Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

These Samples are on:

LANL Request Number:10-1037

Per Agreement Number:126310011

Project Cost Code: MR3A05529E00

Please analyse the enclosed samples

according to the schedule indicated:

SHIP DATE: 12/22/2009

TURNAROUND/REPORT DUE: 1/21/2010

TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required

LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:

Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	

Tuesday, December 22, 2009 REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	HASL-300:ISOPU	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	HASL-300:ISOU	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	SW-846:6020	1	RE12-10-7288	R	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	SW-846:6850	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	
	SW-846:7470A	1	RE12-10-7298	W	12/18/2009	
	SW-846:7471A	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
	SW-846:9012A	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	

Tuesday, December 22, 2009 REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	

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Tuesday, December 22, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1037

REQUEST NUMBER: 10-1037

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 1/21/2010

TURNAROUND REQ'D: 30

General Engineering Laboratories, Inc.,
Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS:

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7288	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7288	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7290	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7290	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7289	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7289	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7291	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7291	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7292	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7292	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7293	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7293	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7296	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7296	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7298	1	POLY	METALS+U-GEL	Nitric Acid	W
RE12-10-7298	1	POLY	SW-846:6850	Ice	W
RE12-10-7298	1	POLY	TCN	Sodium Hydroxide	W
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-Am-241	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-GS	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-ISOPU	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-ISOU	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-U	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-Am-241	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-GS	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-ISOPU	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY	SWP-ISOU	None	SWP

Tuesday, December 22, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1037

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-U	None	SWP

Relinquished By:		**Date**	**Time**	**Received By:**		**Date**	**Time**
[signature]		12/22/09	1400				
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By:		**Date**	**Time**	**Remarks:**
Printed Name	Signature			

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7288 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	QBT3	Alluvium
TIME COLLECTED (HH:MM)		1033	SUB-MEDIA:	TUFF 1	NA
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	HA	ok
LOCATION ID:	12-610553	↓	FIELD QC TYPE:	NA	↓
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	↓
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	0.75	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NMED-EXP	500 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISOPU+ISOU	1 LITER POLY 12m 12/18/09	None	Y	
1	↓	Met+U+CLO4+CN	1 GAL POLY 1 L	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Light brown sandy silt, slightly damp

SAMPLE COMMENTS: NA

LOCATION DESC: 4b-2, west of pipe 10 ft

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 16 dpm HE negative

BY ≤ 2190 dpm

COLLECTED BY (PRINT) TLMcFarland **REVIEWED BY (PRINT)** Larry A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. Lopez	12/18/09 16:20	(Printed Name) 12/18/09 S. MADRID	12/18/09 1620
(Signature) Larry A. Lopez		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7289 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	OBT3	ok
TIME COLLECTED (HH:MM)		1044	SUB-MEDIA:	TUFF 1	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	12-610553	↓	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	↓	FIELD PREP:	NA	
TOP DEPTH:	0	2.2	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NMED-EXP	500 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISOPU+ISOU	1 LITER POLY ZAM 12/18/09	None	Y	
1		Met+U+CLO4+CN	1 ~~GAL~~ L POLY 1L	Ice	Y	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Brownish gray dry tuff

SAMPLE COMMENTS: NA

LOCATION DESC: 4b-2

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 44 dpm

137Cs ≤ 2200 dpm

COLLECTED BY (PRINT) TLMcFarland **REVIEWED BY (PRINT)** Larry A. Lopez

RELINQUISHED BY (Printed Name) Larry A. Lopez (Signature) Larry A. Lopez	**Date/Time** 12/18/09 16:20	**RECEIVED BY** (Printed Name) S. MARCZAK (Signature)	**Date/Time** 12/18/09 1620
RELINQUISHED BY (Printed Name) (Signature)	**Date/Time**	**RECEIVED BY** (Printed Name) (Signature)	**Date/Time**

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7290 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	OBT3	ok
TIME COLLECTED (HH:MM)		1110	SUB-MEDIA:	TUFF 1	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	12-610553	↓	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	↓
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES (NO) NA

BOREHOLE: YES (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NMED-EXP	500 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISOPU+ISOU	1 LITER POLY 12m 12/18/09	None	Y	
1		Met+U+CLO4+CN	1 GAL POLY 1L	Ice	Y	
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC: Pinkish gray dry Tuff

SAMPLE COMMENTS: NA

LOCATION DESC: 4b-2

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \pm 38$ dpm

$\beta\gamma \pm 2560$ dpm

COLLECTED BY (PRINT) TL McFarland **REVIEWED BY (PRINT)** Larry A. López

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. López	12/18/09 16:20	(Printed Name) S. MARCHAL	12/18/09 1620
(Signature) Larry A. López		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7291 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	QBT3	AG 12/18/2009 ~~ok~~ Allh
TIME COLLECTED (HH:MM)		11:30	SUB-MEDIA:	TUFF 1	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	12-610554		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	1.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / NA

BOREHOLE: YES / NO / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY AG 12/18/2009	None		
1		Met+U+CLO4+C N	~~1 GAL~~ 1L POLY	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Dry brown top soil with tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 4b-1

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 60$ dpm HE negative

$\beta/\gamma \leq 2300$

COLLECTED BY (PRINT) Larry A. Lopez **REVIEWED BY (PRINT)** [signature]

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. Lopez	12/18/09 16:20	(Printed Name) S. MARCLAU	12/18/09 1620
(Signature) [signature]		(Signature) [signature]	
RELINQUISHED BY	**Date/Time**	**RECEIVED BY**	**Date/Time**
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7292 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	OBT3	ok
TIME COLLECTED (HH:MM)		1145	SUB-MEDIA:	TUFF 1	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	12-610554		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	2.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	3.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISO PU+ISOU	1 LITER POLY	None	↓	
1	↓	Met+U+CLO4+C N	1 GAL POLY ↳ AG 12/18/2009	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: Light/brown white tuff (Rinsate: RE12-10-7298)

SAMPLE COMMENTS: ~~None~~ RA 12/18/2009 Interface: 2.5' bgs

LOCATION DESC: 4b-1

FIELD SCREENING/MEASUREMENT RESULTS:

α ≤ 33 dpm

β/γ ≤ 2700 dpm

COLLECTED BY (PRINT) [illegible] **REVIEWED BY (PRINT)** Larry A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. Lopez	12/18/09 16:20	(Printed Name) S. MARCZAK	12/18/09 1620
(Signature) Larry A. Lopez		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7293 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	QBT3	ok
TIME COLLECTED (HH:MM)		1200	SUB-MEDIA:	TUFF 1	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	HA	
LOCATION ID:	12-610554		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0	5.0	SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0	6.0	SCREEN/PORT DESC:		NA
FIELD MATRIX:	R	ok	EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8270C+NMED Exp	500 ML AMBER GLASS	Ice	Y	
1		AM241+GS+ISO PU+ISOU	1 LITER POLY	None		
1		Met+U+CLO4+C N	1 GAL POLY L ag 12/18/2009	Ice		
1		RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None		

SAMPLE DESC: Gray weakly indurated → indurated tuff

SAMPLE COMMENTS: None

LOCATION DESC: 12-00406-01

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 38$ dpm

$\beta/\gamma \leq 2300$ dpm

COLLECTED BY (PRINT) A. Gomez **REVIEWED BY (PRINT)** TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. Lopez	12/18/09 16:20	(Printed Name) S. MARQUEZ	12/18/09 1620
(Signature) Larry A. Lopez		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7296 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	OBT3	AG 12/18/09 DT All 4
TIME COLLECTED (HH:MM)		11:30	SUB-MEDIA:	TUFF 1	
PRS ID:	12-004(b)	OK	SAMPLE TECH CODE:	NA	
LOCATION ID:	UNK	12-610554	FIELD QC TYPE:	FD	
LOCATION TYPE:	GENERIC	OK	FIELD PREP:	NA	
TOP DEPTH:	0	0.0	SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0	1.0	SCREEN/PORT DESC:	NA	
FIELD MATRIX:	R	S	EXCAVATED: YES / NO / NA		

COMPOSITE TYPE: NA **COMPOSITE TIME INTERVAL:** NA **WATER FLOWING: YES / NO / NA**

BOREHOLE: YES / NO / NA **BOREHOLE DECLINATION:** NA **BOREHOLE DIRECTION:** NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	8082+8270+NMED-EXP	500 ML AMBER GLASS	Ice	Y	
1	↓	AM241+GS+ISOPU+ISOU	1 LITER POLY	None	↓	
1	↓	Met+U+CLO4+CN	1 GAL POLY L AG 12/18/09	Ice	↓	
1	↓	RADVANA+B+G	1 EA 8 IN RESEALABLE POLY BAG	None	↓	

SAMPLE DESC: QC Sample of RE12-10-7291, Dry brown top soil with tuff fragments

SAMPLE COMMENTS: None

LOCATION DESC: 12-004b-1

FIELD SCREENING/MEASUREMENT RESULTS:

$\alpha \leq 60$ dpm HE Neg

$\beta/\gamma \leq 2160$ dpm

COLLECTED BY (PRINT) Laney A. Lopez **REVIEWED BY (PRINT)** [illegible]

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Laney A Lopez	12/18/09 16:20	(Printed Name) S. MARQUAY	12/18/09 1620
(Signature) Laney A Lopez		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7298 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1200	SUB-MEDIA:	OTHER	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	DC	
LOCATION ID:	UNK	12-610554	FIELD QC TYPE:	FR	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	UF	
TOP DEPTH:	0		SAMPLE USAGE:	QC	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	W		EXCAVATED: YES / NO / (NA)		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / NO / (NA)

BOREHOLE: YES / NO (NA) BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	METALS+U-GEL	1 LITER POLY	Nitric Acid	Y	
1	↓	SW-846:6850	250 ML POLY	Ice	↓	
1	↓	TCN	500 ML POLY	Sodium Hydroxide		

SAMPLE DESC: QC Sample of RE12-10-7292

SAMPLE COMMENTS: None

LOCATION DESC: 12-0046-01

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT) A. Groumas **REVIEWED BY (PRINT)** TLMcFarland

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Lorenzo A. Lopez	12/18/09 1620	(Printed Name) S. MARQUEZ	12/18/04 1620
(Signature) Lorenzo A. Lopez		(Signature) JM	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	
(Signature)		(Signature)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7867 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1337	SUB-MEDIA:	OTHER	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	M	
LOCATION ID:	12-610702		FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC		FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	SWP		EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: NA WATER FLOWING: YES / (NO) / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	SWP-Am-241	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-GS	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-ISOPU	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-ISOU	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-NMED-Exp	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-U	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

swipe sample from interior of pipe

SAMPLE COMMENTS:

NA

LOCATION DESC:

Interior of pipe

FIELD SCREENING/MEASUREMENT RESULTS:

NA

COLLECTED BY (PRINT) TL McFarland **REVIEWED BY (PRINT)** Larry A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Larry A. Lopez	12/18/09	(Printed Name) S. MARRAY	12/18/09
(Signature) Larry A. Lopez	1620	(Signature)	1620
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	

SAMPLE COLLECTION LOG/FIELD CHAIN OF CUSTODY

EVENT ID: 2481 **EVENT NAME:** 4th Qtr. FY09 - AOC 12-004(b) - Threemile Canyon

SAMPLE ID: RE12-10-7868 **WORK ORDER:**

	AS PLANNED	AS COLLECTED		AS PLANNED	AS COLLECTED
DATE COLLECTED(MM/DD/YYYY):		12/18/2009	MEDIA:	NA	ok
TIME COLLECTED (HH:MM)		1345	SUB-MEDIA:	OTHER	
PRS ID:	12-004(b)	ok	SAMPLE TECH CODE:	M	
LOCATION ID:	12-610703	12-610702	FIELD QC TYPE:	NA	
LOCATION TYPE:	GENERIC	ok	FIELD PREP:	NA	
TOP DEPTH:	0		SAMPLE USAGE:	INV	
BOTTOM DEPTH:	0		SCREEN/PORT DESC:	NA	
FIELD MATRIX:	SWP		EXCAVATED: YES / (NO) / NA		

COMPOSITE TYPE: NA COMPOSITE TIME INTERVAL: _____ WATER FLOWING: YES / NO / NA

BOREHOLE: YES / (NO) / NA BOREHOLE DECLINATION: NA BOREHOLE DIRECTION: NA

#	PRIORITY	ORDER	CNTNR	PRESERVATIVE	COLLECTED Y/N	SPECIAL INSTRUCTIONS
1	Normal	SWP-Am-241	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-GS	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-ISOPU	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-ISOU	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-NMED-Exp	1 EA 8 IN RESEALABLE POLY BAG	None	Y	
1		SWP-U	1 EA 8 IN RESEALABLE POLY BAG	None	Y	

SAMPLE DESC:

swipe sample from exterior of pipe

SAMPLE COMMENTS:

NA

LOCATION DESC:

Exterior of pipe

FIELD SCREENING/MEASUREMENT RESULTS:

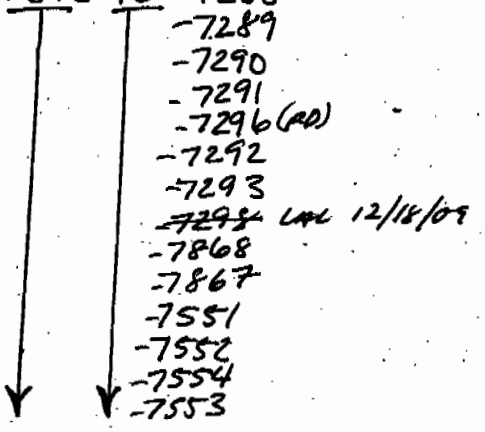
NA

COLLECTED BY (PRINT) TLMcFarland **REVIEWED BY (PRINT)** Lacey A. Lopez

RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name) Lacey A. Lopez	12/18/09 1620	(Printed Name) S. MARTAN	12/18/09 1620
(Signature)		(Signature)	
RELINQUISHED BY	Date/Time	RECEIVED BY	Date/Time
(Printed Name)		(Printed Name)	

Rad Screening Data Release Form

The Following samples were received at the Field Support Facility (FSF) without screening data (list sample number): RE12-10-7288



These samples will not be shipped until radiological screening data documentation arrives at the FSF. I understand that it is my responsibility to ensure this information arrives at the FSF in a timely manner. If holding times are missed because screening data does not arrive, I will pick up the samples.

The following samples do not require rad screening data for the reasons stated (list sample numbers): RE12-10-7298

Reason: Field Rinsate (FR)

Print Last Name LOPEZ **Signature** Danny A. Lopez **Date** 12/18/09

DATA VALIDATION COVER SHEET

5121-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1037 VALIDATION DATE: 02/02/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☒ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☒	☐	☐	8. QUANTITATION REPORTS
☒	☐	☐	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The water MS/MSD was performed on a sample from another LANL RN and the raw data for the parent sample were not included in the data package. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 2/3/10

VALIDATOR'S SIGNATURE: L Thal DATE: 02/02/10

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The Internal Standard (IS) relativer retention time has shifted by more than 0.98 to 1.02 seconds.	R, PERC0	J, PERC0
☐	☒	☐	2. Required IS retention time documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC0b	R, PERC0b
☐	☐	☒	3. The IS are count is <25% of the expected value.	UJ, PERC1a	J, PERC1a
☐	☐	☒	4. The IS area count is <70% but >25% of the average of that obtained from the calibration standards.	UJ, PERC1b	J, PERC1b
☐	☐	☒	5. The IS area count is >130% of the average of that obtained from the calibration standards.	UJ, PERC1c	J, PERC1c
☐	☐	☒	6. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PREC1d	R, PERC1d
☐	☒	☐	7. The sample result is ≤ 5X the concentration of the related analyte in the method blank.	U, PERC4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J+, PERC4a
☐	☒	☐	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, and/or equipment blank.	U, PERC4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC4e	R, PERC4e
☐	☒	☐	11. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, PERC7	J, PERC7
☐	☒	☐	12. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.99.	UJ, R, PERC7a	J, PERC7a

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 **LC/MS/MS Perchlorate Analytical Data Validation Checklist**	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. The ICV and/or CCV were recovered outside the method limits.	UJ, R, PERC7c	J, PERC7c
☐	☒	☐	14. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, R, PERC7d	J, PERC7d
☐	☒	☐	15. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, PERC7f	R. PERC7f
☐	☒	☐	16. The affected analyte is considered not detected because ion abundance ratios did not meet specifications.	N/A	R, PERC8
☐	☒	☐	17. The ion ratio documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	N/A	R, PERC8a
☐	☒	☐	18. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ PERC9	J-, PERC9
☐	☒	☐	19. The holding time was > 2 times the applicable holding time requirement.	R, PERC9a	J-, PERC9a
☐	☒	☐	20. The LCS percent recovery was <10%. Follow the external laboratory limits.	R, PERC12	J-, PERC12
☐	☒	☐	21. The LCS percent recovery was < the Lower Acceptance Limit but >10%. Follow the external laboratory limits.	UJ, PERC12a	J-, PERC12a
☐	☒	☐	22. The LCS percent recovery was > the Upper Acceptance Limit. Follow the external laboratory limits.	N/A	J+, PERC12b
☐	☒	☐	23. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, PERC12c	R, PERC12c
☐	☒	☐	24. The MS/MSD percent recovery was <10%	R, PERC12d	R, PERC12d
☐	☒	☐	25. The MS/MSD percent recovery was >10% but <75%	UJ, PERC12e	J, PERC12e
☐	☒	☐	26. The MS/MSD percent recovery was >125%.	N/A	J+, PERC12f

LC/MS/MS PERCHLORATE ANALYTICAL DATA VALIDATION CHECKLIST	
5121-2 LC/MS/MS Perchlorate Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

Yes (Check One)	No (Check One)	N/A (Check One)		Assign Qualifier Listed Below If Criterion = Yes	
				Non-detected Analyte	Detected Analyte
☐	☒	☐	27. The MS/MSD relative percent difference was >20%.	UJ, PERC12g	J, PERC12g
☐	☐	☒	28. The affected analytes are considered suspect because the sample was diluted without any target analytes identified due to matrix interference. Qualify as Reject if the analytical laboratory cannot provide proof for matrix interference.	UJ, R, PERC15	N/A
☐	☐	☒	29. The sample was diluted because target analytes were > the initial verification calibration.	UJ, PERC15a	J, PERC15a
☐	☐	☒	30. The Contract Required Detection Limit check standard (CRI) sample did not pass method-acceptance limits.	UJ, R, PERC16	J, PERC16
☐	☐	☒	31. The Interference Check Sample was not within ±20% of the known value.	UJ, PERC16a	J, PERC16a
☐	☐	☒	32. The required CRI sample information is missing. Contact the SMO or external laboratory for information.	R, PERC16c	R, PERC16c
☐	☒	☐	33. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, PERC19	J, R, PERC19
☐	☒	☐	34. Duplicate, dilution, or reanalysis.	UJ, PERC88	J, PERC88

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7288

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492001

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.2	0.551	ug/kg	U	1	07-JAN-10 18:29	per0107021a
	Perchlorate Isotope Ratio						1	07-JAN-10 18:29	per0107021a
14797-73-0	Perchlorate-101	.551	2.2	0.551	ug/kg	U	1	07-JAN-10 18:29	per0107021a
	Perchlorate-O(18)			5.47	ug/kg		1	07-JAN-10 18:29	per0107021a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7290

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492002

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 96.9

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.516	2.06	0.516	ug/kg	U	1	07-JAN-10 18:50	per0107024a
	Perchlorate Isotope Ratio						1	07-JAN-10 18:50	per0107024a
14797-73-0	Perchlorate-101	.516	2.06	0.516	ug/kg	U	1	07-JAN-10 18:50	per0107024a
	Perchlorate-O(18)			5.64	ug/kg		1	07-JAN-10 18:50	per0107024a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7289

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492003

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	0.832	ug/kg	J	1	07-JAN-10 18:57	per0107025a
	Perchlorate Isotope Ratio			2.99			1	07-JAN-10 18:57	per0107025a
14797-73-0	Perchlorate-101	.555	2.22	0.829	ug/kg	J	1	07-JAN-10 18:57	per0107025a
	Perchlorate-O(18)			6.30	ug/kg		1	07-JAN-10 18:57	per0107025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7291

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492004

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 91.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.544	2.18	0.544	ug/kg	U	1	07-JAN-10 19:04	per0107026a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:04	per0107026a
14797-73-0	Perchlorate-101	.544	2.18	0.544	ug/kg	U	1	07-JAN-10 19:04	per0107026a
	Perchlorate-O(18)			5.73	ug/kg		1	07-JAN-10 19:04	per0107026a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7292

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492005

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 94

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.532	2.13	0.532	ug/kg	U	1	07-JAN-10 19:11	per0107027a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:11	per0107027a
14797-73-0	Perchlorate-101	.532	2.13	0.532	ug/kg	U	1	07-JAN-10 19:11	per0107027a
	Perchlorate-O(18)			5.43	ug/kg		1	07-JAN-10 19:11	per0107027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7293

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492006

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 97.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.513	2.05	0.513	ug/kg	U	1	07-JAN-10 19:18	per0107028a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:18	per0107028a
14797-73-0	Perchlorate-101	.513	2.05	0.513	ug/kg	U	1	07-JAN-10 19:18	per0107028a
	Perchlorate-O(18)			5.33	ug/kg		1	07-JAN-10 19:18	per0107028a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7296

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492007

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 92

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JAN-10 19:26	per0107029a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:26	per0107029a
14797-73-0	Perchlorate-101	.543	2.17	0.543	ug/kg	U	1	07-JAN-10 19:26	per0107029a
	Perchlorate-O(18)			5.50	ug/kg		1	07-JAN-10 19:26	per0107029a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 936065

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
RE12-10-7298

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037-1

GEL Sample ID: 243493001

Date Filtered: 29-DEC-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	29-DEC-09 22:56	per1229082a
	Perchlorate Isotope Ratio						1	29-DEC-09 22:56	per1229082a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	29-DEC-09 22:56	per1229082a
	Perchlorate-O(18)			0.434	ug/L		1	29-DEC-09 22:56	per1229082a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

LT 02/02/10

DATA VALIDATION COVER SHEET

5118-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1037 VALIDATION DATE: 02/02/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☒ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. In the soil MB, Pb was detected. The associated result for sample RE12-10-7293 was a detect ≤5X the MB concentration and, thus, was qualified U,I4. The remaining associated sample results were detects >5X but ≤50X the MB concentration and, thus, were qualified J,I4a. In the water MB, As was detected. The associated sample result was a detect ≤5X the MB concentration and, thus, was qualified U,I4.
2. In the soil CCB, Tl was detected. The associated sample results were detects ≤5X the CCB concentration and, thus, were qualified U,I4b. In the water CCBs, As and K were detected. The associated sample results were detects ≤5X the CCB concentrations and, thus, were qualified U,I4b. In the swipe CCB, U was detected. The associated sample results were detects >5X the CCB concentration and, thus, were not qualified.
3. In the FR blank, sample -7298, Mn and Na were detected. The associated sample results were detects >5X the FR blank concentrations and, thus, were not qualified.
4. The soil MS %Rs for Fe, Mn, Al, Mg, Ca and K were > the laboratory's UAL. The associated sample results for Mg, Ca and K were detects and, thus, were qualified J+,I6b. The parent sample results for Fe, Mn and Al were >4X the spike amounts and, thus, no sample results were qualified. The water MS %R for Pb was > the laboratory's UAL. The associated sample result was a detect and, thus, was qualified UJ,I6b.
5. Since only one swipe was supplied for the U analysis, an MS and duplicate analysis were not performed. No sample data were qualified, based on professional judgment. An LCS/LCSD was performed and met precision criteria for

DATA VALIDATION COVER SHEET

5118-1 **Data Validation Cover Sheet**	Records Use only Los Alamos NATIONAL LABORATORY EST. 1943

the batch.

6. The soil matrix QC analyses for Hg and the water matrix QC analyses for ICP-AES and Hg were performed on samples from other LANL RNs. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 2/3/10

VALIDATOR'S SIGNATURE: K Neal DATE: 02/02/10

Form 5118-1, Revision 0.0	LOS ALAMOS Environmental Restoration Project

METALS ANALYTICAL DATA VALIDATION CHECKLIST

5118-2

Metals Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The instrument performance sample did not pass method acceptance criteria.	R, I16	R, I16
☐	☐	☒	4. The mass calibration is not within 0.1 amu or %RSD is >5% for any isotope (Be, Mg, Co, In, Pb).	UJ, I16a	J, I16a
☐	☐	☒	5. Samples were analyzed outside specific method tune time criteria.	N/A	J, I16b
☐	☐	☒	6. The required instrument performance sample information is missing. Contact the SMO or external laboratory for information.	R, I16c	R, I16c
☐	☒	☐	7. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	8. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	9. The initial Calibration Verification (ICV) and/or Continuing Calibration Verification (CCV) were recovered outside the method-specific limits.	UJ, I7c	J, I7c
☐	☒	☐	10. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	11. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☒	☐	12. Metals interference check sample percent recover value is <50%.	R, I2	J-, I2

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	13. Metals interference check sample percent recovery value is ≥50% and <80%	UJ, I2a	J-, I2a
☐	☒	☐	14. Metals interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☒	☐	15. Metals interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☒	☐	☐	16. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A
☒	☐	☐	17. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☒	☐	☐	18. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	19. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	20. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	21. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	23. The associated matrix spike recovery was <the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J+, I6a
☒	☐	☐	24. The associated matrix spike recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☒	☐	☐	25. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If the LCS information is present, do not Reject. Qualify data based on the LCS information.	R, I6c	R, I6c
☐	☒	☐	26. The sample and the duplicate sample results were ≥5X the RL and the duplicate RPD was >20% for water samples and >35% for soil samples.	UJ, I10a	J, I10a
☒	☐	☐	27. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	28. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	29. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	30. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	31. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☐	☒	32. The quantitating IS area count is <10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	R, I1a	J, I1a

METALS ANALYTICAL DATA VALIDATION CHECKLIST	
5118-2 Metals Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	33. The IS area count for the quantitating IS is <60% but >10% for metals window in relation to the initial calibration blank. Follow the method-specific windows.	UJ, I1b	J, I1b
☐	☐	☒	34. The IS area count for the quantitating IS is >125% in relation to the metals initial calibration blank. Follow method-specific windows.	UJ, I1c	J, I1c
☐	☐	☒	35. Required IS information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I1d	R, I1d
☐	☐	☒	36. Serial dilution sample RPD was >10% and the sample result was >50X the MDL (>100X the MDL for ICPMS). Qualify ONLY the sample used for the serial dilution.	UJ, I18	J, I18
☐	☐	☒	37. Serial dilution sample was not analyzed with the samples.	UJ, I18a	J, I18
☐	☐	☒	38. The sample result was reported as detected between the IDL and the EDL.	N/A	J, I1
☐	☒	☐	39. Duplicate, dilution, or reanalysis.	UJ, I88	J, I88
☒	☐	☐	40. Qualification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB, NQ, NQ
☐	☒	☐	41. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492001 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7288 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 90.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16400000	ug/Kg		7130	21000	21000	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-36-0	Antimony	1050	ug/Kg	U	346	1050	1050	1	P	HSC	01/14/10 22:20	011410-2	941050
7440-38-2	Arsenic	2.3	mg/kg		0.216	1.08	1.08	2	MS	RMJ	01/13/10 22:33	100113-4	936805
7440-39-3	Barium	221000	ug/Kg		105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-41-7	Beryllium	1.05	mg/kg		0.0216	0.108	0.108	2	MS	RMJ	01/12/10 13:30	100111-3	936805
7440-43-9	Cadmium	299	ug/Kg	J	105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-70-2	Calcium J+,I6b	3070000	ug/Kg		8390	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-47-3	Chromium	18700	ug/Kg		157	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-48-4	Cobalt	9620	ug/Kg		157	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-50-8	Copper	12100	ug/Kg		315	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-89-6	Iron	21700000	ug/Kg		8390	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-92-1	Lead J,I4a	23400	ug/Kg		262	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-95-4	Magnesium J+,I6b	3000000	ug/Kg		8910	31500	31500	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-96-5	Manganese	604000	ug/Kg		210	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-97-6	Mercury	13.6	ug/kg		4.41	13	13	1	AV	JXL1	01/07/10 10:24	010710S1-7	937635
7440-02-0	Nickel	8.06	mg/kg		0.108	0.433	0.433	2	MS	RMJ	01/12/10 13:30	100111-3	936805
7440-09-7	Potassium J+,I6b	2990000	ug/Kg		6710	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7782-49-2	Selenium	1.08	mg/kg	U	0.541	1.08	1.08	2	MS	RMJ	01/12/10 13:30	100111-3	936805
7440-22-4	Silver	239	ug/Kg	J	105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-23-5	Sodium	222000	ug/Kg		7340	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-28-0	Thallium U,I4b	0.219	mg/kg		0.0649	0.216	0.216	2	MS	RMJ	01/13/10 22:33	100113-4	936805
7440-61-1	Uranium	2.6	mg/kg		0.0143	0.0433	0.0433	2	MS	RMJ	01/13/10 22:33	100113-4	936805
7440-62-2	Vanadium	47500	ug/Kg		105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-66-6	Zinc	42900	ug/Kg		346	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.509	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.525	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.509	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.525	g	50	mL	01/13/10	FGA

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492002 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7290 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 96.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2670000	ug/Kg		7020	20600	20600	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-36-0	Antimony	1000	ug/Kg	U	330	1000	1000	1	P	HSC	01/14/10 22:27	011410-2	941050
7440-38-2	Arsenic	0.920	mg/kg	J	0.206	1.03	1.03	2	MS	RMJ	01/13/10 22:45	100113-4	936805
7440-39-3	Barium	37700	ug/Kg		103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-41-7	Beryllium	0.424	mg/kg		0.0206	0.103	0.103	2	MS	RMJ	01/12/10 13:47	100111-3	936805
7440-43-9	Cadmium	516	ug/Kg	U	103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-70-2	Calcium J+,I6b	1370000	ug/Kg		8260	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-47-3	Chromium	21300	ug/Kg		155	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-48-4	Cobalt	7120	ug/Kg		155	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-50-8	Copper	3270	ug/Kg		310	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-89-6	Iron	7230000	ug/Kg		8260	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-92-1	Lead J,I4a	6900	ug/Kg		258	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-95-4	Magnesium J+,I6b	867000	ug/Kg		8770	31000	31000	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-96-5	Manganese	319000	ug/Kg		206	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-97-6	Mercury	7.41	ug/kg	J	3.94	11.6	11.6	1	AV	JXL1	01/07/10 10:33	010710S1-7	937635
7440-02-0	Nickel	3.5	mg/kg		0.103	0.413	0.413	2	MS	RMJ	01/12/10 13:47	100111-3	936805
7440-09-7	Potassium J+,I6b	667000	ug/Kg		6610	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7782-49-2	Selenium	1.03	mg/kg	U	0.516	1.03	1.03	2	MS	RMJ	01/12/10 13:47	100111-3	936805
7440-22-4	Silver	277	ug/Kg	J	103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-23-5	Sodium	357000	ug/Kg		7230	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-28-0	Thallium U,I4b	0.0731	mg/kg	J	0.0619	0.206	0.206	2	MS	RMJ	01/13/10 22:45	100113-4	936805
7440-61-1	Uranium	0.735	mg/kg		0.0136	0.0413	0.0413	2	MS	RMJ	01/13/10 22:45	100113-4	936805
7440-62-2	Vanadium	6040	ug/Kg		103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-66-6	Zinc	28500	ug/Kg		341	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.5	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.5	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.535	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.516	g	50	mL	01/13/10	FGA

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METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492003 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7289 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 90.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9270000	ug/Kg		7240	21300	21300	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-36-0	Antimony	373	ug/Kg	J	338	1020	1020	1	P	HSC	01/14/10 22:34	011410-2	941050
7440-38-2	Arsenic	1.88	mg/kg		0.219	1.09	1.09	2	MS	RMJ	01/13/10 22:50	100113-4	936805
7440-39-3	Barium	121000	ug/Kg		107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-41-7	Beryllium	0.895	mg/kg		0.0219	0.109	0.109	2	MS	RMJ	01/12/10 13:53	100111-3	936805
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-70-2	Calcium J+,I6b	2260000	ug/Kg		8520	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-47-3	Chromium	8880	ug/Kg		160	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-48-4	Cobalt	7690	ug/Kg		160	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-50-8	Copper	6230	ug/Kg		320	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-89-6	Iron	12100000	ug/Kg		8520	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-92-1	Lead J,I4a	11500	ug/Kg		266	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-95-4	Magnesium J+,I6b	1900000	ug/Kg		9050	32000	32000	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-96-5	Manganese	304000	ug/Kg		213	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-97-6	Mercury	13.8	ug/kg		4.18	12.3	12.3	1	AV	JXL1	01/07/10 10:34	010710S1-7	937635
7440-02-0	Nickel	6.57	mg/kg		0.109	0.438	0.438	2	MS	RMJ	01/12/10 13:53	100111-3	936805
7440-09-7	Potassium J+,I6b	1640000	ug/Kg		6820	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7782-49-2	Selenium	1.09	mg/kg	U	0.547	1.09	1.09	2	MS	RMJ	01/12/10 13:53	100111-3	936805
7440-22-4	Silver	259	ug/Kg	J	107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-23-5	Sodium	387000	ug/Kg		7460	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-28-0	Thallium U,I4b	0.174	mg/kg	J	0.0657	0.219	0.219	2	MS	RMJ	01/13/10 22:50	100113-4	936805
7440-61-1	Uranium	0.832	mg/kg		0.0144	0.0438	0.0438	2	MS	RMJ	01/13/10 22:50	100113-4	936805
7440-62-2	Vanadium	22500	ug/Kg		107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-66-6	Zinc	24400	ug/Kg		351	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.507	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.521	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.541	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.542	g	50	mL	01/13/10	FGA

LT 02/02/10

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492004 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7291 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 91.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7410000	ug/Kg		7390	21700	21700	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-36-0	Antimony	1050	ug/Kg	U	346	1050	1050	1	P	HSC	01/14/10 22:41	011410-2	941050
7440-38-2	Arsenic	1.96	mg/kg		0.218	1.09	1.09	2	MS	RMJ	01/13/10 22:54	100113-4	936805
7440-39-3	Barium	118000	ug/Kg		109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-41-7	Beryllium	0.901	mg/kg		0.0218	0.109	0.109	2	MS	RMJ	01/12/10 13:59	100111-3	936805
7440-43-9	Cadmium	543	ug/Kg	U	109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-70-2	Calcium J+,I6b	2210000	ug/Kg		8690	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-47-3	Chromium	14000	ug/Kg		163	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-48-4	Cobalt	5120	ug/Kg		163	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-50-8	Copper	5900	ug/Kg		326	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-89-6	Iron	11800000	ug/Kg		8690	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-92-1	Lead J,I4a	11200	ug/Kg		272	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-95-4	Magnesium J+,I6b	1630000	ug/Kg		9240	32600	32600	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-96-5	Manganese	310000	ug/Kg		217	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-97-6	Mercury	13.4	ug/kg		4.17	12.3	12.3	1	AV	JXL1	01/07/10 10:36	010710S1-7	937635
7440-02-0	Nickel	6.93	mg/kg		0.109	0.436	0.436	2	MS	RMJ	01/12/10 13:59	100111-3	936805
7440-09-7	Potassium J+,I6b	1600000	ug/Kg		6950	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7782-49-2	Selenium	1.09	mg/kg	U	0.544	1.09	1.09	2	MS	RMJ	01/12/10 13:59	100111-3	936805
7440-22-4	Silver	246	ug/Kg	J	109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-23-5	Sodium	79600	ug/Kg		7610	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-28-0	Thallium U,I4b	0.174	mg/kg	J	0.0653	0.218	0.218	2	MS	RMJ	01/13/10 22:54	100113-4	936805
7440-61-1	Uranium	1.7	mg/kg		0.0144	0.0436	0.0436	2	MS	RMJ	01/13/10 22:54	100113-4	936805
7440-62-2	Vanadium	22800	ug/Kg		109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-66-6	Zinc	25400	ug/Kg		359	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.5	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.501	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.533	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.52	g	50	mL	01/13/10	FGA

LT 02/02/10

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492005 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7292 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 94

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5780000	ug/Kg		7190	21100	21100	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-36-0	Antimony	1020	ug/Kg	U	337	1020	1020	1	P	HSC	01/14/10 22:49	011410-2	941050
7440-38-2	Arsenic	1.76	mg/kg		0.206	1.03	1.03	2	MS	RMJ	01/13/10 22:58	100113-4	936805
7440-39-3	Barium	406000	ug/Kg		106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-41-7	Beryllium	0.670	mg/kg		0.0206	0.103	0.103	2	MS	RMJ	01/12/10 14:05	100111-3	936805
7440-43-9	Cadmium	529	ug/Kg	U	106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-70-2	Calcium J+,I6b	3620000	ug/Kg		8460	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-47-3	Chromium	10500	ug/Kg		159	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-48-4	Cobalt	6070	ug/Kg		159	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-50-8	Copper	4120	ug/Kg		317	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-89-6	Iron	9670000	ug/Kg		8460	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-92-1	Lead J,I4a	7830	ug/Kg		264	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-95-4	Magnesium J+,I6b	1320000	ug/Kg		8990	31700	31700	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-96-5	Manganese	300000	ug/Kg		211	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-97-6	Mercury	13.6	ug/kg		4.2	12.3	12.3	1	AV	JXL1	01/07/10 10:38	010710S1-7	937635
7440-02-0	Nickel	4.94	mg/kg		0.103	0.412	0.412	2	MS	RMJ	01/12/10 14:05	100111-3	936805
7440-09-7	Potassium J+,I6b	1080000	ug/Kg		6770	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7782-49-2	Selenium	1.03	mg/kg	U	0.515	1.03	1.03	2	MS	RMJ	01/12/10 14:05	100111-3	936805
7440-22-4	Silver	262	ug/Kg	J	106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-23-5	Sodium	214000	ug/Kg		7400	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-28-0	Thallium U,I4b	0.112	mg/kg	J	0.0618	0.206	0.206	2	MS	RMJ	01/13/10 22:58	100113-4	936805
7440-61-1	Uranium	0.741	mg/kg		0.0136	0.0412	0.0412	2	MS	RMJ	01/13/10 22:58	100113-4	936805
7440-62-2	Vanadium	12700	ug/Kg		106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-66-6	Zinc	24300	ug/Kg		349	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.516	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.503	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.517	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.52	g	50	mL	01/13/10	FGA

LT 02/02/10

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492006 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7293 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 97.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1580000	ug/Kg		6760	19900	19900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-36-0	Antimony	939	ug/Kg	U	310	939	939	1	P	HSC	01/14/10 22:56	011410-2	941050
7440-38-2	Arsenic	0.772	mg/kg	J	0.202	1.01	1.01	2	MS	RMJ	01/13/10 23:02	100113-4	936805
7440-39-3	Barium	22900	ug/Kg		99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-41-7	Beryllium	0.361	mg/kg		0.0202	0.101	0.101	2	MS	RMJ	01/12/10 14:11	100111-3	936805
7440-43-9	Cadmium	497	ug/Kg	U	99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-70-2	Calcium J+,I6b	787000	ug/Kg		7950	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-47-3	Chromium	2420	ug/Kg		149	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-48-4	Cobalt	4490	ug/Kg		149	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-50-8	Copper	2140	ug/Kg		298	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-89-6	Iron	6500000	ug/Kg		7950	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-92-1	Lead U,I4	3380	ug/Kg		249	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-95-4	Magnesium J+,I6b	351000	ug/Kg		8450	29800	29800	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-96-5	Manganese	227000	ug/Kg		199	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-97-6	Mercury	7.11	ug/kg	J	3.61	10.6	10.6	1	AV	JXL1	01/07/10 10:39	010710S1-7	937635
7440-02-0	Nickel	2.35	mg/kg		0.101	0.405	0.405	2	MS	RMJ	01/12/10 14:11	100111-3	936805
7440-09-7	Potassium J+,I6b	358000	ug/Kg		6360	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7782-49-2	Selenium	1.01	mg/kg	U	0.506	1.01	1.01	2	MS	RMJ	01/12/10 14:11	100111-3	936805
7440-22-4	Silver	247	ug/Kg	J	99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-23-5	Sodium	209000	ug/Kg		6960	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-28-0	Thallium U,I4b	0.0654	mg/kg	J	0.0607	0.202	0.202	2	MS	RMJ	01/13/10 23:02	100113-4	936805
7440-61-1	Uranium	0.934	mg/kg		0.0134	0.0405	0.0405	2	MS	RMJ	01/13/10 23:02	100113-4	936805
7440-62-2	Vanadium	3620	ug/Kg		99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-66-6	Zinc	20600	ug/Kg		328	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.507	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.516	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.58	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.546	g	50	mL	01/13/10	FGA

LT 02/02/10

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492007 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7296 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 92

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7350000	ug/Kg		7350	21600	21600	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	01/14/10 23:03	011410-2	941050
7440-38-2	Arsenic	1.88	mg/kg		0.214	1.07	1.07	2	MS	RMJ	01/13/10 23:06	100113-4	936805
7440-39-3	Barium	107000	ug/Kg		108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-41-7	Beryllium	0.858	mg/kg		0.0214	0.107	0.107	2	MS	RMJ	01/12/10 14:17	100111-3	936805
7440-43-9	Cadmium	540	ug/Kg	U	108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-70-2	Calcium J+,I6b	2010000	ug/Kg		8640	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-47-3	Chromium	17000	ug/Kg		162	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-48-4	Cobalt	4600	ug/Kg		162	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-50-8	Copper	5880	ug/Kg		324	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-89-6	Iron	11900000	ug/Kg		8640	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-92-1	Lead J,I4a	10600	ug/Kg		270	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-95-4	Magnesium J+,I6b	1520000	ug/Kg		9180	32400	32400	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-96-5	Manganese	301000	ug/Kg		216	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-97-6	Mercury	13.1	ug/kg		3.95	11.6	11.6	1	AV	JXL1	01/07/10 10:44	010710S1-7	937635
7440-02-0	Nickel	6.64	mg/kg		0.107	0.427	0.427	2	MS	RMJ	01/12/10 14:17	100111-3	936805
7440-09-7	Potassium J+,I6b	1560000	ug/Kg		6910	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7782-49-2	Selenium	1.07	mg/kg	U	0.534	1.07	1.07	2	MS	RMJ	01/12/10 14:17	100111-3	936805
7440-22-4	Silver	325	ug/Kg	J	108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-23-5	Sodium	72500	ug/Kg		7560	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-28-0	Thallium U,I4b	0.162	mg/kg	J	0.0641	0.214	0.214	2	MS	RMJ	01/13/10 23:06	100113-4	936805
7440-61-1	Uranium	1.3	mg/kg		0.0141	0.0427	0.0427	2	MS	RMJ	01/13/10 23:06	100113-4	936805
7440-62-2	Vanadium	22800	ug/Kg		108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-66-6	Zinc	25000	ug/Kg		357	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.509	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.503	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.561	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.509	g	50	mL	01/13/10	FGA

LT 02/02/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243493001 **BASIS:** As Received **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7298 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	BAJ	01/06/10 06:33	100105-3	936815
7440-38-2	Arsenic U,I4	8.81	ug/L	J	5	30	30	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	01/14/10 22:45	100114-6	941231
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	01/06/10 06:33	100105-3	936815
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	01/08/10 12:57	010810-1	936813
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	01/08/10 12:57	010810-1	936813
7439-92-1	Lead UJ,I6b	2	ug/L	UN	0.5	2	2	1	MS	PRB	01/08/10 16:38	100108-2	936815
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	01/08/10 12:57	010810-1	936813
7439-96-5	Manganese	1.03	ug/L	J	1	5	5	1	MS	BAJ	01/07/10 05:09	100106-4	936815
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	12/30/09 10:37	123009W1-7	937342
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-09-7	Potassium U,I4b	155	ug/L		50	150	150	1	P	HSC	01/08/10 12:57	010810-1	936813
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-23-5	Sodium	110	ug/L	J	100	300	300	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	BAJ	01/08/10 12:40	100108-5	936815
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	BAJ	01/08/10 12:40	100108-5	936815
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	01/08/10 12:57	010810-1	936813

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936813	936812	SW846 3005A	50	mL	50	mL	01/04/10	BXA1
936815	936814	SW846 3005A	50	mL	50	mL	01/04/10	BXA1
937342	937341	SW846 7470A Prep	20	mL	20	mL	12/29/09	BCD1
941231	941230	SW846 3005A	25	mL	25	mL	01/13/10	FGA

LT 02/02/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037-2 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243494001 **BASIS:** As Received **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7867 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SWIPE **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-61-1	Uranium	0.292	ug/Filter		0.0066	0.02	0.02	2	MS	SKJ	01/07/10 15:46	100107-1	937303

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
937303	937302	SW846 3050B	1	Filter	50	mL	12/31/09	FGA

LT 02/02/10

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037-2 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243494002 **BASIS:** As Received **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7868 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SWIPE **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-61-1	Uranium	0.901	ug/Filter		0.0066	0.02	0.02	2	MS	SKJ	01/07/10 15:59	100107-1	937303

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
937303	937302	SW846 3050B	1	Filter	50	mL	12/31/09	FGA

LT 02/02/10

DATA VALIDATION COVER SHEET

5120-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1037 VALIDATION DATE: 02/03/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☒ GENERAL CHEMISTRY	☐ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The matrix QC analyses were performed on samples from other LANL RNs. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 2/3/10

VALIDATOR'S SIGNATURE: L Thal DATE: 02/03/10

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST

5120-2

General Chemistry Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, I9	J-, I9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, I9a	J-, I9a
☐	☐	☒	3. The affected analytes are regarded as rejected because the analytical holding time was exceeded.	R, I9b	R, I9b
☐	☒	☐	4. The affected results were not analyzed with a valid 5-point calibration curve and/or a standard at the reporting limit.	UJ, R, I7	J, I7
☐	☒	☐	5. The affected analytes were analyzed with an initial calibration curve that exceeded the %RSD criteria and/or the associated multipoint calibration correlation coefficient is <0.995.	UJ, I7a	J, I7a
☐	☒	☐	6. The ICV and/or CCV were recovered outside the method specific limits.	UJ, I7c	J, I7c
☐	☒	☐	7. The ICV and/or CCV were not analyzed at the appropriate method frequency.	UJ, I7d	J, I7d
☐	☒	☐	8. Required calibration information is missing or samples were analyzed on an expired calibration. Contact the SMO or external laboratory for information.	R, I7f	R, I7f
☐	☐	☒	9. The interference check sample percent recovery value is <50%.	R, I2	J-, I2
☐	☐	☒	10. The interference check sample percent recovery value is ≥50% and <80%.	UJ, I2a	J-, I2a
☐	☐	☒	11. The interference check sample percent recovery value is >120%.	N/A	J+, I2b
☐	☐	☒	12. The interference check sample was not analyzed with the samples.	R, I2c	R, I2c
☐	☒	☐	13. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, I4	N/A

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	14. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, I4a
☐	☒	☐	15. The sample result is ≤5X the concentration of the related analyte in the instrument blank and continuing calibration blank.	U, I4b	N/A
☐	☒	☐	16. Continuing calibration blanks were not analyzed at the appropriate method frequency.	UJ, I4c	J, I4c
☐	☒	☐	17. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, I4d	N/A
☐	☒	☐	18. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, I4e	R, I4e
☐	☒	☐	19. The associate matrix spike recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I6	R, I6
☐	☒	☐	20. The associated matrix spike recovery was below the Lower Acceptance Limit (LAL) but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I6a	J-, I6a
☐	☒	☐	21. The associated matrix spike recovery was above the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package.	UJ, I6b	J+, I6b
☐	☒	☐	22. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not reject. Qualify data based on LCS information.	R, I6c	R, I6c
☐	☒	☐	23. The sample and/or the duplicate sample results RPD is not within the acceptance limits. Follow the external laboratory limits located within the associated data package.	UJ, I10b	J, I10b

GENERAL CHEMISTRY ANALYTICAL DATA VALIDATION CHECKLIST	
5120-2 General Chemistry Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	24. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	UJ, I10d	J, I10d
☐	☒	☐	25. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, I12	R, I12
☐	☒	☐	26. The LCS percent recover was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, I12a	J-, I12a
☐	☒	☐	27. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, I12b
☐	☒	☐	28. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Do not Reject if MS/MSD information is present. Qualify according to MS/MSD criteria.	R, I12c	R, I12c
☐	☒	☐	29. Duplicate, dilution, or reanalysis	UJ, I88	J, I88
☐	☒	☐	30. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, I19	J, R, I19
☒	☐	☐	31. Qualification of data via data validation does not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ (no qualification)

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7288	Project:	LANL01004
Sample ID:	243492001	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	9.18%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	69.3	255	ug/kg	1	AXC2 12/31/09	1024	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7290	Project:	LANL01004
Sample ID:	243492002	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	3.11%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	65.0	239	ug/kg	1	AXC2 12/31/09	1025	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7289	Project:	LANL01004
Sample ID:	243492003	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	9.89%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.2	262	ug/kg	1	AXC2 12/31/09	1026	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

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Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7291	Project:	LANL01004
Sample ID:	243492004	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	8.16%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.2	262	ug/kg	1	AXC2 12/31/09	1027	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7292	Project:	LANL01004
Sample ID:	243492005	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	5.97%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	69.5	256	ug/kg	1	AXC2 12/31/09	1031	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7293	Project:	LANL01004
Sample ID:	243492006	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	2.52%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	67.1	247	ug/kg	1	AXC2 12/31/09	1032	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7296	Project:	LANL01004
Sample ID:	243492007	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	7.99%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.9	272	ug/kg	1	AXC2 12/31/09	1033	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 4, 2010
Client SDG: 10-1037-1

Client Sample ID:	RE12-10-7298	Project:	LANL01004
Sample ID:	243493001	Client ID:	LANL010
Matrix:	W		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 12/30/09	1041	936398	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/29/09	1423	936396

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

LT 02/03/10

DATA VALIDATION COVER SHEET

5119-1

Data Validation Cover Sheet

Records Use only

Los Alamos NATIONAL LABORATORY EST. 1943

Section I.

REQUEST NUMBER: 10-1037 VALIDATION DATE: 02/03/10 LAB CODE: GEL

CONTRACT LABORATORY NAME: GEL Laboratories LLC

VALIDATOR: Linda Thal ORGANIZATION: Analytical Quality Associates, Inc.

ANALYTICAL SUITE (CHECK ALL THAT APPLY):

☐ TPH-GRO	☐ HIGH EXPLOSIVES	☐ DIOXIN FURANS	☐ LCMSMS PERCHLORATES
☐ TPH-DRO	☐ METALS	☐ PCB CONGENERS	☐ ORGANOCHLORINE PESTICIDES/POLYCHLORINATED BIPHENYLS
☐ GENERAL CHEMISTRY	☒ RADIOCHEMISTRY	☐ LCMSMS HIGH EXPLOSIVES	

☐ OTHER (DESCRIBE):

Section II. Completeness Check

YES	NO	N/A	(CHECK ONE)	YES	NO	N/A	(CHECK ONE)
☒	☐	☐	1. CHAIN-OF-CUSTODY FORM(S)	☒	☐	☐	6. RAW/BSS DATA
☒	☐	☐	2. CASE NARRATIVE	☒	☐	☐	7. QUALITY CONTROL FORMS
☒	☐	☐	3. SAMPLE RESULT FORMS	☐	☐	☒	8. QUANTITATION REPORTS
☐	☐	☒	4. SAMPLE CHROMATOGRAMS	☐	☐	☒	9. TICS FORMS
☐	☐	☒	5. STANDARD CHROMATOGRAMS	☐	☐	☒	10. TICS MASS SPECTRA

Comments/problems noted (include information about requests for further information submitted to the contract laboratory and agreed-upon date of resolution and contract laboratory point of contact):

1. The gamma spec sample results that were rejected by the laboratory due to high counting uncertainty, interference and low abundance were qualified R,R5a.
2. The soil duplicate analysis for gamma spec was performed on a sample from another LANL RN. No sample data were qualified as a result.

Reviewed by: ETM Level: 1 Date: 2/3/10

VALIDATOR'S SIGNATURE: L Thal DATE: 02/03/10

RAD ANALYTICAL DATA VALIDATION CHECKLIST

5119-2

Rad Analytical Data Validation Checklist

Records Use only

Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	1. The holding time was >1 and ≤2 times the applicable holding time requirement.	UJ, R9	J-, R9
☐	☒	☐	2. The holding time was >2 times the applicable holding time requirement.	R, R9a	J-, R9a
☐	☐	☒	3. The results for the affected analytes are considered not detected (U) because the associated sample concentration was less than or equal to the MDC.	U, R5	N/A
☒	☐	☐	4. The analyte should be regarded as rejected because spectral interferences prevent positive identification of the analytes.	R, R5a	R, R5a
☐	☒	☐	5. The MDC and/or TPU documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R5b	J-, R5b
☐	☐	☒	6. The results for the affected analytes should be regarded as not detected (U) because the associated sample concentration was less than 3X the 1 sigma TPU.	U, R11	N/A
☐	☒	☐	7. The sample result is ≤5X the concentration of the related analyte in the method blank.	U, R4	N/A
☐	☒	☐	8. The affected analytes are considered estimated and biased high because this analyte was identified in the method blank but was >5X.	N/A	J, R4a
☐	☐	☒	9. The sample result is ≤5X the concentration of the related analyte in the trip blank, rinsate blank, or equipment blank.	U, R4d	N/A
☐	☒	☐	10. Required method blank information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R4e	R, R4e
☐	☒	☐	11. The tracer is <10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3	R, R3

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below If Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☒	☐	12. The tracer is < the Lower Acceptance Level (LAL) but ≥10%R. Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	UJ, R3a	J-, R3a
☐	☒	☐	13. The Tracer%R value is > the Upper Acceptance Limit (UAL). Follow the external laboratory limits located within the associated data package. Tracer%R is not applicable for Gamma Spectroscopy.	N/A	J+, R3b
☐	☒	☐	14. Required tracer information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. Tracer%R is not applicable for Gamma Spectroscopy.	R, R3d	R, R3d
☐	☒	☐	15. The LCS percent recovery was <10%. Follow the external laboratory limits located within the associated data package.	R, R12	R, R12
☐	☒	☐	16. The LCS percent recovery was < the LAL but >10%. Follow the external laboratory limits located within the associated data package.	UJ, R12a	J-, R12a
☐	☒	☐	17. The LCS percent recovery was > the UAL. Follow the external laboratory limits located within the associated data package.	N/A	J+, R12b
☐	☒	☐	18. The LCS documentation is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R12c	R, R12c
☐	☒	☐	19. Associated duplicate sample has DER or RER > the analytical laboratory's acceptance limits.	R, R10	J, J10
☐	☒	☐	20. The duplicate sample was not prepared and/or analyzed with the samples for unspecified reasons. The duplicate information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information.	R, R6	R, R6

RAD ANALYTICAL DATA VALIDATION CHECKLIST	
5119-2 Rad Analytical Data Validation Checklist	Records Use only Los Alamos NATIONAL LABORATORY

Yes	No	N/A		Assign Qualifier Listed Below if Criterion = Yes	
(Check One)				Non-detected Analyte	Detected Analyte
☐	☐	☒	21. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6	R, R6
☐	☐	☒	22. The associated matrix spike recovery was <10%. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6a	J-, R6a
☐	☐	☒	23. The associated matrix spike recovery was above the UAL. Follow the external laboratory limits. MS/MSD is not applicable to Gamma Spectroscopy.	UJ, R6b	J+, R6b
☐	☐	☒	24. Required matrix spike information is missing. Data may not be acceptable for use. Contact the SMO or external laboratory for information. If LCS information is present, do not Reject. Qualify data based on LCS information. MS/MSD is not applicable to Gamma Spectroscopy.	R, R6c	R, R6c
☐	☒	☐	25. Duplicate, dilution, or reanalysis.	UJ, R88	J, R88
☐	☒	☐	26. The LANL project chemist identified quality deficiencies in the reported data that require further qualification. This code can ONLY be used and/or under advisement by the LANL project chemist.	UJ, R, R19	J, R, R19
☒	☐	☐	27. Quantification of data via data validation did not occur based on Quality Control requirements in this procedure. Adhere to the external laboratory qualifiers found within the Form I analytical data summary sheets generated by the external laboratory.	U, U_LAB	J, J_LAB NQ, NQ

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7288
Sample ID: 243492001
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 9.18%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	-0.00415		0.0197	+/-0.00337	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00279		0.0227	+/-0.00198	0.050	pCi/g		JXD2	01/04/10	1814	937598	3
Plutonium-239/240	U	0.0209		0.0255	+/-0.00587	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.22		0.153	+/-0.118	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0426		0.0947	+/-0.0185	0.100	pCi/g						
Uranium-238		1.59		0.0885	+/-0.146	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0265		0.252	+/-0.0779	0.200	pCi/g		MXR1	01/04/10	1359	936923	5
Bismuth-211	UI	4.21	R,R5a	0.312	+/-0.242		pCi/g						
Bismuth-214		1.40		0.100	+/-0.0983	0.200	pCi/g						
Cadmium-109	UI	3.38	R,R5a	1.20	+/-0.485		pCi/g						
Cerium-139	U	0.00113		0.0484	+/-0.0145	0.050	pCi/g						
Cesium-134	U	0.0593		0.0858	+/-0.0261	0.100	pCi/g						
Cesium-137		0.212		0.0629	+/-0.0327	0.100	pCi/g						
Cobalt-60	U	0.0262		0.0718	+/-0.0204	0.100	pCi/g						
Europium-152	U	-0.00384		0.150	+/-0.0506	0.200	pCi/g						
Lanthanum-140	U	-0.0321		0.132	+/-0.042		pCi/g						
Lead-212		1.54		0.0926	+/-0.0775	0.100	pCi/g						
Lead-214		1.46		0.111	+/-0.0924	0.100	pCi/g						
Mercury-203	U	0.0236		0.069	+/-0.0195	0.100	pCi/g						
Potassium-40		21.3		0.397	+/-1.07	1.00	pCi/g						
Radium-223	U	-0.168		1.11	+/-0.332		pCi/g						
Radium-224	UI	4.29	R,R5a	1.05	+/-0.670		pCi/g						
Radium-226		1.40		0.100	+/-0.0983		pCi/g						
Radium-228		1.72		0.184	+/-0.157	0.500	pCi/g						
Ruthenium-106	U	0.130		0.539	+/-0.154	0.800	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7288 Project: LANL01004
Sample ID: 243492001 Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Sodium-22	U	-0.0137		0.0651	+/-0.0205	0.080	pCi/g						
Strontium-85	U	0.0451		0.062	+/-0.0194		pCi/g						
Thallium-208		0.447		0.0525	+/-0.0449	0.080	pCi/g						
Thorium-227	U	0.173		0.605	+/-0.171		pCi/g						
Thorium-231	U	-0.168		1.11	+/-0.332		pCi/g						
Thorium-234	UI	2.26	R,R5a	2.11	+/-1.07	2.00	pCi/g						
Tin-113	U	-0.0476		0.0674	+/-0.0219	0.100	pCi/g						
Uranium-235	U	0.130		0.347	+/-0.101	0.500	pCi/g						
Yttrium-88	U	0.0056		0.0555	+/-0.0163	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	92.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	84.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.6	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7290
Sample ID: 243492002
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 3.11%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00182		0.0207	+/-0.00228	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00244		0.0198	+/-0.00244	0.050	pCi/g		JXD2	01/04/10	1546	937598	3
Plutonium-239/240	U	0.00488		0.0223	+/-0.003	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.802		0.154	+/-0.0862	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0554		0.0957	+/-0.0189	0.100	pCi/g						
Uranium-238		0.856		0.0895	+/-0.0904	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.034		0.110	+/-0.033	0.200	pCi/g		MXR1	01/04/10	1400	936923	5
Bismuth-211	UI	3.38	R,R5a	0.413	+/-0.283		pCi/g						
Bismuth-214		1.30		0.138	+/-0.112	0.200	pCi/g						
Cadmium-109	UI	3.65	R,R5a	1.09	+/-0.456		pCi/g						
Cerium-139	U	-0.00196		0.055	+/-0.0165	0.050	pCi/g						
Cesium-134	UI	0.130	R,R5a	0.120	+/-0.0321	0.100	pCi/g						
Cesium-137	U	-0.0461		0.0751	+/-0.0244	0.100	pCi/g						
Cobalt-60	U	-0.0095		0.0829	+/-0.0254	0.100	pCi/g						
Europium-152	U	-0.0199		0.189	+/-0.0591	0.200	pCi/g						
Lanthanum-140	U	-0.11		0.176	+/-0.0615		pCi/g						
Lead-212		1.70		0.102	+/-0.0965	0.100	pCi/g						
Lead-214		1.17		0.144	+/-0.103	0.100	pCi/g						
Mercury-203	U	0.00884		0.0803	+/-0.0233	0.100	pCi/g						
Potassium-40		33.7		0.770	+/-1.46	1.00	pCi/g						
Radium-223	U	0.0507		1.31	+/-0.387		pCi/g						
Radium-224	UI	2.07	R,R5a	1.16	+/-0.643		pCi/g						
Radium-226		1.30		0.138	+/-0.112		pCi/g						
Radium-228		1.67		0.292	+/-0.220	0.500	pCi/g						
Ruthenium-106	U	-0.369		0.634	+/-0.204	0.800	pCi/g						
Sodium-22	U	0.00		0.0997	+/-0.00	0.080	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7290 Project: LANL01004
Sample ID: 243492002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0843	0.0908	+/-0.0279		pCi/g						
Thallium-208		0.587	0.0711	+/-0.0545	0.080	pCi/g						
Thorium-227	U	-0.29	0.671	+/-0.203		pCi/g						
Thorium-231	U	0.0507	1.31	+/-0.387		pCi/g						
Thorium-234		1.90	1.09	+/-0.624	2.00	pCi/g						
Tin-113	U	-0.0357	0.0867	+/-0.0273	0.100	pCi/g						
Uranium-235	U	0.0277	0.400	+/-0.120	0.500	pCi/g						
Yttrium-88	U	-0.00378	0.0639	+/-0.0196	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	86.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7289
Sample ID: 243492003
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 9.89%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.0042		0.0205	+/-0.00283	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00		0.0191	+/-0.00166	0.050	pCi/g		JXD2	01/04/10	1547	937598	3
Plutonium-239/240	U	0.00705		0.0215	+/-0.0029	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.913		0.133	+/-0.0907	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0585		0.0828	+/-0.0181	0.100	pCi/g						
Uranium-238		0.788		0.0774	+/-0.0812	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0453		0.109	+/-0.0328	0.200	pCi/g		MXR1	01/05/10	1415	936923	5
Bismuth-211	UI	3.76	R,R5a	0.406	+/-0.275		pCi/g						
Bismuth-214		1.36		0.151	+/-0.119	0.200	pCi/g						
Cadmium-109	UI	3.27	R,R5a	0.947	+/-0.367		pCi/g						
Cerium-139	U	-0.00524		0.0546	+/-0.0166	0.050	pCi/g						
Cesium-134	U	0.0896		0.114	+/-0.0309	0.100	pCi/g						
Cesium-137	U	0.0249		0.0838	+/-0.0246	0.100	pCi/g						
Cobalt-60	U	0.0451		0.0958	+/-0.0269	0.100	pCi/g						
Europium-152	U	0.0502		0.195	+/-0.065	0.200	pCi/g						
Lanthanum-140	U	0.0551		0.215	+/-0.0625		pCi/g						
Lead-212		1.54		0.0944	+/-0.0902	0.100	pCi/g						
Lead-214		1.31		0.142	+/-0.102	0.100	pCi/g						
Mercury-203	U	0.0444		0.0821	+/-0.0231	0.100	pCi/g						
Potassium-40		21.8		0.634	+/-1.05	1.00	pCi/g						
Radium-223	U	-1.0		1.19	+/-0.392		pCi/g						
Radium-224	UI	3.87	R,R5a	1.07	+/-0.618		pCi/g						
Radium-226		1.36		0.151	+/-0.119		pCi/g						
Radium-228		1.42		0.310	+/-0.206	0.500	pCi/g						
Ruthenium-106	U	0.00638		0.686	+/-0.206	0.800	pCi/g						
Sodium-22	U	0.000827		0.0845	+/-0.0253	0.080	pCi/g						

LT 02/03/10

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Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7289 Project: LANL01004
Sample ID: 243492003 Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Strontium-85	UI	0.0971	R,R5a	0.0835	+/-0.0246		pCi/g						
Thallium-208		0.562		0.0774	+/-0.0564	0.080	pCi/g						
Thorium-227	U	-0.35		0.658	+/-0.203		pCi/g						
Thorium-231	U	-1.0		1.19	+/-0.392		pCi/g						
Thorium-234	UI	1.18	R,R5a	1.04	+/-0.511	2.00	pCi/g						
Tin-113	U	-0.0455		0.0781	+/-0.0253	0.100	pCi/g						
Uranium-235	U	0.248		0.358	+/-0.232	0.500	pCi/g						
Yttrium-88	U	0.0107		0.0675	+/-0.0194	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	81.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	83.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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> Result is greater than value reported
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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Company : Los Alamos National Laboratory
Address : PO Box 1663
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID:	RE12-10-7291	Project:	LANL01004
Sample ID:	243492004	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	8.16%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	-0.00181		0.0211	+/-0.00176	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00359		0.0194	+/-0.00397	0.050	pCi/g		JXD2	01/04/10	1547	937598	3
Plutonium-239/240	U	0.00359		0.0219	+/-0.00317	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		1.17		0.150	+/-0.114	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0597		0.093	+/-0.0194	0.100	pCi/g						
Uranium-238		1.14		0.0869	+/-0.111	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.167		0.511	+/-0.162	0.200	pCi/g		MXR1	01/04/10	1401	936923	5
Bismuth-211	UI	4.25	R,R5a	0.395	+/-0.307		pCi/g						
Bismuth-214		1.28		0.124	+/-0.0956	0.200	pCi/g						
Cadmium-109	U	1.81		2.18	+/-0.696		pCi/g						
Cerium-139	U	-0.0155		0.061	+/-0.0186	0.050	pCi/g						
Cesium-134	U	0.0606		0.098	+/-0.0269	0.100	pCi/g						
Cesium-137	U	0.0546		0.0841	+/-0.0238	0.100	pCi/g						
Cobalt-60	U	0.000578		0.0788	+/-0.0243	0.100	pCi/g						
Europium-152	U	-0.0396		0.200	+/-0.0797	0.200	pCi/g						
Lanthanum-140	U	0.0273		0.178	+/-0.0517		pCi/g						
Lead-212		1.72		0.108	+/-0.0988	0.100	pCi/g						
Lead-214		1.48		0.138	+/-0.113	0.100	pCi/g						
Mercury-203	U	0.0402		0.0913	+/-0.0292	0.100	pCi/g						
Potassium-40		20.5		0.686	+/-1.21	1.00	pCi/g						
Radium-223	U	-0.547		1.36	+/-0.483		pCi/g						
Radium-224	UI	5.10	R,R5a	1.23	+/-0.826		pCi/g						
Radium-226		1.28		0.124	+/-0.0956		pCi/g						
Radium-228		1.54		0.224	+/-0.164	0.500	pCi/g						
Ruthenium-106	U	0.0591		0.633	+/-0.191	0.800	pCi/g						
Sodium-22	U	0.0006		0.0903	+/-0.0278	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7291 Project: LANL01004
Sample ID: 243492004 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0602	0.0815	+/-0.0258		pCi/g						
Thallium-208		0.637	0.0684	+/-0.0466	0.080	pCi/g						
Thorium-227	U	-0.241	0.809	+/-0.241		pCi/g						
Thorium-231	U	-0.547	1.36	+/-0.483		pCi/g						
Thorium-234	U	2.34	3.85	+/-1.60	2.00	pCi/g						
Tin-113	U	-0.00819	0.0871	+/-0.0261	0.100	pCi/g						
Uranium-235	U	0.361	0.454	+/-0.134	0.500	pCi/g						
Yttrium-88	U	0.013	0.0642	+/-0.0183	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	73.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7292
Sample ID: 243492005
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 5.97%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.00053		0.020	+/-0.00342	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	-0.00124		0.0202	+/-0.00216	0.050	pCi/g		JXD2	01/04/10	1123	937598	3
Plutonium-239/240	U	0.00373		0.0227	+/-0.00216	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.694		0.128	+/-0.073	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0357		0.0794	+/-0.0137	0.100	pCi/g						
Uranium-238		0.755		0.0742	+/-0.0777	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0936		0.231	+/-0.0735	0.200	pCi/g		MXR1	01/04/10	1401	936923	5
Bismuth-211	UI	4.28	R,R5a	0.285	+/-0.315		pCi/g						
Bismuth-214		1.30		0.102	+/-0.0999	0.200	pCi/g						
Cadmium-109	UI	3.79	R,R5a	1.04	+/-0.449		pCi/g						
Cerium-139	U	0.00264		0.0453	+/-0.0131	0.050	pCi/g						
Cesium-134	UI	0.0919	R,R5a	0.0857	+/-0.0404	0.100	pCi/g						
Cesium-137	U	0.00388		0.0555	+/-0.0167	0.100	pCi/g						
Cobalt-60	U	0.0196		0.067	+/-0.0196	0.100	pCi/g						
Europium-152	U	0.0466		0.147	+/-0.0459	0.200	pCi/g						
Lanthanum-140	U	-0.0599		0.122	+/-0.0417		pCi/g						
Lead-212		1.69		0.0885	+/-0.114	0.100	pCi/g						
Lead-214		1.49		0.0995	+/-0.116	0.100	pCi/g						
Mercury-203	U	-0.0142		0.0623	+/-0.0218	0.100	pCi/g						
Potassium-40		31.2		0.481	+/-1.64	1.00	pCi/g						
Radium-223	U	-0.254		1.00	+/-0.359		pCi/g						
Radium-224	UI	4.96	R,R5a	1.01	+/-0.659		pCi/g						
Radium-226		1.30		0.102	+/-0.0999		pCi/g						
Radium-228		1.82		0.191	+/-0.185	0.500	pCi/g						
Ruthenium-106	U	-0.15		0.469	+/-0.148	0.800	pCi/g						
Sodium-22	U	-0.0167		0.0707	+/-0.0226	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7292 Project: LANL01004
Sample ID: 243492005 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0512	0.0579	+/-0.0172		pCi/g						
Thallium-208		0.543	0.0516	+/-0.0488	0.080	pCi/g						
Thorium-227	U	-0.0971	0.588	+/-0.180		pCi/g						
Thorium-231	U	-0.254	1.00	+/-0.359		pCi/g						
Thorium-234	U	1.68	1.74	+/-0.918	2.00	pCi/g						
Tin-113	U	-0.00146	0.0652	+/-0.019	0.100	pCi/g						
Uranium-235	U	0.0778	0.340	+/-0.0987	0.500	pCi/g						
Yttrium-88	U	0.0154	0.0535	+/-0.0148	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	90.2	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	73.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	85.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
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E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID:	RE12-10-7293	Project:	LANL01004
Sample ID:	243492006	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	2.52%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	-0.00181		0.0198	+/-0.00442	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00		0.0172	+/-0.00106	0.050	pCi/g		JXD2	01/04/10	1124	937598	3
Plutonium-239/240	U	0.00		0.0194	+/-0.0015	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.768		0.0913	+/-0.0714	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.040		0.0567	+/-0.0134	0.100	pCi/g						
Uranium-238		0.836		0.0529	+/-0.0763	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.00333		0.109	+/-0.0357	0.200	pCi/g		MXR1	01/04/10	1402	936923	5
Bismuth-211	UI	3.88	R,R5a	0.358	+/-0.276		pCi/g						
Bismuth-214		1.31		0.134	+/-0.121	0.200	pCi/g						
Cadmium-109	UI	3.23	R,R5a	0.973	+/-0.483		pCi/g						
Cerium-139	U	0.00274		0.0508	+/-0.0147	0.050	pCi/g						
Cesium-134	U	0.0853		0.120	+/-0.041	0.100	pCi/g						
Cesium-137	U	-0.0242		0.0795	+/-0.0256	0.100	pCi/g						
Cobalt-60	U	-0.0105		0.0816	+/-0.0255	0.100	pCi/g						
Europium-152	U	0.00779		0.169	+/-0.0483	0.200	pCi/g						
Lanthanum-140	U	0.0164		0.201	+/-0.0591		pCi/g						
Lead-212		1.80		0.0953	+/-0.0993	0.100	pCi/g						
Lead-214		1.35		0.117	+/-0.102	0.100	pCi/g						
Mercury-203	U	-0.0328		0.0696	+/-0.0222	0.100	pCi/g						
Potassium-40		34.3		0.653	+/-1.53	1.00	pCi/g						
Radium-223	U	-0.273		1.07	+/-0.359		pCi/g						
Radium-224	UI	5.29	R,R5a	1.09	+/-0.835		pCi/g						
Radium-226		1.31		0.134	+/-0.121		pCi/g						
Radium-228		1.79		0.244	+/-0.217	0.500	pCi/g						
Ruthenium-106	U	0.142		0.655	+/-0.192	0.800	pCi/g						
Sodium-22	U	0.0254		0.0994	+/-0.0292	0.080	pCi/g						

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Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7293 Project: LANL01004
Sample ID: 243492006 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.032	0.0691	+/-0.0216		pCi/g						
Thallium-208		0.601	0.0705	+/-0.057	0.080	pCi/g						
Thorium-227	U	0.253	0.653	+/-0.190		pCi/g						
Thorium-231	U	-0.273	1.07	+/-0.359		pCi/g						
Thorium-234		1.93	1.07	+/-0.562	2.00	pCi/g						
Tin-113	U	-0.00902	0.0836	+/-0.0246	0.100	pCi/g						
Uranium-235	U	-0.0115	0.347	+/-0.102	0.500	pCi/g						
Yttrium-88	U	0.0565	0.0853	+/-0.0203	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	89.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	87.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
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F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID:	RE12-10-7296	Project:	LANL01004
Sample ID:	243492007	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	7.99%		

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
"As Received"													
Rad Alpha Spec Analysis													
AM241 "Dry Weight Corrected"													
Americium-241	U	0.0103		0.0293	+/-0.00914	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"													
Plutonium-238	U	0.00733		0.0198	+/-0.00302	0.050	pCi/g		JXD2	01/04/10	1124	937598	3
Plutonium-239/240	U	0.00733		0.0223	+/-0.00347	0.050	pCi/g						
ISOU "Dry Weight Corrected"													
Uranium-233/234		0.937		0.109	+/-0.0873	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0564		0.0676	+/-0.0161	0.100	pCi/g						
Uranium-238		1.17		0.0631	+/-0.104	0.100	pCi/g						
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Americium-241	U	0.0898		0.294	+/-0.0917	0.200	pCi/g		MXR1	01/04/10	1402	936923	5
Bismuth-211	UI	4.29	R,R5a	0.242	+/-0.236		pCi/g						
Bismuth-214		1.18		0.0916	+/-0.0818	0.200	pCi/g						
Cadmium-109	UI	3.85	R,R5a	1.25	+/-0.462		pCi/g						
Cerium-139	U	-0.00545		0.0426	+/-0.0124	0.050	pCi/g						
Cesium-134	UI	0.102	R,R5a	0.0715	+/-0.0226	0.100	pCi/g						
Cesium-137	UI	0.063	R,R5a	0.0605	+/-0.0163	0.100	pCi/g						
Cobalt-60	U	-0.022		0.0454	+/-0.0151	0.100	pCi/g						
Europium-152	U	-0.0159		0.127	+/-0.0487	0.200	pCi/g						
Lanthanum-140	U	-0.024		0.114	+/-0.0359		pCi/g						
Lead-212		1.60		0.0783	+/-0.0751	0.100	pCi/g						
Lead-214		1.49		0.0843	+/-0.0907	0.100	pCi/g						
Mercury-203	U	-0.00448		0.0581	+/-0.0176	0.100	pCi/g						
Potassium-40		24.7		0.457	+/-1.14	1.00	pCi/g						
Radium-223	U	0.171		0.908	+/-0.311		pCi/g						
Radium-224	UI	3.79	R,R5a	0.890	+/-0.494		pCi/g						
Radium-226		1.18		0.0916	+/-0.0818		pCi/g						
Radium-228		1.54		0.171	+/-0.158	0.500	pCi/g						
Ruthenium-106	U	0.0893		0.435	+/-0.131	0.800	pCi/g						
Sodium-22	U	-0.00299		0.0543	+/-0.0167	0.080	pCi/g						

LT 02/03/10

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7296 Project: LANL01004
Sample ID: 243492007 Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
GAMMA SPEC "Dry Weight Corrected"													
Strontium-85	UI	0.128	R,R5a	0.0664	+/-0.0192		pCi/g						
Thallium-208		0.510		0.0436	+/-0.0383	0.080	pCi/g						
Thorium-227	U	-0.201		0.519	+/-0.160		pCi/g						
Thorium-231	U	0.171		0.908	+/-0.311		pCi/g						
Thorium-234	U	1.17		2.30	+/-1.08	2.00	pCi/g						
Tin-113	U	0.00161		0.0622	+/-0.0182	0.100	pCi/g						
Uranium-235	U	0.142		0.314	+/-0.0953	0.500	pCi/g						
Yttrium-88	U	0.0181		0.0453	+/-0.0125	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	66.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	76.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	69.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

LT 02/03/10

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7867
Sample ID: 243494001
Matrix: SWP
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
Alphaspec Am241 Cm, Filter "As Received"													
Americium-241	U	-0.0228		0.276	+/-0.0694	1.00	pCi/Filter		MXE1	01/13/10	0827	938067	1
Alphaspec Pu, Filter "As Received"													
Plutonium-238	U	-0.014		0.103	+/-0.0198	1.00	pCi/Filter		MXE1	01/13/10	0827	938068	2
Plutonium-239/240	U	0.028		0.130	+/-0.0343	1.00	pCi/Filter						
Alphaspec U, Filter "As Received"													
Uranium-233/234		0.692		0.0386	+/-0.110	1.00	pCi/Filter		MXE1	01/13/10	0712	938069	3
Uranium-235/236		0.0705		0.0478	+/-0.0356	1.00	pCi/Filter						
Uranium-238		1.23		0.0386	+/-0.157	1.00	pCi/Filter						
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Filter (Long List) "As Received"													
Americium-241	U	9.97		17.0	+/-4.82		pCi/Filter		MXR1	01/04/10	1928	937282	5
Bismuth-211	U	-0.0754		16.9	+/-6.15		pCi/Filter						
Bismuth-214	U	-1.89		6.52	+/-2.90		pCi/Filter						
Cadmium-109	U	-32.3		50.2	+/-17.8		pCi/Filter						
Cerium-139	U	-0.698		2.09	+/-0.663		pCi/Filter						
Cesium-134	U	1.34		3.21	+/-0.911		pCi/Filter						
Cesium-137	U	-1.36		3.58	+/-1.38	5.00	pCi/Filter						
Cobalt-60	U	-2.85		2.92	+/-1.41		pCi/Filter						
Europium-152	U	-1.82		6.97	+/-2.14		pCi/Filter						
Lanthanum-140	U	-1.83		7.51	+/-2.41		pCi/Filter						
Lead-212	U	-2.68		4.72	+/-2.05		pCi/Filter						
Lead-214	U	-2.18		5.79	+/-2.17		pCi/Filter						
Mercury-203	U	-0.407		2.97	+/-0.889		pCi/Filter						
Potassium-40	U	6.24		27.0	+/-13.2		pCi/Filter						
Radium-223	U	-20.6		44.7	+/-14.0		pCi/Filter						
Radium-224	U	-52.4		46.1	+/-16.0		pCi/Filter						
Radium-226	U	10.2		49.9	+/-26.9		pCi/Filter						
Radium-228	U	-1.55		10.1	+/-3.99		pCi/Filter						
Ruthenium-106	U	-3.59		22.7	+/-7.24		pCi/Filter						
Sodium-22	U	0.270		2.70	+/-0.792		pCi/Filter						
Strontium-85	U	-14.1		3.74	+/-1.52		pCi/Filter						
Thallium-208	UI	3.47	R,R5a	3.31	+/-1.79		pCi/Filter						
Thorium-227	U	11.2		29.0	+/-8.36		pCi/Filter						

LT 02/03/10

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7867 Project: LANL01004
Sample ID: 243494001 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Filter (Long List) "As Received"												
Thorium-231	U	-22.1	33.8	+/-14.0		pCi/Filter						
Thorium-234	U	-110	122	+/-50.2		pCi/Filter						
Tin-113	U	-0.0691	3.27	+/-0.991		pCi/Filter						
Uranium-235	U	-13.3	13.6	+/-6.37		pCi/Filter						
Yttrium-88	U	-0.31	2.48	+/-0.794		pCi/Filter						

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Cm, Filter "As l	95.1	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Filter "As Received	95.2	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Filter "As Received"	83.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7868
Sample ID: 243494002
Matrix: SWP
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result		DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
Alphaspec Am241 Cm, Filter "As Received"													
Americium-241	U	0.0262		0.296	+/-0.0794	1.00	pCi/Filter		MXE1	01/13/10	0827	938067	1
Alphaspec Pu, Filter "As Received"													
Plutonium-238	U	0.0155		0.114	+/-0.0269	1.00	pCi/Filter		MXE1	01/13/10	0827	938068	2
Plutonium-239/240	U	0.0155		0.114	+/-0.0269	1.00	pCi/Filter						
Alphaspec U, Filter "As Received"													
Uranium-233/234		0.594		0.037	+/-0.0987	1.00	pCi/Filter		MXE1	01/13/10	0712	938069	3
Uranium-235/236		0.101		0.0457	+/-0.0419	1.00	pCi/Filter						
Uranium-238		0.682		0.127	+/-0.111	1.00	pCi/Filter						
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Filter (Long List) "As Received"													
Americium-241	U	-0.584		9.34	+/-2.82		pCi/Filter		MXR1	01/04/10	1928	937282	5
Bismuth-211	U	-12.6		18.0	+/-7.98		pCi/Filter						
Bismuth-214	U	-2.84		6.43	+/-2.45		pCi/Filter						
Cadmium-109	U	-30.3		50.0	+/-19.6		pCi/Filter						
Cerium-139	U	-0.766		2.42	+/-0.734		pCi/Filter						
Cesium-134	U	-1.15		3.05	+/-1.28		pCi/Filter						
Cesium-137	U	0.0701		2.59	+/-0.787	5.00	pCi/Filter						
Cobalt-60	U	-1.22		2.54	+/-0.813		pCi/Filter						
Europium-152	U	-1.22		7.69	+/-2.33		pCi/Filter						
Lanthanum-140	U	0.338		7.82	+/-2.34		pCi/Filter						
Lead-212	U	0.757		4.51	+/-2.13		pCi/Filter						
Lead-214	U	0.319		6.33	+/-3.28		pCi/Filter						
Mercury-203	U	1.08		3.41	+/-1.05		pCi/Filter						
Potassium-40	U	2.64		25.5	+/-16.2		pCi/Filter						
Radium-223	U	-8.33		51.7	+/-15.6		pCi/Filter						
Radium-224	U	19.2		54.9	+/-19.0		pCi/Filter						
Radium-226	U	54.7		56.3	+/-45.2		pCi/Filter						
Radium-228	U	-1.41		11.6	+/-5.02		pCi/Filter						
Ruthenium-106	U	-9.31		23.6	+/-7.34		pCi/Filter						
Sodium-22	U	-1.82		2.45	+/-0.803		pCi/Filter						
Strontium-85	UI	15.9	R,R5a	4.25	+/-1.31		pCi/Filter						
Thallium-208	U	0.332		2.69	+/-1.50		pCi/Filter						
Thorium-227	U	8.86		30.7	+/-9.42		pCi/Filter						
Thorium-231	U	0.412		31.0	+/-11.6		pCi/Filter						

LT 02/03/10

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7868 Project: LANL01004
Sample ID: 243494002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Filter (Long List) "As Received"												
Thorium-234	U	-90.7	95.9	+/-36.1		pCi/Filter						
Tin-113	U	0.095	3.41	+/-1.03		pCi/Filter						
Uranium-235	U	-9.04	17.2	+/-6.76		pCi/Filter						
Yttrium-88	U	0.861	2.95	+/-0.862		pCi/Filter						

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Cm, Filter "As I	85.6	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Filter "As Received	91.9	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Filter "As Received"	89.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.

LT 02/03/10

Tuesday, December 22, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1037

LOS ALAMOS

NATIONAL LABORATORY

REQUEST NUMBER: 10-1037

ATTN: Valerie Davis

General Engineering Laboratories, Inc., Charleston, SC.

2040 Savage Rd

Charleston, SC 29407

TURNAROUND/REPORT DUE: 1/21/2010

TURNAROUND REQ'D: 30

LAB REQUEST COMMENTS:

243492 243493 243494

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7288	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7288	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7290	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7290	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7289	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7289	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7291	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7291	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7292	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7292	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7293	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7293	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7296	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7296	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7298	1	POLY	METALS+U-GEL	Nitric Acid	W
RE12-10-7298	1	POLY	SW-846:6850	Ice	W
RE12-10-7298	1	POLY	TCN	Sodium Hydroxide	W
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-Am-241	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-GS	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-ISOPU	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-ISOU	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-U	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-Am-241	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-GS	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-ISOPU	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY	SWP-ISOU	None	SWP

Tuesday, December 22, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1037

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-U	None	SWP

Relinquished By:		Date	Time	Received By:		Date	Time
[illegible]	[signature]	12/22/09	1400	Patricia Dover-Dent	[signature]	12-23-09	10:10
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		
Printed Name	Signature			Printed Name	Signature		

Received for DISPOSAL By: **Date** **Time** **Remarks:**

Printed Name Signature

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:10-1037
Per Agreement Number:128310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 12/22/2009
TURNAROUND/REPORT DUE: 1/21/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	HASL-300:ISOPU	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	HASL-300:ISOU	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	SW-846:6850	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	
	SW-846:7470A	1	RE12-10-7298	W	12/18/2009	
	SW-846:7471A	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
	SW-846:9012A	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	

Final Page of REQUEST NUMBER 10-1037

GEL Laboratories LLC

a member of **The GEL Group** INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

January 05, 2010

Ms. Joylene Valdez
Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545

Re: LANL ER Project
Work Orders: 243492 243493 243494
SDG: 10-1037

Dear Ms. Valdez:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on December 23, 2009, and analyzed for General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4485.

Sincerely,

for

Valerie Davis
Project Manager

Purchase Order: 72733-001-09
Chain of Custody: 10-1037
Enclosures

problem solved

Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Work Order #: 243492 and 243493, 243494
SDG: 10-1037

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Sample Data Summary 839
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Standards 887
Raw Data 900
Miscellaneous 1256

Metals Analysis **1312**
Case Narrative 1313
Sample Data Summary 1318

Quality Control Summary 1321
Standards 1333
Raw Data 1336
Miscellaneous 1403

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Case Narrative 1420
Sample Data Summary 1425
Quality Control Summary 1434
Instrument QC Data Summary 1437
Cyanide, Total 1439

General Chemistry Analysis 1449
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Quality Control Summary 1458
Instrument QC Data Summary 1461
Cyanide, Total 1463

Radiological Analysis 1471
Sample Data Summary 1483
Quality Control Data 1506
Raw Data 1513
Background and Efficiency Data 2056
Standards Data 2163
Runlogs 2195

Radiological Analysis 2200
Sample Data Summary 2209
Quality Control Data 2217
Raw Data 2224
Background and Efficiency Data 2471
Standards Data 2527
Runlogs 2575

Case Narrative

Case Narrative for
Los Alamos National Laboratory (72733-001-09)
LANL ER Project
Workorder #: 243492, 243493 and 243494
SDG # : 10-1037

January 05, 2010

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on December 23, 2009 for analysis. The samples were prepared/analyzed within the required holding time. Shipping container temperatures were checked, documented, and within specifications. The samples were screened according to GEL Standard Operating Procedure. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. Containers were checked for pH, where appropriate, and matched the preservative as documented on the accompanying chain of custody. The containers for radiochemistry were received at 13/15/16C temperatures. Shipping container temperature was within specification (0 - 6C).

Sample Identification The laboratory received the following samples:

Laboratory ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
243493001	RE12-10-7298
243494001	RE12-10-7867
243494002	RE12-10-7868

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: General Chemistry, Metals, Perchlorates by LCMSMS and Radiochemistry.

I certify that this data report is in compliance with the terms and conditions of the subcontract and task order, both technically and for completeness, for other than the conditions detailed in the attached case narrative.

for

Valerie Davis

Project Manager

List of current GEL Certifications as of 05 January 2010

State	Certification
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California - NELAP	01151CA
Colorado	GEL
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA Region 5	WG-15J
Florida - NELAP	E87156
Georgia	E87156 (FL/NELAP)
Georgia DW	967
Hawaii	N/A
ISO 17025	2567.01
Idaho	SC00012
Illinois - NELAP	200029
Indiana	C-SC-01
Kansas - NELAP	E-10332
Kentucky	90129
Louisiana - NELAP	03046
Maryland	270
Massachusetts	M-SC012
Nevada	SC00012
New Jersey - NELAP	SC002
New Mexico	FL NELAP E87156
New York - NELAP	11501
North Carolina	233
North Carolina DW	45709
Oklahoma	9904
Pennsylvania - NELAP	68-00485
South Carolina	10120001/10120002
Tennessee	TN 02934
Texas - NELAP	T104704235-07B-TX
U.S. Dept. of Agriculture	S-52597
Utah - NELAP	GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Tuesday, December 22, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1037

REQUEST NUMBER: 10-1037

LOS ALAMOS

NATIONAL LABORATORY

ATTN: Valerie Davis

TURNAROUND/REPORT DUE: 1/21/2010

General Engineering Laboratories, Inc.,
Charleston, SC.

TURNAROUND REQ'D: 30

2040 Savage Rd

Charleston, SC 29407

LAB REQUEST COMMENTS: 243492 243493 243494

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7288	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7288	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7290	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7290	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7289	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7289	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7291	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7291	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7292	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7292	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7293	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7293	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7296	1	POLY	AM241+GS+ISOPU+ISOU	None	R
RE12-10-7296	1	POLY	Met+U+CLO4+CN	Ice	R
RE12-10-7298	1	POLY	METALS+U-GEL	Nitric Acid	W
RE12-10-7298	1	POLY	SW-846:6850	Ice	W
RE12-10-7298	1	POLY	TCN	Sodium Hydroxide	W
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-Am-241	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-GS	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-ISOPU	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-ISOU	None	SWP
RE12-10-7867	1	8 IN RESEALABLE POLY BAG	SWP-U	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-Am-241	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-GS	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-ISOPU	None	SWP
RE12-10-7868	1	8 IN RESEALABLE POLY	SWP-ISOU	None	SWP

Tuesday, December 22, 2009

LAB CHAIN OF CUSTODY DOCUMENT NUMBER: 10-1037

SAMPLE ID	CTNR	CTNR DESC	ORDER	PRESERV	MATRIX
RE12-10-7868	1	8 IN RESEALABLE POLY BAG	SWP-U	None	SWP

Relinquished By:	Date	Time	Received By:	Date	Time
[signature]	12/22/09	1400	Patricia Dover-Dent [signature]	12-23-09	10:10
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		
Printed Name / Signature			Printed Name / Signature		

Received for DISPOSAL By:	Date	Time	Remarks:
Printed Name / Signature			

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

LOS ALAMOS
NATIONAL LABORATORY

ATTN: Valerie Davis
General Engineering Laboratories, Inc., Charleston, SC.
2040 Savage Rd
Charleston, SC 29407

These Samples are on:
LANL Request Number:10-1037
Per Agreement Number:126310011
Project Cost Code: MR3A05529E00

Please analyse the enclosed samples
according to the schedule indicated:

SHIP DATE: 12/22/2009
TURNAROUND/REPORT DUE: 1/21/2010
TURNAROUND REQ'D: 30 Days

RAD SCREENING: Not Required
LAB REQUEST COMMENTS:

LANL ER SMO CONTACT:
Signature:

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	EPA:901.1	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	HASL-300:AM-241	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	HASL-300:ISOPU	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	HASL-300:ISOU	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:6020	1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	
		1	RE12-10-7867	SWP	12/18/2009	
		1	RE12-10-7868	SWP	12/18/2009	
	SW-846:6850	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	
	SW-846:7470A	1	RE12-10-7298	W	12/18/2009	
	SW-846:7471A	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	
		1	RE12-10-7290	R	12/18/2009	
		1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
	SW-846:9012A	1	RE12-10-7288	R	12/18/2009	
		1	RE12-10-7289	R	12/18/2009	

Tuesday, December 22, 2009

REQUEST NUMBER: 10-1037

PRIORITY	METHOD CODE	CNTNR	SAMPLE ID	SAMPLE MATRIX	DATE SAMPLED	SPECIAL INSTRUCTIONS
	SW-846:9012A	1	RE12-10-7291	R	12/18/2009	
		1	RE12-10-7292	R	12/18/2009	
		1	RE12-10-7293	R	12/18/2009	
		1	RE12-10-7296	R	12/18/2009	
		1	RE12-10-7298	W	12/18/2009	

Final Page of REQUEST NUMBER 10-1037

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client:LANL	**SDG/ARCOC/Work Order:10-1037**
Received By:Patricia Dover-Dent	**Date Received:December 23, 2009**

Suspected Hazard Information	**Yes**	**No**	*If Counts > x2 area background on samples not marked "radioactive", contact the Radiation Safety Group of further
COC/Samples marked as radioactive?		X	Maximum Counts Observed*:40CPM
Classified Radioactive II by RSO?		X	
COC/Samples marked containing PCBs?		X	
Shipped as a DOT Hazardous?		X	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		X	

	Sample Receipt Criteria	**Yes**	**NA**	**No**	**Comments/Qualifiers (Required for Non-Conforming Items)**
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe
2	Samples requiring cold preservation within (0 < 6 deg. C?	X			Preservation Method: ice bags **BLUE ICE** dry ice **NONE** other (describe) **1-6,13,15,16**
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?	X			Sample ID's, containers affected and observed pH. If Preservative added, Lot#
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present?			X	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?		X		Sample ID's affected: **No Time on Chain of Custody**
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	X			

Comments:FED EX #'S

7209 7849 3479 1C
7209 7849 3446 2C
7209 7849 3457 2C
7209 7849 3527 2C
7209 7849 3549 2C
7209 7849 3480 2C
7209 7849 3490 3C
7209 7849 3505 4C
7209 7849 3550 4C
7209 7849 3538 5C
7209 7849 3516 6C
7209 7849 3413 13C
7209 7849 3424 15C
7209 7849 3435 16C

RADIOACTIVE SAMPLES

PM (or PMA) review: Initials GRT Date 12/28/09

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 54.0 LB MAN
CAD: 0014176/CAFE2434

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 68010AMR3A0552QE00

1c

FedEx Express

TRK# 0201 7209 7849 3479

WED - 23DEC A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

Part # 156148-434 NRIT V3 09-08

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2434

BILL SENDER

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GENERAL ENGINEERING LAB
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(843)556-8171
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3 of 3
MPS# 0263 7209 7849 3457

Mstr# 7209 7849 3435 0201

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XX CHSA

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2434

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2 of 3
MPS# 0263 7209 7849 3446

Mstr# 7209 7849 3435 0201

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XX CHSA

Part # 156148-434 NRIT V3 09-08

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

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UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2434

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2040 SAVAGE RD

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(843)556-8171
REF: 68010AMR1A015AGWH0

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3 of 3
MPS# 0263 7209 7849 3457

Mstr# 7209 7849 3435 0201

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PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 51.0 LB MAN
CAD: 0014176/CAFE2434

BILL SENDER

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CHARLESTON SC 29407
(843)556-8171
REF: 68010AMR2A054196D0

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1 of 3
TRK# 0201 7209 7849 3527

** MASTER **

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PRIORITY OVERNIGH

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SC-U
CHS

XX CHSA

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 53.0 LB MAN
CAD: 0014176/CAFE2434

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 6B010AMR2A05418DO

2c

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3 of 3
MPS# 0263 7209 7849 3549
Matrl# 7209 7849 3527 0201

WED - 23DEC A1
PRIORITY OVERNIGHT

29407
SC-US
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XX CHSA

Part # 156148-434 NRIT V3 09-09

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2434

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TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 6B010AMR1A0130XK00

3c

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MPS# 0263 7209 7849 3490
Matrl# 7209 7849 3480 0201

WED - 23DEC A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 53.0 LB MAN
CAD: 0014176/CAFE2434

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 6B010AMR1A0130XK00

2c

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1 of 2
TRK# 0201 7209 7849 3480
MM MASTER MM

WED - 23DEC A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

Part # 156148-434 NRIT V3 09-09

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 52.0 LB MAN
CAD: 0014176/CAFE2434

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 6B010AAREW01105800

4c

FedEx Express

TRK# 0201 7209 7849 3505

WED - 23DEC A1
PRIORITY OVERNIGHT

29407
SC-US
CHS

XX CHSA

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 34.0 LB MAN
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TRK# 0201 7209 7849 3550
PRIORITY OVERNIGHT

XX CHSA
29407
SC-US
CHS

Part # 156148-434 NRIT V3 09-09

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 44.0 LB MAN
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5C

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FedEx 0001 of 0001
MPS# 0263 7209 7849 3538
WED - 23 DEC A1
PRIORITY OVERNIGHT

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29407
SC-US
CHS

347274 23Dec 03:36 MENN 502C1/1888/5FE8

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 10.0 LB MAN
CAD: 0014176/CAFE2434
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6C

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TRK# 0201 7209 7849 3516
PRIORITY OVERNIGHT

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ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03
LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 44.0 LB MAN
CAD: 0014176/CAFE2434
BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 6B010AMR1A015AGWHO

13

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2 of 3
MPS# 0263 7209 7849 3413
WED - 23DEC A1
PRIORITY OVERNIGHT
Mstr# 7209 7849 3402 0201

XX CHSA
29407

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 58.0 LB MAN
CAD: 0014176/CAFE2434

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GENERAL ENGINEERING LAB
2040 SAVAGE RD

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(843)556-8171
REF: 6B010AMR1A015AGWHO

15c

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3 of 3
MPS# 0253 7209 7849 3424
Mstr# 7209 7849 3402 0201

WED - 23DEC A1
PRIORITY OVERNIGHT

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29407
SC-US
CHS

ORIGIN ID: SAFA (505)665-9968
JOYLENE VALDEZ
LOS ALAMOS NATL LAB.
TA00 BLDG 1237 DPU 03

LOS ALAMOS, NM 87545
UNITED STATES US

SHIP DATE: 22DEC09
ACTWGT: 34.0 LB MAN
CAD: 0014176/CAFE2434

BILL SENDER

TO VALERIE DAVIS
GENERAL ENGINEERING LAB
2040 SAVAGE RD

CHARLESTON SC 29407
(843)556-8171
REF: 6B010AMR1A015AGWHO

16c

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1 of 3
TRK# 0201 7209 7849 3435
MASTER

WED - 23DEC A1
PRIORITY OVERNIGHT

XX CHSA

29407
SC-US
CHS

Data Review Qualifier Flag Definition Sheet

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1037

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	936672
Prep Batch Number:	936671

Sample Analysis

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202004152	Interference Check Sample (ICS)
1202004148	Method Blank (MB)
1202004149	Laboratory Control Sample (LCS)
1202004150	243492001(RE12-10-7288) Matrix Spike (MS)
1202004151	243492001(RE12-10-7288) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

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Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Sample 243492001 (RE12-10-7288) was chosen for matrix spike and matrix spike duplicate analysis.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

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Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18) labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Data Exception (DER) Documentation
Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception reports (DER) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The samples in this SDG were not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

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Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert K. Mauer **Date:** 01/15/10

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SAMPLE DATA SUMMARY

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7288

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492001

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.2	0.551	ug/kg	U	1	07-JAN-10 18:29	per0107021a
	Perchlorate Isotope Ratio						1	07-JAN-10 18:29	per0107021a
14797-73-0	Perchlorate-101	.551	2.2	0.551	ug/kg	U	1	07-JAN-10 18:29	per0107021a
	Perchlorate-O(18)			5.47	ug/kg		1	07-JAN-10 18:29	per0107021a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7290

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492002

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 96.9

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.516	2.06	0.516	ug/kg	U	1	07-JAN-10 18:50	per0107024a
	Perchlorate Isotope Ratio						1	07-JAN-10 18:50	per0107024a
14797-73-0	Perchlorate-101	.516	2.06	0.516	ug/kg	U	1	07-JAN-10 18:50	per0107024a
	Perchlorate-O(18)			5.64	ug/kg		1	07-JAN-10 18:50	per0107024a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7289

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492003

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	0.832	ug/kg	J	1	07-JAN-10 18:57	per0107025a
	Perchlorate Isotope Ratio			2.99			1	07-JAN-10 18:57	per0107025a
14797-73-0	Perchlorate-101	.555	2.22	0.829	ug/kg	J	1	07-JAN-10 18:57	per0107025a
	Perchlorate-O(18)			6.30	ug/kg		1	07-JAN-10 18:57	per0107025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area.
The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7291

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492004

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 91.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.544	2.18	0.544	ug/kg	U	1	07-JAN-10 19:04	per0107026a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:04	per0107026a
14797-73-0	Perchlorate-101	.544	2.18	0.544	ug/kg	U	1	07-JAN-10 19:04	per0107026a
	Perchlorate-O(18)			5.73	ug/kg		1	07-JAN-10 19:04	per0107026a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7292

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492005

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 94

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.532	2.13	0.532	ug/kg	U	1	07-JAN-10 19:11	per0107027a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:11	per0107027a
14797-73-0	Perchlorate-101	.532	2.13	0.532	ug/kg	U	1	07-JAN-10 19:11	per0107027a
	Perchlorate-O(18)			5.43	ug/kg		1	07-JAN-10 19:11	per0107027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7293

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492006

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 97.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.513	2.05	0.513	ug/kg	U	1	07-JAN-10 19:18	per0107028a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:18	per0107028a
14797-73-0	Perchlorate-101	.513	2.05	0.513	ug/kg	U	1	07-JAN-10 19:18	per0107028a
	Perchlorate-O(18)			5.33	ug/kg		1	07-JAN-10 19:18	per0107028a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7296

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492007

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 92

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JAN-10 19:26	per0107029a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:26	per0107029a
14797-73-0	Perchlorate-101	.543	2.17	0.543	ug/kg	U	1	07-JAN-10 19:26	per0107029a
	Perchlorate-O(18)			5.50	ug/kg		1	07-JAN-10 19:26	per0107029a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1037

Extract Batch Code: 936671

Date Filtered: 07–JAN–10

Matrix: SOIL

Sample ID: 1202004149

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	1.99	ug/kg	99.4		70 – 130
Perchlorate Isotope Ratio		2.89				–
Perchlorate–101	2.00	2.05	ug/kg	103		70 – 130
Perchlorate–O(18)		4.9	ug/kg			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1037

Extract Batch Code: 936671

Date Filtered: 07–JAN–10

Matrix: SOIL

Sample ID: 1202004152

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	2.00	2.11	ug/kg	106		70 – 130
Perchlorate Isotope Ratio		3.11				
Perchlorate–101	2.00	2.02	ug/kg	101		70 – 130
Perchlorate–O(18)		5.1	ug/kg			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

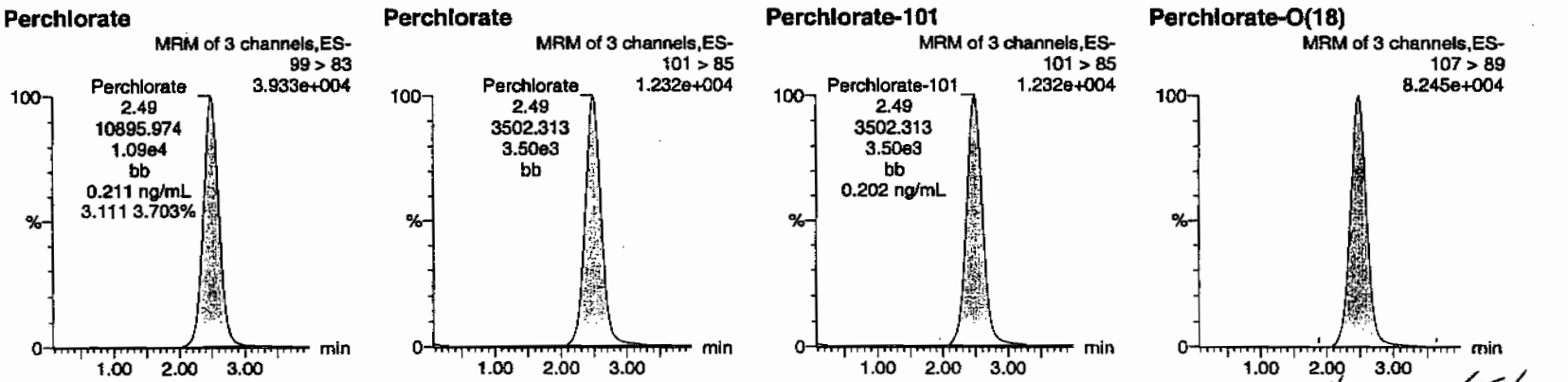
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107014a
Date: 07-Jan-2010
Time: 17:40:27
ID: 1202004152
Vial: 1:3,C

|LANL|936672|SOLID|ICS|1|

CWW
01-08-10



Hmw 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202004152	Perchlorate	99 > 83	2.49	10895.974	10895.974	bb			0.2110	105.51	5.51	910.317	3.11
1202004152	Perchlorate-101	101 > 85	2.49	3502.313	3502.313	bb			0.2022	101.08	1.08	796.684	
1202004152	Perchlorate-O(18)	107 > 89	2.48	23264.105	23264.105	bb			0.5098	101.95	1.95	4182.0...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10-1037

Extract Batch Code: 936671

Date Extracted: 07-JAN-10

GEL MS/PS ID: 1202004150

Client ID: RE12-10-7288

GEL MSD/PSD ID: 1202004151

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	2.20	0.232	ug/kg	2.55	105	2.49	102	2.29	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3.17		3.03		0		–
Perchlorate-101	2.20	0.231	ug/kg	2.40	98.3	2.45	101	2.11	30	75 – 125
Perchlorate-O(18)	0	5.47	ug/kg	5.56		5.59		.58		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

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Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1037

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	07–JAN–10	per0107001a	IPB001
Perchlorate–101	0.00	0	NA	07–JAN–10	per0107001a	IPB001
Perchlorate	0.00	0	NA	07–JAN–10	per0107002a	IPB001
Perchlorate–101	0.00	0	NA	07–JAN–10	per0107002a	IPB001

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

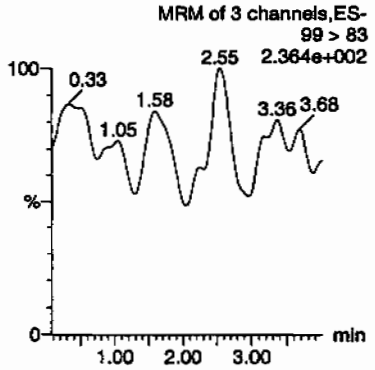
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per010710a.mdb 08 Jan 2010 08:13:48
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per010710a.cdb 08 Jan 2010 08:57:24

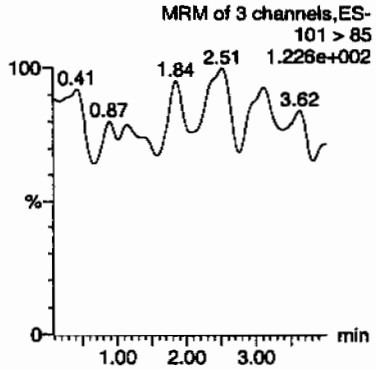
Name: per0107001a
Date: 07-Jan-2010
Time: 16:08:50
ID: IPB001
Vial: 1:1,A

01-08-10

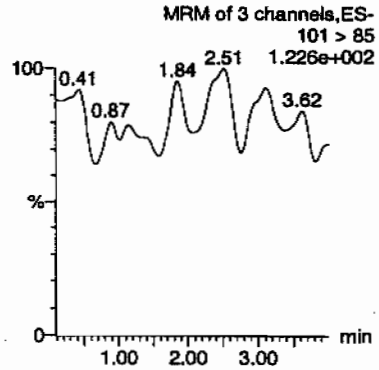
Perchlorate



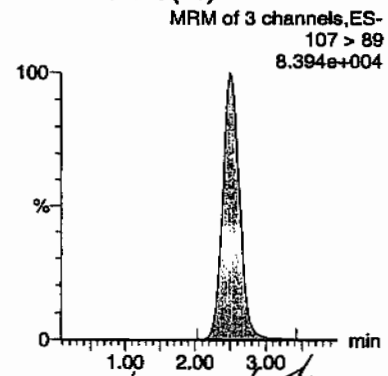
Perchlorate



Perchlorate-101



Perchlorate-O(18)



01/08/10

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB001	Perchlorate	99 > 83											0.00
PB001	Perchlorate-101	101 > 85											
PB001	Perchlorate-O(18)	107 > 89	2.50	22868.908	22868.908	bb			0.5011	100.22	0.22	1754.3...	

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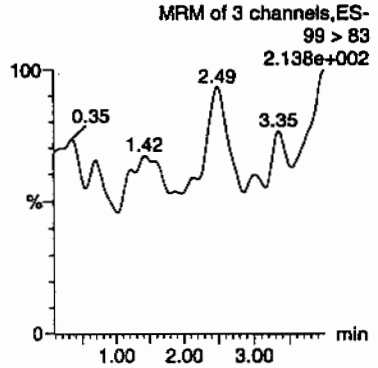
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

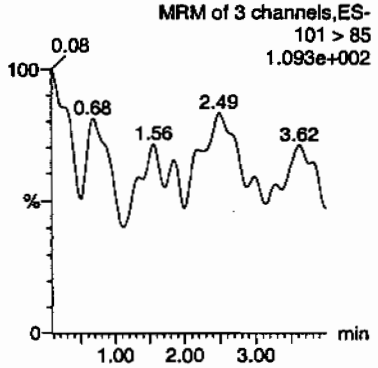
Name: per0107002a
Date: 07-Jan-2010
Time: 16:15:52
ID: IPB001
Vial: 1:1,A

CWW
01-08-10

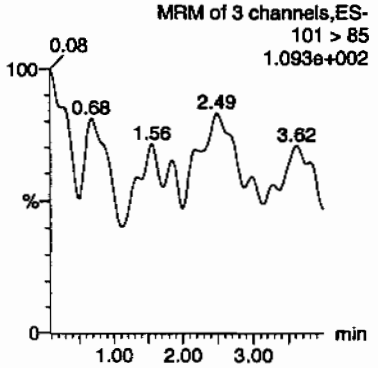
Perchlorate



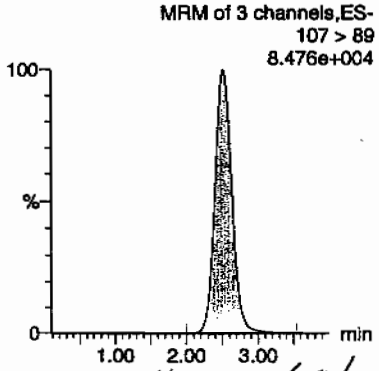
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB001	Perchlorate	99 > 83											0.00
IPB001	Perchlorate-101	101 > 85											
IPB001	Perchlorate-O(18)	107 > 89	2.51	23222.023	23222.023	bb			0.5089	101.77	1.77	11057....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	07–JAN–10	per0107008a	IPB002
Perchlorate–101	0.00	0	NA	07–JAN–10	per0107008a	IPB002
Perchlorate	0.00	0	NA	07–JAN–10	per0107010a	IPB003
Perchlorate–101	0.00	0	NA	07–JAN–10	per0107010a	IPB003
Perchlorate	0.00	0	NA	07–JAN–10	per0107019a	IPB004
Perchlorate–101	0.00	0	NA	07–JAN–10	per0107019a	IPB004
Perchlorate	0.00	0	NA	07–JAN–10	per0107031a	IPB005
Perchlorate–101	0.00	0	NA	07–JAN–10	per0107031a	IPB005

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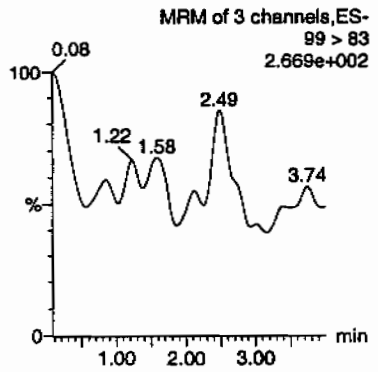
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

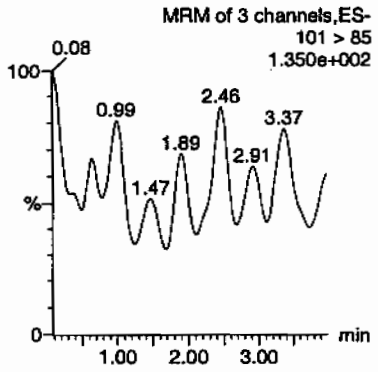
Name: per0107008a
Date: 07-Jan-2010
Time: 16:58:10
ID: IPB002
Vial: 1:1,A

01-08-10

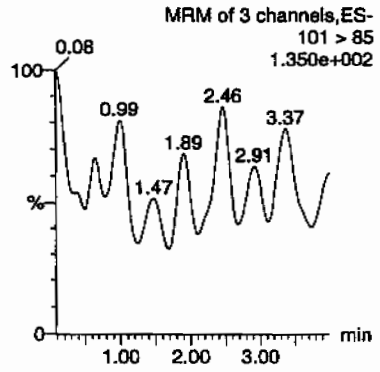
Perchlorate



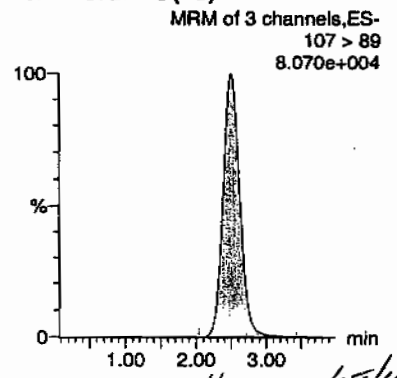
Perchlorate



Perchlorate-101



Perchlorate-O(18)



hmm 01/08/10

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB002	Perchlorate	99 > 83											0.00
PB002	Perchlorate-101	101 > 85											
PB002	Perchlorate-O(18)	107 > 89	2.50	22229.973	22229.973	bb			0.4871	97.42	-2.58	4832.5...	

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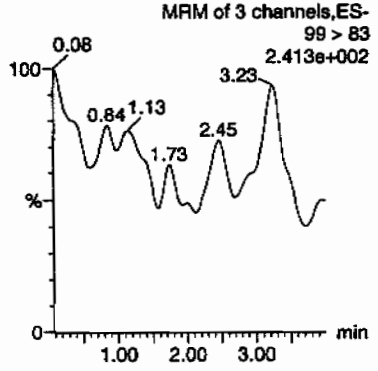
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

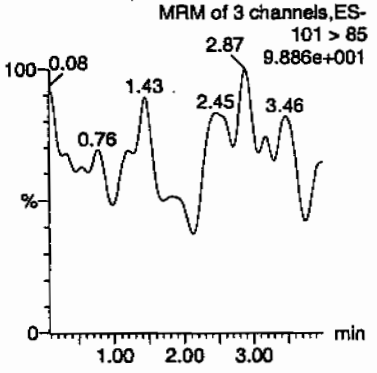
Name: per0107010a
Date: 07-Jan-2010
Time: 17:12:15
ID: IPB003
Vial: 1:1,A

CWD 01-08-10

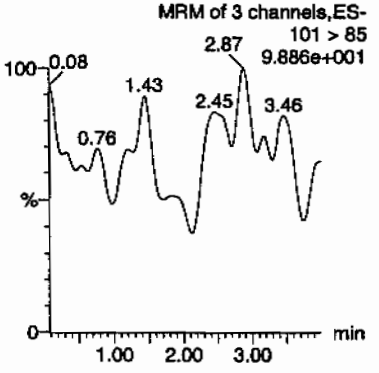
Perchlorate



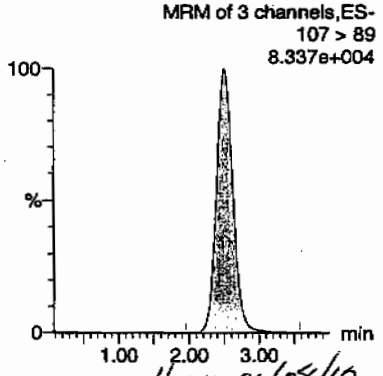
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmw 01/08/10

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
PB003	Perchlorate	99 > 83											0.00
PB003	Perchlorate-101	101 > 85											
PB003	Perchlorate-O(18)	107 > 89	2.50	22629.775	22629.775	bb			0.4959	99.17	-0.83	5182.3...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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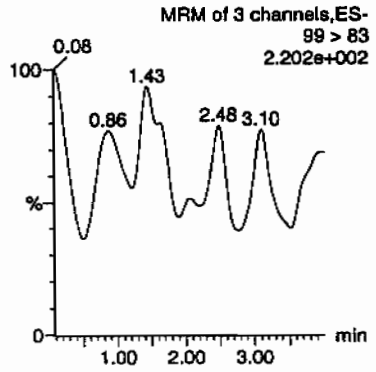
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

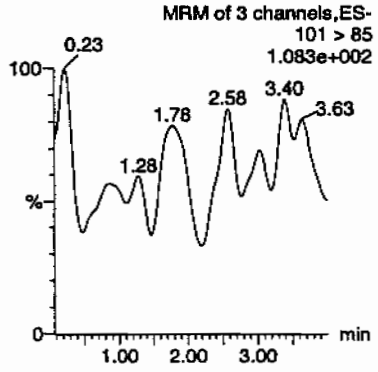
Name: per0107019a
Date: 07-Jan-2010
Time: 18:15:36
ID: IPB004
Vial: 1:1,A

01-08-10

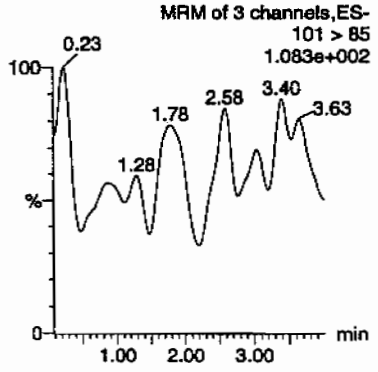
Perchlorate



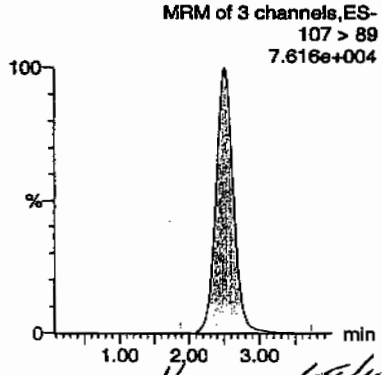
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMW 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB004	Perchlorate	99 > 83											0.00
IPB004	Perchlorate-101	101 > 85											
IPB004	Perchlorate-O(18)	107 > 89	2.51	21901.963	21901.963	bb			0.4799	95.99	-4.01	1815.2...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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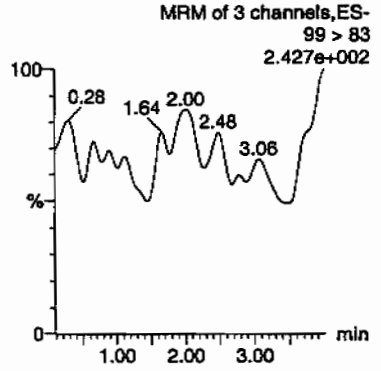
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

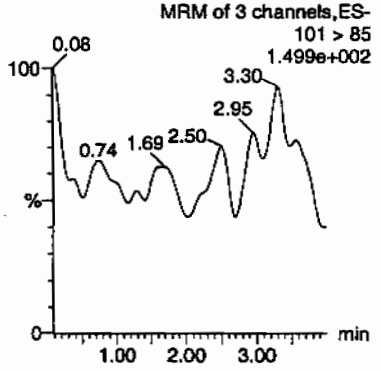
Name: per0107031a
Date: 07-Jan-2010
Time: 19:40:07
ID: IPB005
Vial: 1:1,A

aw
01-08-10

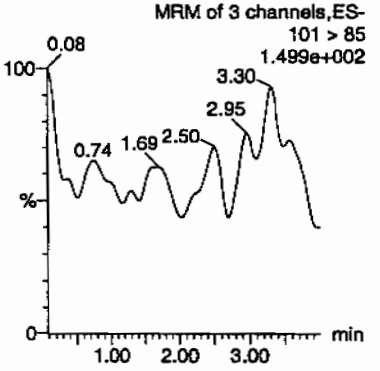
Perchlorate



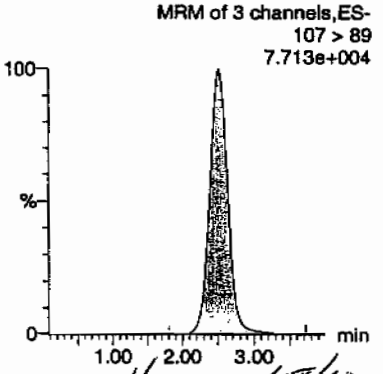
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hbm 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
IPB005	Perchlorate	99 > 83											0.00
IPB005	Perchlorate-101	101 > 85											
IPB005	Perchlorate-O(18)	107 > 89	2.50	22107.498	22107.498	bb			0.4844	96.89	-3.11	4366.4...	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/RbI (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

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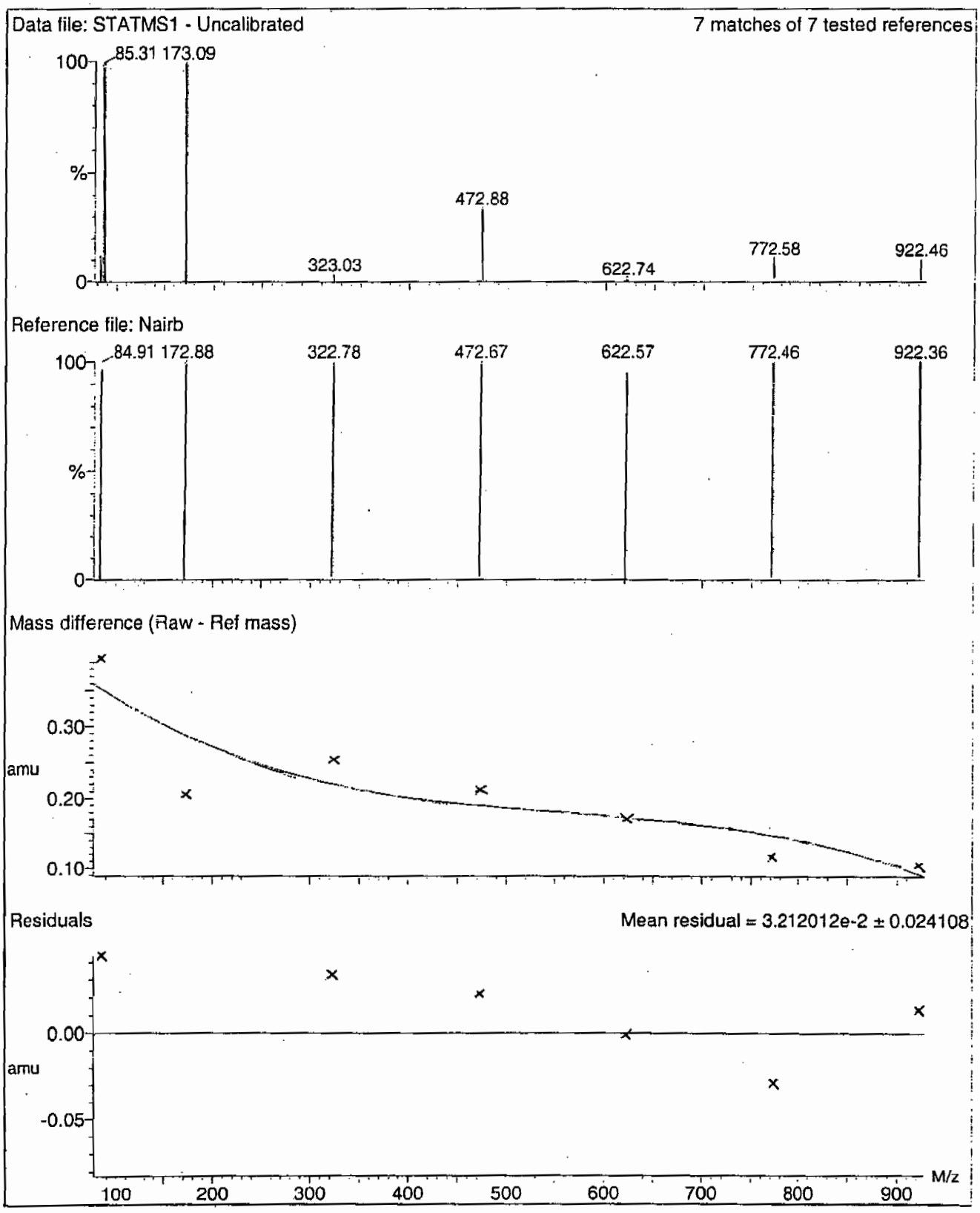
QUATTRO ULTIMA: nairb_01_08_08.cal

Calibration Report - MS1 Static

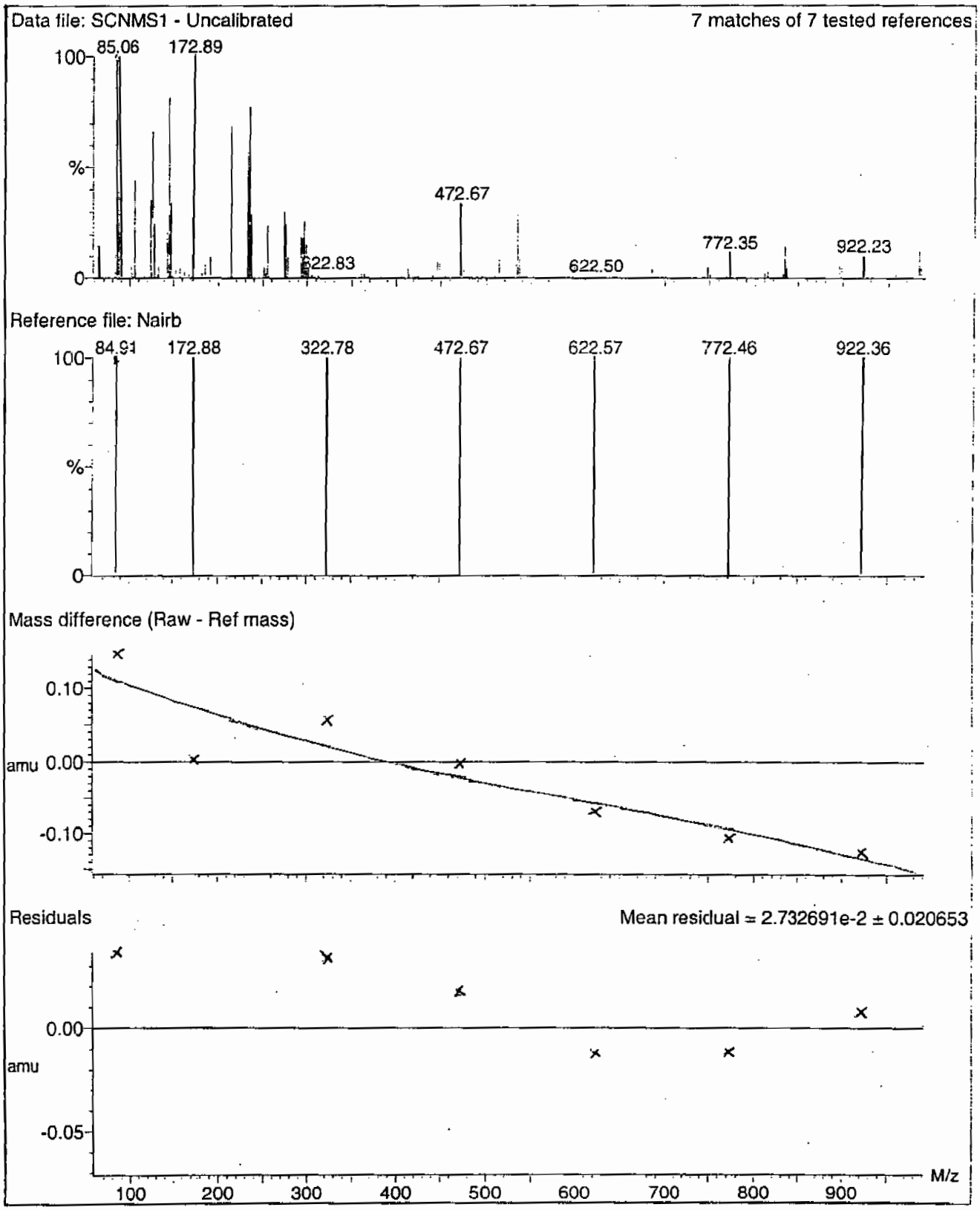
Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08



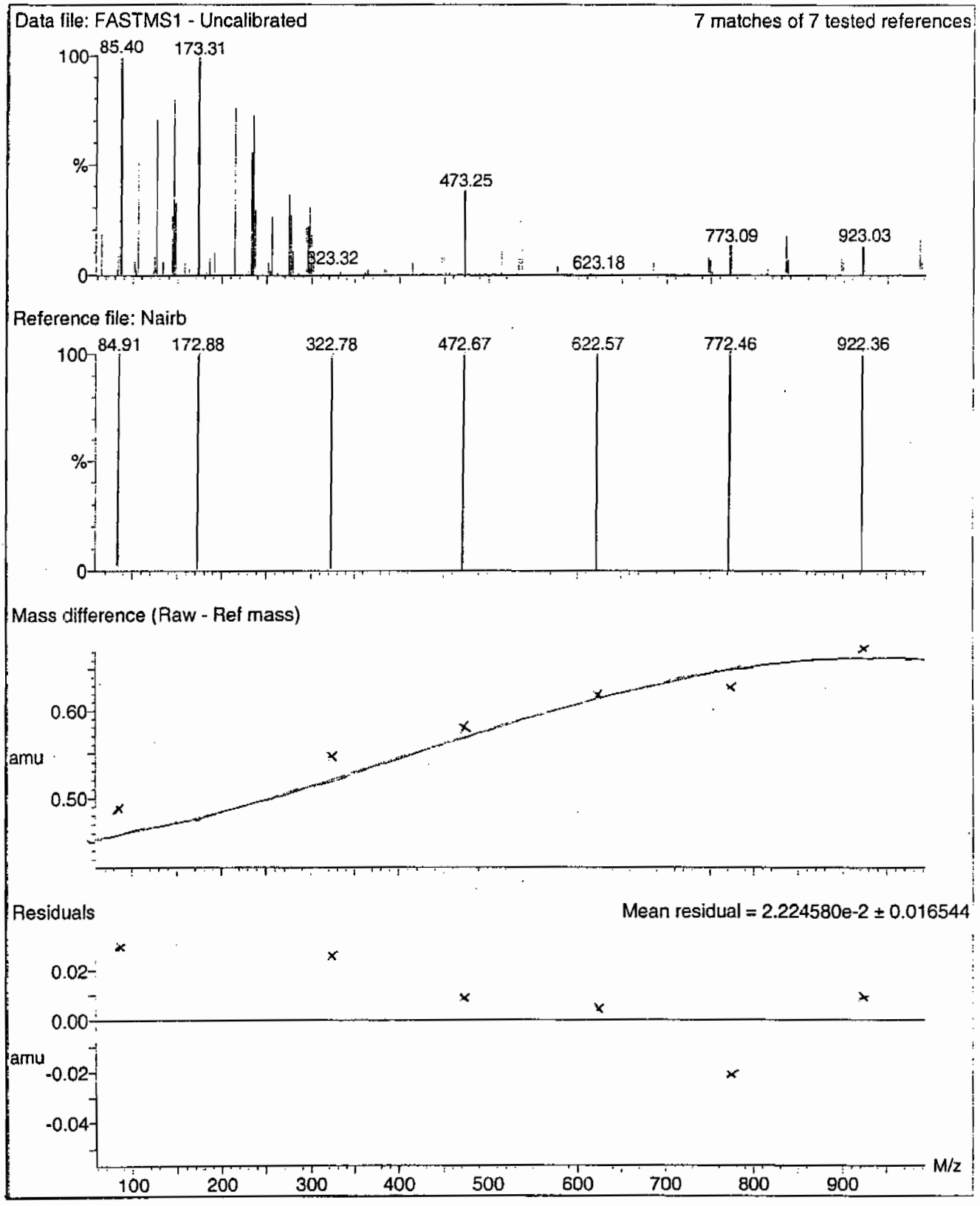
PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Printed: Tue Jan 08 12:20:09 2008



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Printed: Tue Jan 08 12:21:04 2008



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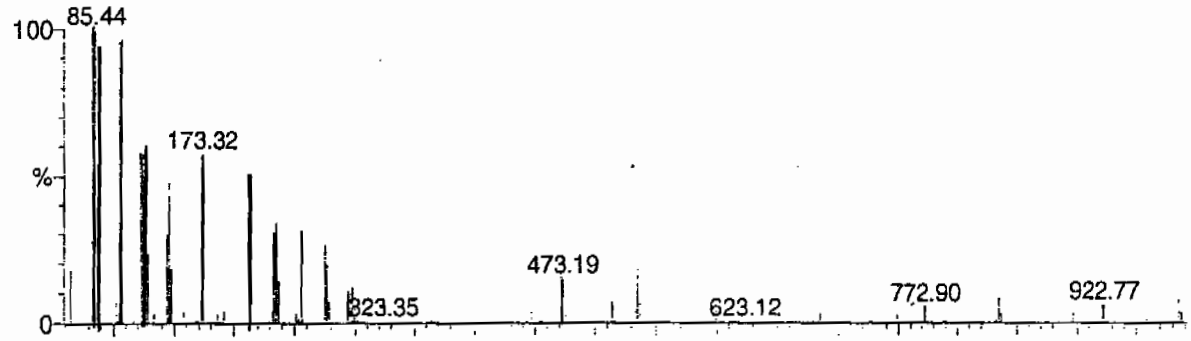
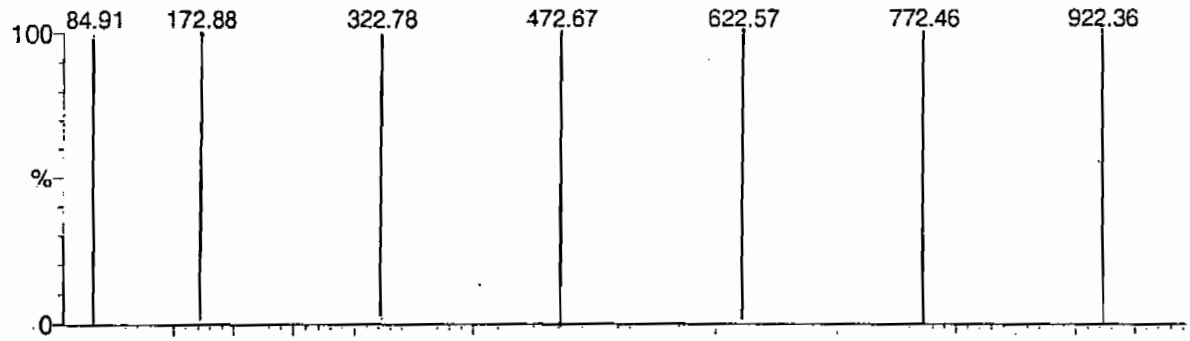
Printed: Tue Jan 08 12:23:51 2008

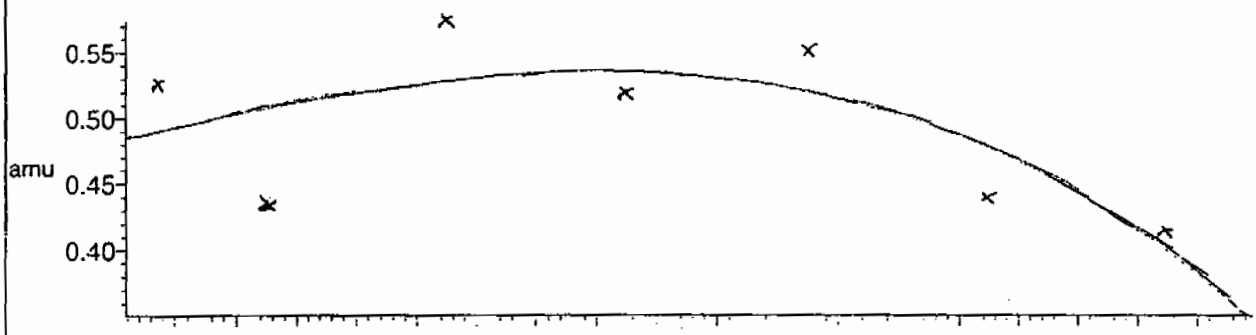
Data file: FASTMS2 - Uncalibrated 7 matches of 7 tested references



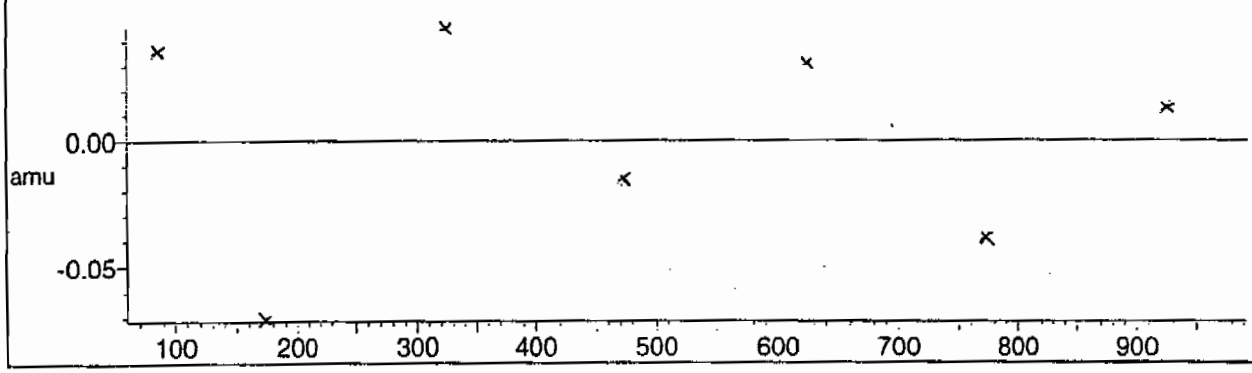
Reference file: Nairb



Mass difference (Raw - Ref mass)



Residuals Mean residual = 3.598289e-2 ± 0.017899



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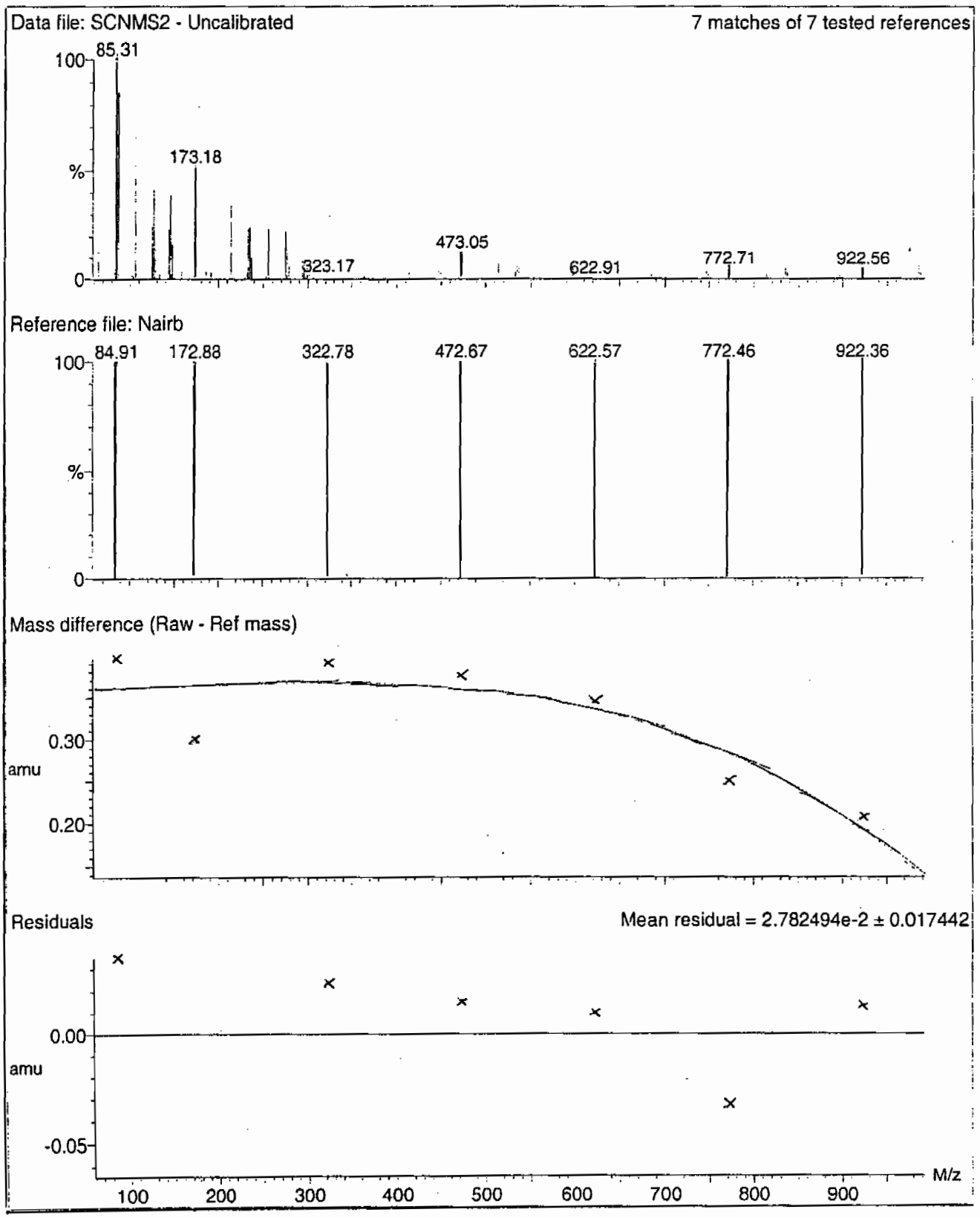
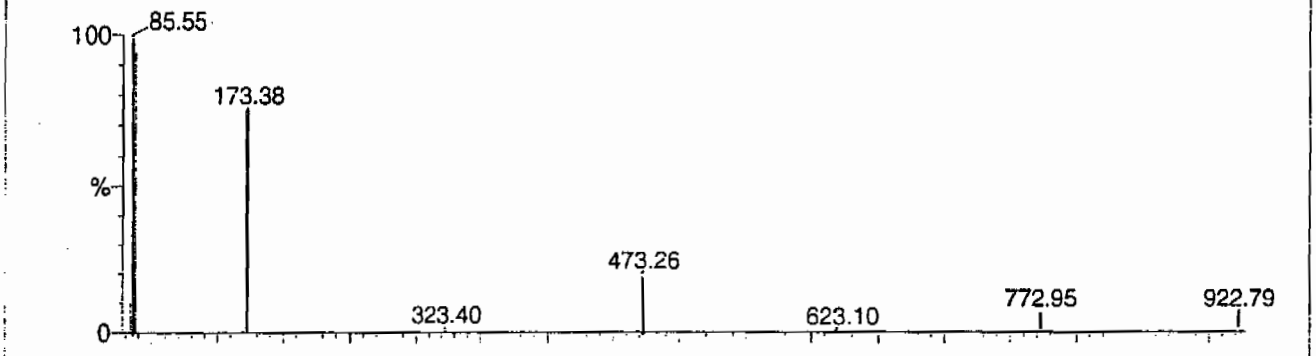
Printed: Tue Jan 08 12:22:56 2008



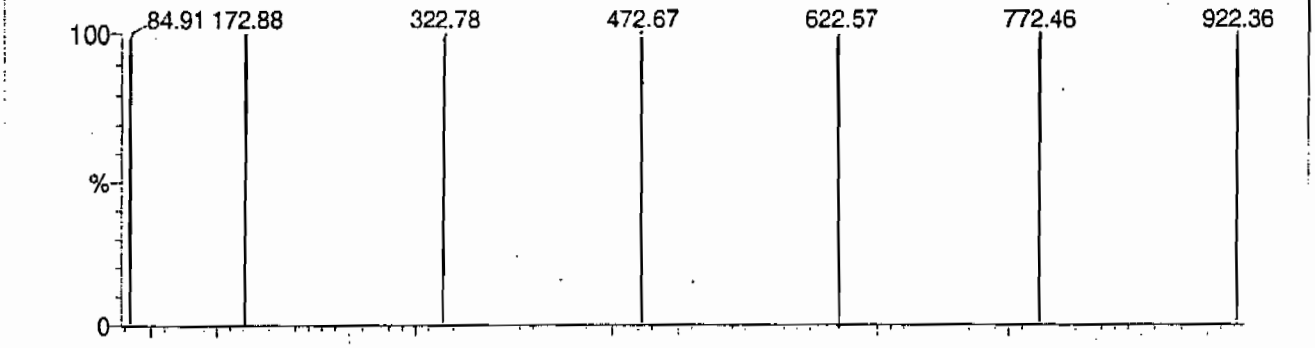
PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Printed: Tue Jan 08 12:21:59 2008

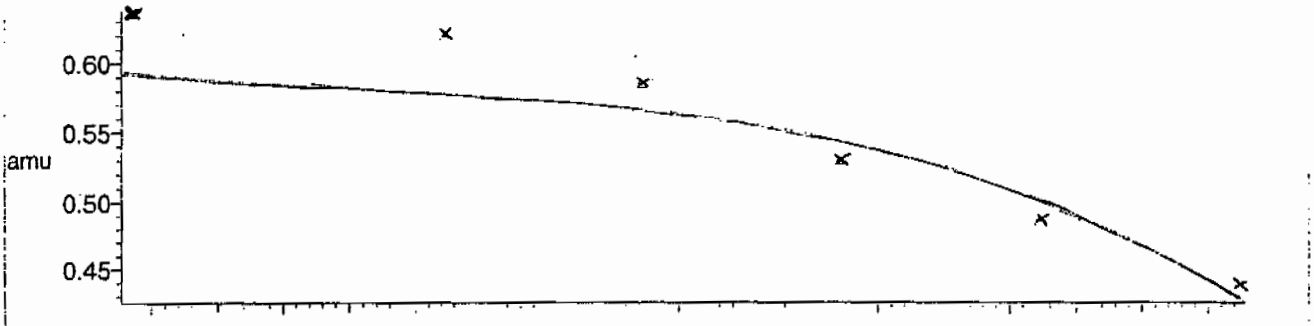
Data file: STATMS2 - Uncalibrated 7 matches of 7 tested references



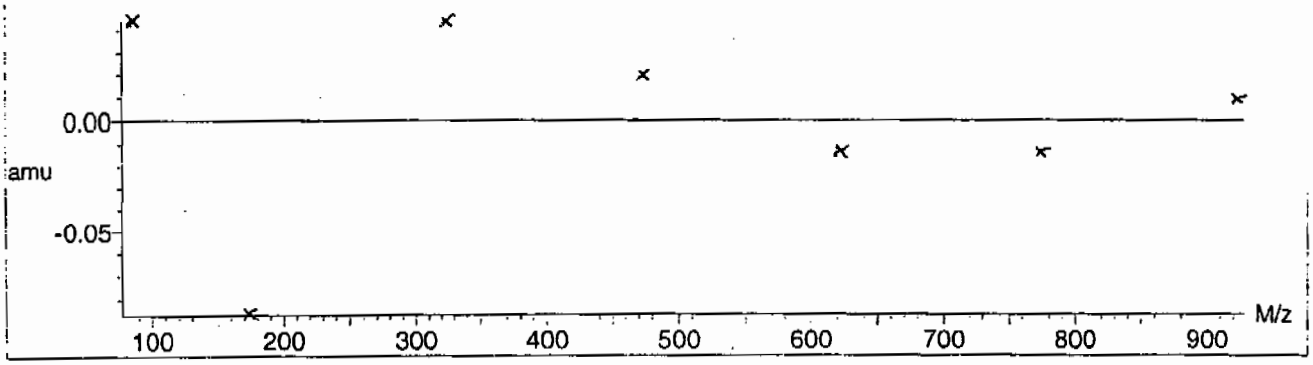
Reference file: Nairb



Mass difference (Raw - Ref mass)



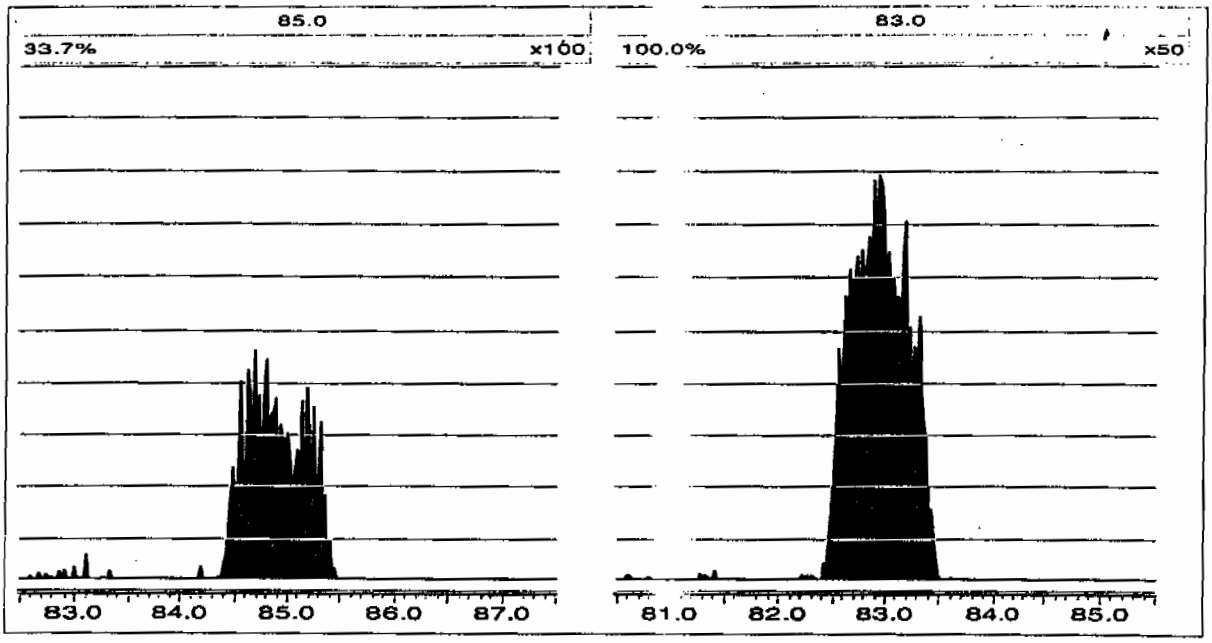
Residuals Mean residual = 3.295980e-2 ± 0.025603



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Thursday, January 07, 2010 13:15:46 Eastern Standard Time



Form 8

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0107006a**	**07–JAN–10**	**23066.8**				
Lower Area Limit			**11533.4**				
Upper Area Limit			**46133.6**				
1202004148	per0107012a	07–JAN–10 17:26	22035.6	2.53	2.52632	.999	
1202004149	per0107013a	07–JAN–10 17:33	22367.8	2.51	2.53875	1.011	
1202004152	per0107014a	07–JAN–10 17:40	23264.1	2.48	2.48908	1.004	
243492001	per0107021a	07–JAN–10 18:29	22662.3	2.5	2.5263	1.011	
1202004150	per0107022a	07–JAN–10 18:36	23055.3	2.5	2.51387	1.006	
1202004151	per0107023a	07–JAN–10 18:43	23189.4	2.5	2.51385	1.006	
243492002	per0107024a	07–JAN–10 18:50	24915.5	2.5	2.51387	1.006	
243492003	per0107025a	07–JAN–10 18:57	25896.9	2.5	2.51383	1.006	

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Form 8

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per0107006a**	**07–JAN–10**	**23066.8**				
Lower Area Limit			**11533.4**				
Upper Area Limit			**46133.6**				
243492004	per0107026a	07–JAN–10 19:04	24011.5	2.51	2.5263	1.006	
243492005	per0107027a	07–JAN–10 19:11	23283	2.5	2.51382	1.006	
243492006	per0107028a	07–JAN–10 19:18	23723.4	2.5	2.51382	1.006	
243492007	per0107029a	07–JAN–10 19:26	23110.2	2.5	2.51383	1.006	

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SAMPLE DATA

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7288

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492001

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.2	0.551	ug/kg	U	1	07-JAN-10 18:29	per0107021a
	Perchlorate Isotope Ratio						1	07-JAN-10 18:29	per0107021a
14797-73-0	Perchlorate-101	.551	2.2	0.551	ug/kg	U	1	07-JAN-10 18:29	per0107021a
	Perchlorate-O(18)			5.47	ug/kg		1	07-JAN-10 18:29	per0107021a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

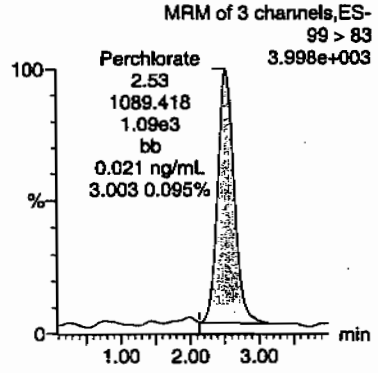
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107021a
Date: 07-Jan-2010
Time: 18:29:41
ID: 243492001
Vial: 1:4,A

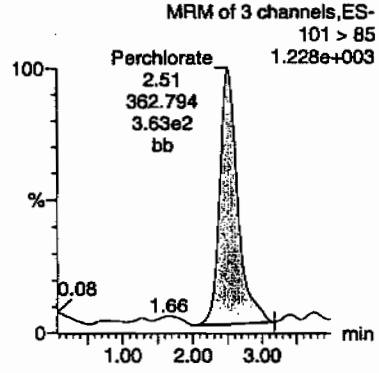
|LANL|936672|5020|1|

CWJ
01-08-10

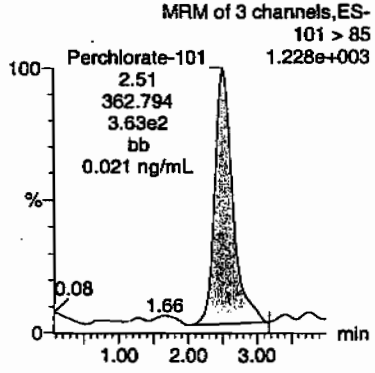
Perchlorate



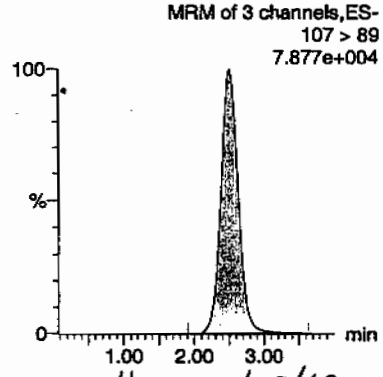
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492001	Perchlorate	99 > 83	2.53	1089.418	1089.418	bb			0.0211			429.973	3.00
243492001	Perchlorate-101	101 > 85	2.51	362.794	362.794	bb			0.0209			69.736	
243492001	Perchlorate-O(18)	107 > 89	2.50	22662.289	22662.289	bb			0.4966	99.32	-0.68	5587.7...	

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7290

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492002

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 96.9

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.516	2.06	0.516	ug/kg	U	1	07-JAN-10 18:50	per0107024a
	Perchlorate Isotope Ratio						1	07-JAN-10 18:50	per0107024a
14797-73-0	Perchlorate-101	.516	2.06	0.516	ug/kg	U	1	07-JAN-10 18:50	per0107024a
	Perchlorate-O(18)			5.64	ug/kg		1	07-JAN-10 18:50	per0107024a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

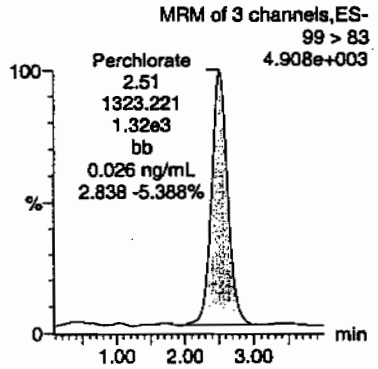
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107024a
Date: 07-Jan-2010
Time: 18:50:49
ID: 243492002
Vial: 1:4,D

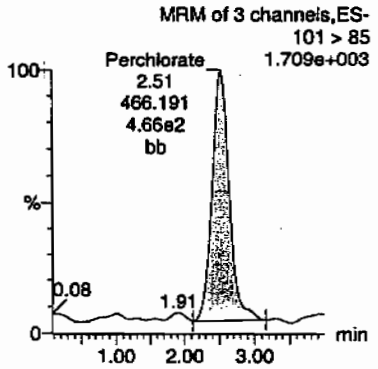
CWD 01-08-10

LANL | 936672 | SOLID | 1 |

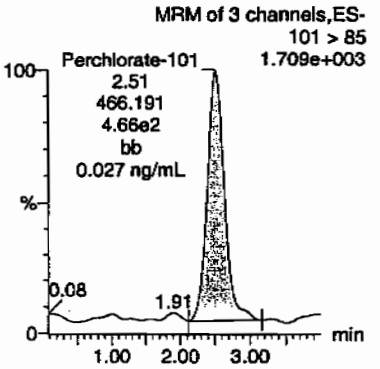
Perchlorate



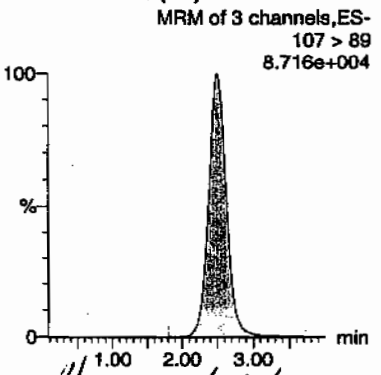
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HNM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492002	Perchlorate	99 > 83	2.51	1323.221	1323.221	bb			0.0256			208.986	2.84
243492002	Perchlorate-101	101 > 85	2.51	466.191	466.191	bb			0.0269			87.605	
243492002	Perchlorate-O(18)	107 > 89	2.50	24915.531	24915.531	bb			0.5460	109.19	9.19	10305....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7289

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492003

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.1

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.555	2.22	0.832	ug/kg	J	1	07-JAN-10 18:57	per0107025a
	Perchlorate Isotope Ratio			2.99			1	07-JAN-10 18:57	per0107025a
14797-73-0	Perchlorate-101	.555	2.22	0.829	ug/kg	J	1	07-JAN-10 18:57	per0107025a
	Perchlorate-O(18)			6.30	ug/kg		1	07-JAN-10 18:57	per0107025a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

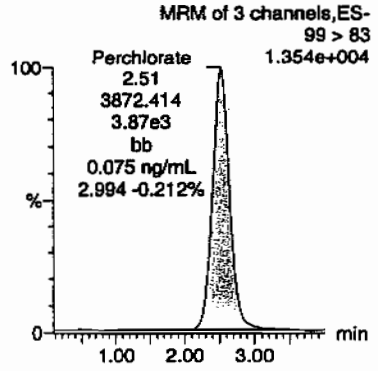
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107025a
Date: 07-Jan-2010
Time: 18:57:51
ID: 243492003
Vial: 1:4,E

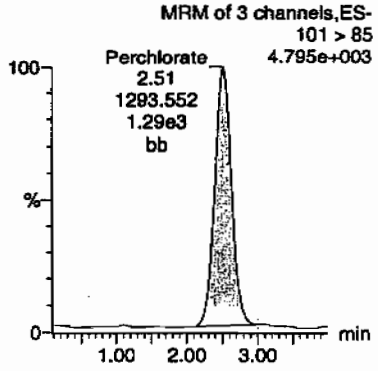
| LAW | 936672 | 50120 | 1 |

WJ 01-08-10

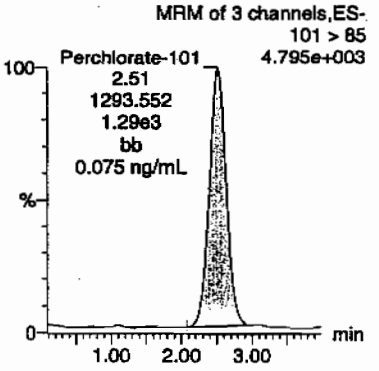
Perchlorate



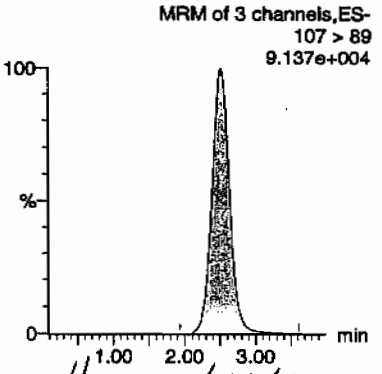
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/09/10

ID	Name	Trace	RT	Area	Response	Flags	Mod Date	Mod Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492003	Perchlorate	99 > 83	2.51	3872.414	3872.414	bb			0.0750			500.887	2.99
243492003	Perchlorate-101	101 > 85	2.51	1293.552	1293.552	bb			0.0747			439.807	
243492003	Perchlorate-O(18)	107 > 89	2.50	25896.918	25896.918	bb			0.5675	113.49	13.49	13448....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7291

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492004

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 91.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.544	2.18	0.544	ug/kg	U	1	07-JAN-10 19:04	per0107026a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:04	per0107026a
14797-73-0	Perchlorate-101	.544	2.18	0.544	ug/kg	U	1	07-JAN-10 19:04	per0107026a
	Perchlorate-O(18)			5.73	ug/kg		1	07-JAN-10 19:04	per0107026a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

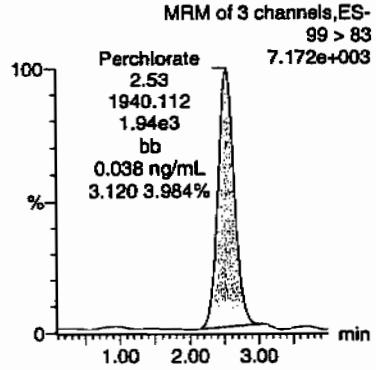
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107026a
Date: 07-Jan-2010
Time: 19:04:52
ID: 243492004
Vial: 1:4,F

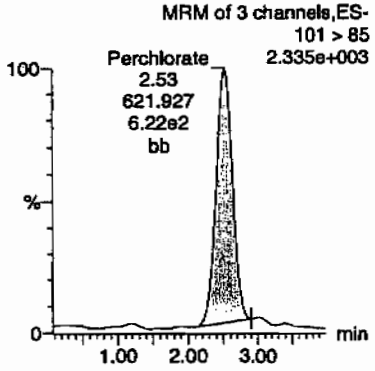
|LANL|936672|SOLID|1|

01-08-10

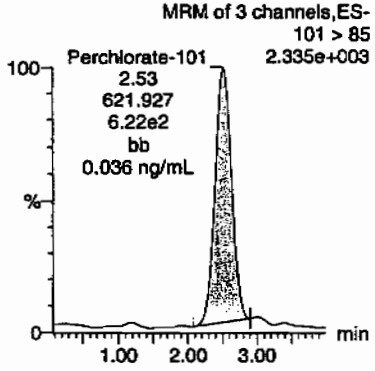
Perchlorate



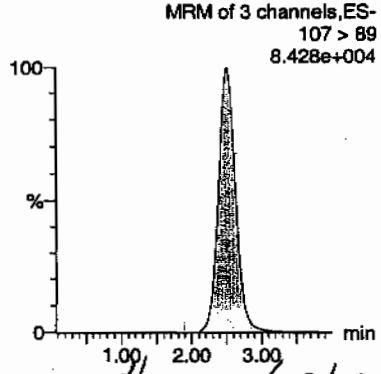
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hnm 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492004	Perchlorate	99 > 83	2.53	1940.112	1940.112	bb			0.0376			261.860	3.12
243492004	Perchlorate-101	101 > 85	2.53	621.927	621.927	bb			0.0359			150.426	
243492004	Perchlorate-O(18)	107 > 89	2.51	24011.521	24011.521	bb			0.5262	105.23	5.23	9206.0...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7292

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492005

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 94

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.532	2.13	0.532	ug/kg	U	1	07-JAN-10 19:11	per0107027a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:11	per0107027a
14797-73-0	Perchlorate-101	.532	2.13	0.532	ug/kg	U	1	07-JAN-10 19:11	per0107027a
	Perchlorate-O(18)			5.43	ug/kg		1	07-JAN-10 19:11	per0107027a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

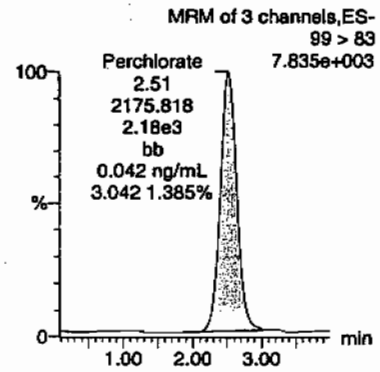
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107027a
Date: 07-Jan-2010
Time: 19:11:54
ID: 243492005
Vial: 1:5,A

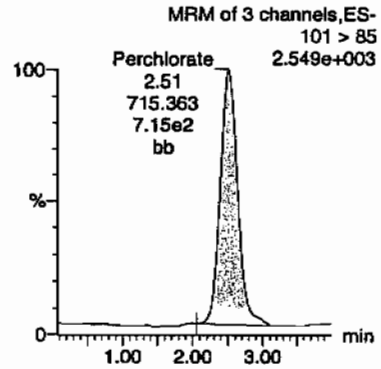
|LANL|936672|SOL2D|1|

01-08-10

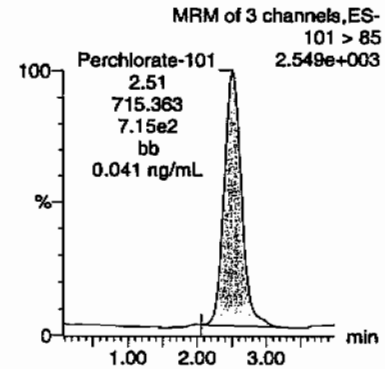
Perchlorate



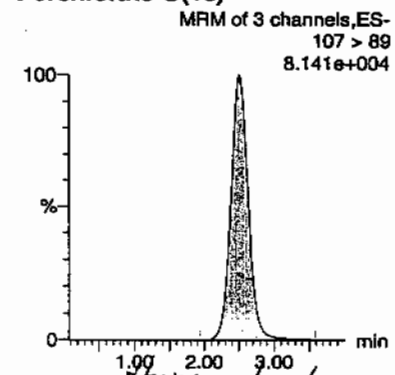
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492005	Perchlorate	99 > 83	2.51	2175.818	2175.818	bb			0.0421			1511.2...	3.04
243492005	Perchlorate-101	101 > 85	2.51	715.363	715.363	bb			0.0413			496.130	
243492005	Perchlorate-O(18)	107 > 89	2.50	23283.008	23283.008	bb			0.5102	102.04	2.04	3154.7...	

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7293

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492006

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 97.5

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.513	2.05	0.513	ug/kg	U	1	07-JAN-10 19:18	per0107028a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:18	per0107028a
14797-73-0	Perchlorate-101	.513	2.05	0.513	ug/kg	U	1	07-JAN-10 19:18	per0107028a
	Perchlorate-O(18)			5.33	ug/kg		1	07-JAN-10 19:18	per0107028a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

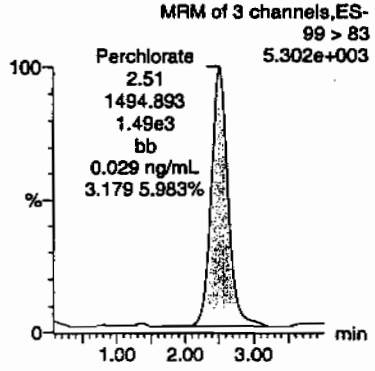
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107028a
Date: 07-Jan-2010
Time: 19:18:59
ID: 243492006
Vial: 1:5,B

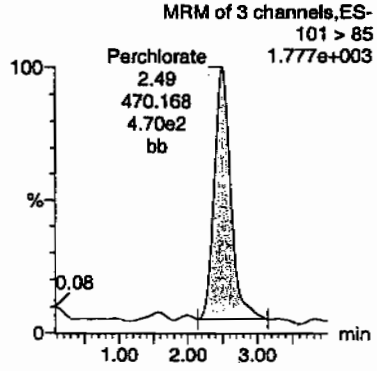
|LANL|936672|5020|1|

WWD
01-08-10

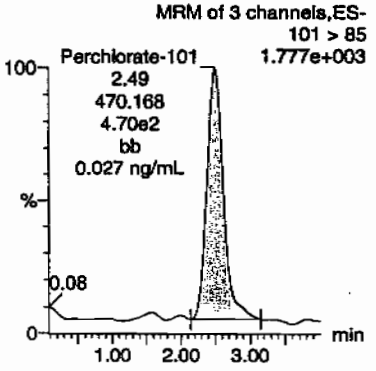
Perchlorate



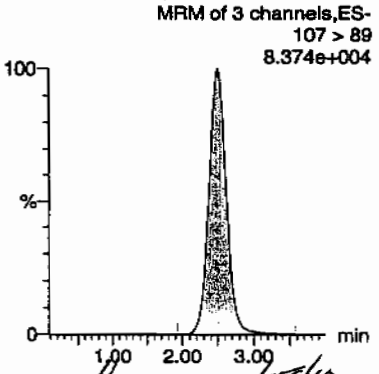
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ANWL 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492006	Perchlorate	99 > 83	2.51	1494.893	1494.893	bb			0.0290			362.439	3.18
243492006	Perchlorate-101	101 > 85	2.49	470.168	470.168	bb			0.0271			56.279	
243492006	Perchlorate-O(18)	107 > 89	2.50	23723.445	23723.445	bb			0.5198	103.97	3.97	8469.7...	

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7296

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 243492007

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 92

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.543	2.17	0.543	ug/kg	U	1	07-JAN-10 19:26	per0107029a
	Perchlorate Isotope Ratio						1	07-JAN-10 19:26	per0107029a
14797-73-0	Perchlorate-101	.543	2.17	0.543	ug/kg	U	1	07-JAN-10 19:26	per0107029a
	Perchlorate-O(18)			5.50	ug/kg		1	07-JAN-10 19:26	per0107029a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

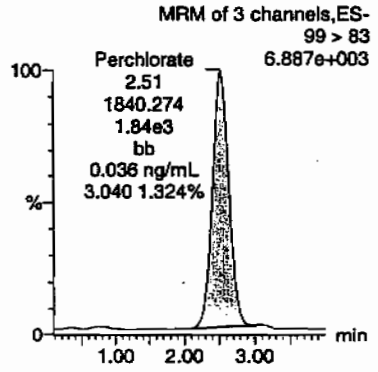
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107029a
Date: 07-Jan-2010
Time: 19:26:02
ID: 243492007
Vial: 1:5,C

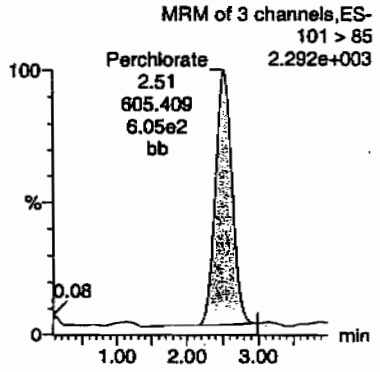
|LANL|936672|SOLID|1|

CWW
01-08-10

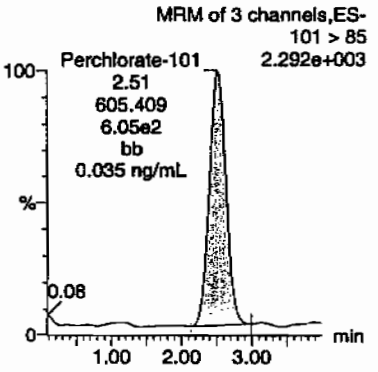
Perchlorate



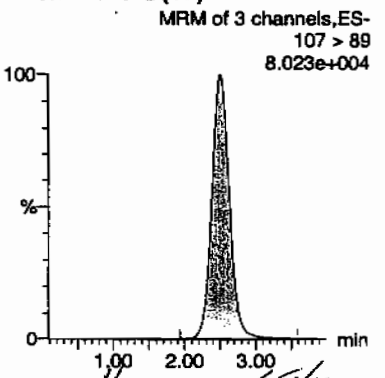
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
243492007	Perchlorate	99 > 83	2.51	1840.274	1840.274	bb			0.0356			643.189	3.04
243492007	Perchlorate-101	101 > 85	2.51	605.409	605.409	bb			0.0349			242.401	
243492007	Perchlorate-O(18)	107 > 89	2.50	23110.158	23110.158	bb			0.5064	101.28	1.28	1741.7...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

STANDARDS DATA

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 07–JAN–10

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 51634.86

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10-1037

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 07-JAN-10

HPLC Column: Phenomenex Ion Pac AG-16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate-101

Coefficient of Determination:

Calibration Curve: 17324.94

Response Type: External Standard

Curve Type: RF

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

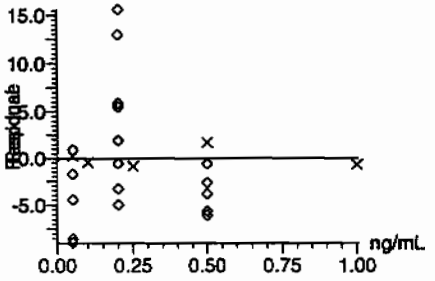
Quantify Calibration Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

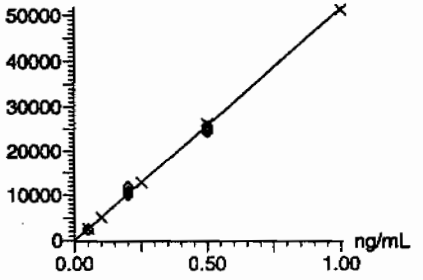
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Method: C:\MassLynx\Perchlorate.PRO\MethDB\per010710a.mdb 08 Jan 2010 08:13:48
Calibration: C:\MassLynx\Perchlorate.PRO\CurveDB\per010710a.cdb 08 Jan 2010 08:57:24

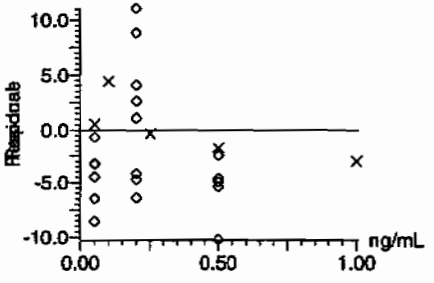
Compound name: Perchlorate
Response Factor: 51634.9
RRF SD: 544.923, % Relative SD: 1.05534
Response type: External Std, Area
Curve type: RF

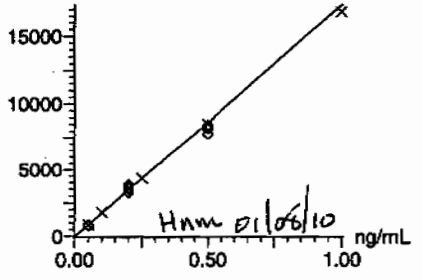




CWJ
01-08-10

Compound name: Perchlorate-101
Response Factor: 17324.9
RRF SD: 489.508, % Relative SD: 2.82545
Response type: External Std, Area
Curve type: RF





Hmm 01/06/10

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

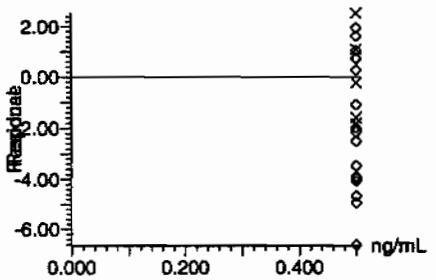
PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

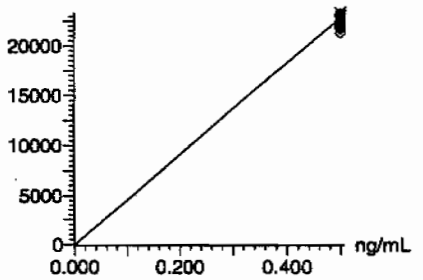
Quantify Calibration Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Compound name: Perchlorate-O(18)
Response Factor: 45636.2
RRF SD: 840.481, % Relative SD: 1.8417
Response type: External Std, Area
Curve type: RF





GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	99.39	07–JAN–10 17:05	per0107009a
Perchlorate Isotope Ratio		3.12		07–JAN–10 17:05	per0107009a
Perchlorate–101	.5	.48	95.05	07–JAN–10 17:05	per0107009a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Charlers W. Wilson

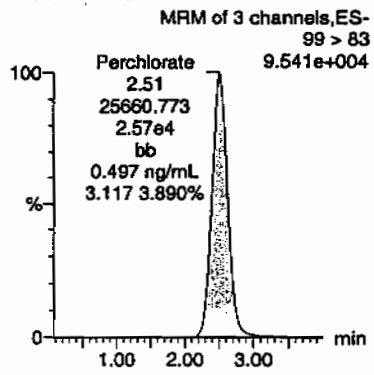
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

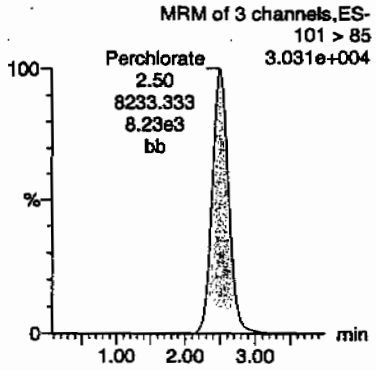
Name: per0107009a
Date: 07-Jan-2010
Time: 17:05:13
ID: WCL100104-06ICV
Vial: 1:2,A

Pass
ans
01-08-10

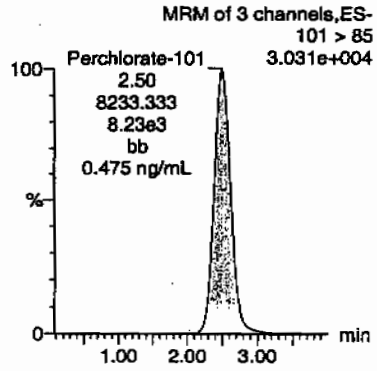
Perchlorate



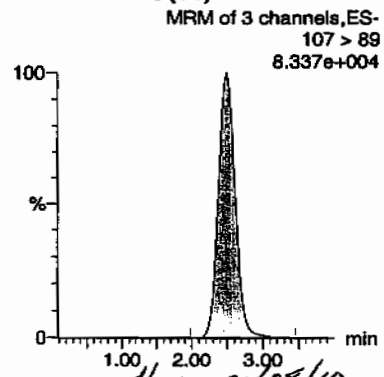
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06ICV	Perchlorate	99 > 83	2.51	25660.773	25660.773	bb			0.4970	99.39	-0.61	4619.1...	3.12
WCL100104-06ICV	Perchlorate-101	101 > 85	2.50	8233.333	8233.333	bb			0.4752	95.05	-4.95	2344.3...	
WCL100104-06ICV	Perchlorate-O(18)	107 > 89	2.49	22571.494	22571.494	bb			0.4946	98.92	-1.08	1137.0...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.47	94.35	07–JAN–10 18:08	per0107018a
Perchlorate Isotope Ratio		2.88		07–JAN–10 18:08	per0107018a
Perchlorate–101	.5	.49	97.55	07–JAN–10 18:08	per0107018a
Perchlorate	.5	.49	97.33	07–JAN–10 19:33	per0107030a
Perchlorate Isotope Ratio		3.07		07–JAN–10 19:33	per0107030a
Perchlorate–101	.5	.47	94.59	07–JAN–10 19:33	per0107030a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

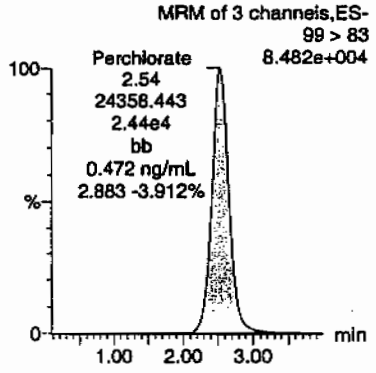
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

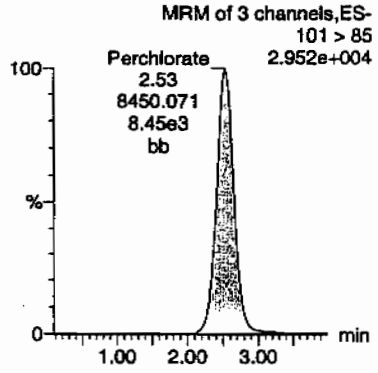
Name: per0107018a
Date: 07-Jan-2010
Time: 18:08:34
ID: WCL100104-06CCV
Vial: 1:2,A

Perchlorate
01-08-10

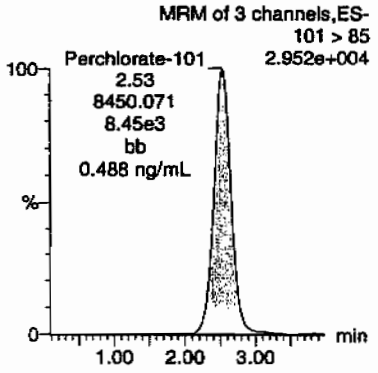
Perchlorate



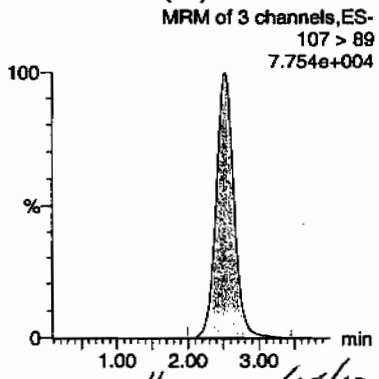
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06CCV	Perchlorate	99 > 83	2.54	24358.443	24358.443	bb			0.4717	94.35	-5.65	3780.6...	2.88
WCL100104-06CCV	Perchlorate-101	101 > 85	2.53	8450.071	8450.071	bb			0.4877	97.55	-2.45	1000.9...	
WCL100104-06CCV	Perchlorate-O(18)	107 > 89	2.53	22248.279	22248.279	bb			0.4875	97.50	-2.50	16250....	

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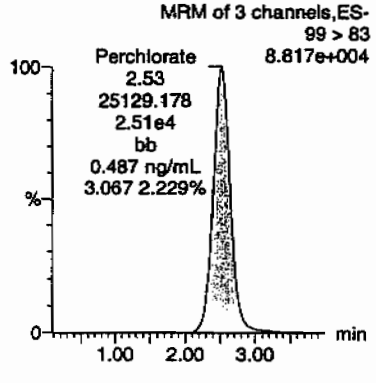
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

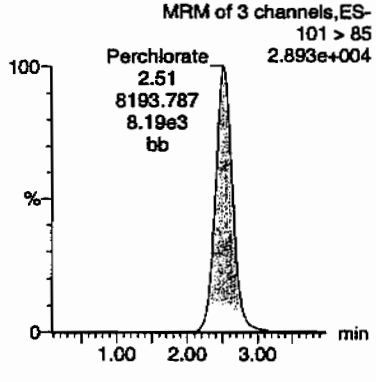
Name: per0107030a
Date: 07-Jan-2010
Time: 19:33:04
ID: WCL100104-06CCV
Vial: 1:2,A

Pass
aw
01-08-10

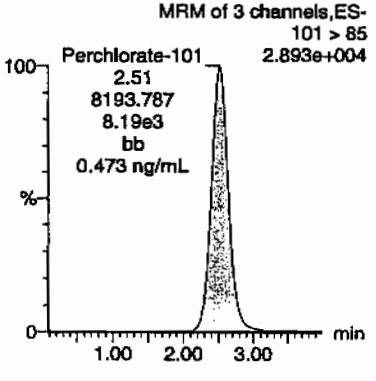
Perchlorate



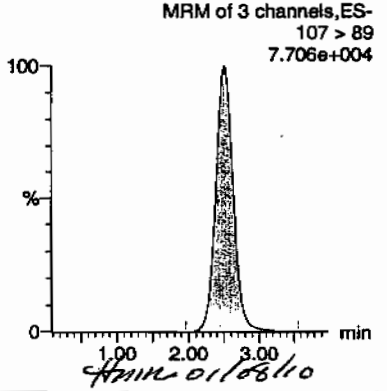
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-06CCV	Perchlorate	99 > 83	2.53	25129.178	25129.178	bb			0.4867	97.33	-2.67	7738.1...	3.07
WCL100104-06CCV	Perchlorate-101	101 > 85	2.51	8193.787	8193.787	bb			0.4729	94.59	-5.41	1467.8...	
WCL100104-06CCV	Perchlorate-O(18)	107 > 89	2.50	21916.148	21916.148	bb			0.4802	96.05	-3.95	7350.0...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Form 3

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037

Lab Code: GEL

Reporting Units: ug/kg

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	98.3	07–JAN–10 17:19	per0107011a
Perchlorate Isotope Ratio		3.03		07–JAN–10 17:19	per0107011a
Perchlorate–101	.05	.05	96.74	07–JAN–10 17:19	per0107011a
Perchlorate	.05	.05	100.97	07–JAN–10 18:22	per0107020a
Perchlorate Isotope Ratio		3.03		07–JAN–10 18:22	per0107020a
Perchlorate–101	.05	.05	99.35	07–JAN–10 18:22	per0107020a
Perchlorate	.05	.05	91.1	07–JAN–10 19:47	per0107032a
Perchlorate Isotope Ratio		2.84		07–JAN–10 19:47	per0107032a
Perchlorate–101	.05	.05	95.55	07–JAN–10 19:47	per0107032a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

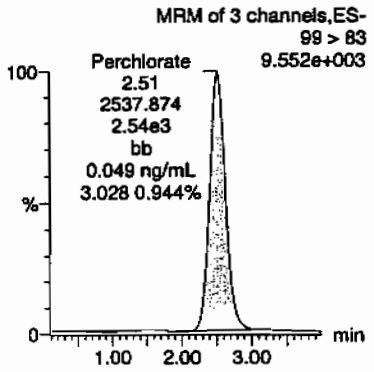
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

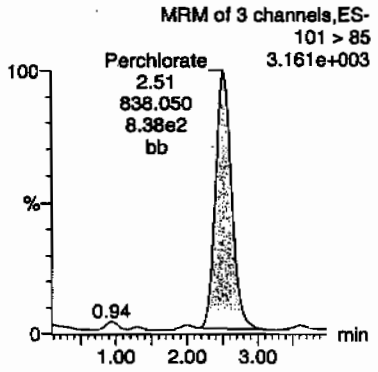
Name: per0107011a
Date: 07-Jan-2010
Time: 17:19:18
ID: WCL100104-07CRI
Vial: 1:2,B

PWD
01-08-10

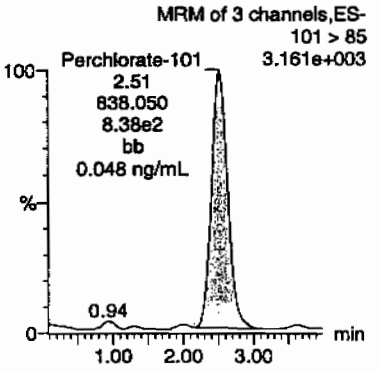
Perchlorate



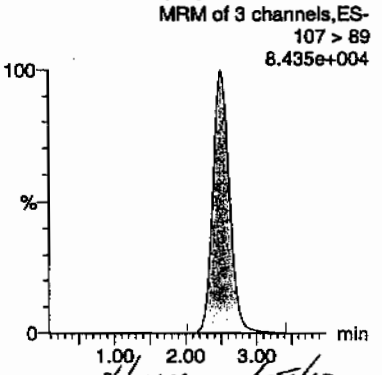
Perchlorate



Perchlorate-101



Perchlorate-O(18)



MM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	2.51	2537.874	2537.874	bb			0.0492	98.30	-1.70	442.243	3.03
WCL100104-07CRI	Perchlorate-101	101 > 85	2.51	838.050	838.050	bb			0.0484	96.74	-3.26	741.364	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	2.50	22983.533	22983.533	bb			0.5036	100.73	0.73	5043.2...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

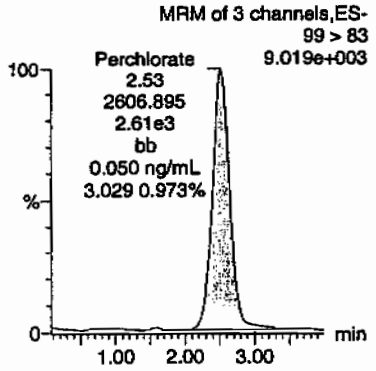
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

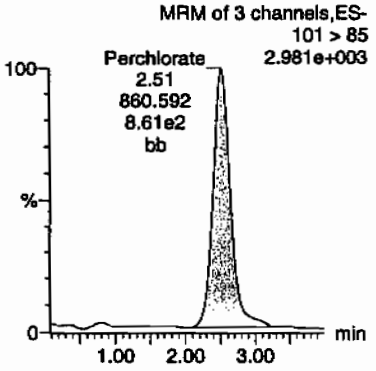
Name: per0107020a
Date: 07-Jan-2010
Time: 18:22:39
ID: WCL100104-07CRI
Vial: 1:2,B

Pass
ans
01-08-10

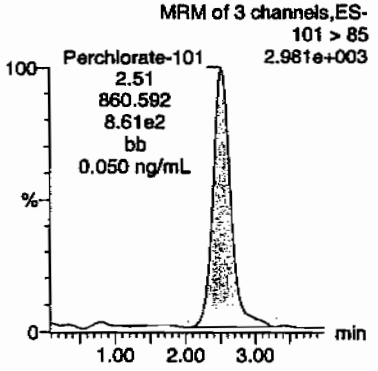
Perchlorate



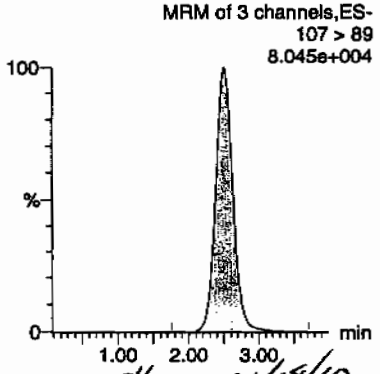
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 01/04/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	2.53	2606.895	2606.895	bb			0.0505	100.97	0.97	409.880	3.03
WCL100104-07CRI	Perchlorate-101	101 > 85	2.51	860.592	860.592	bb			0.0497	99.35	-0.65	63.273	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	2.50	22880.898	22880.898	bb			0.5014	100.28	0.28	10927....	

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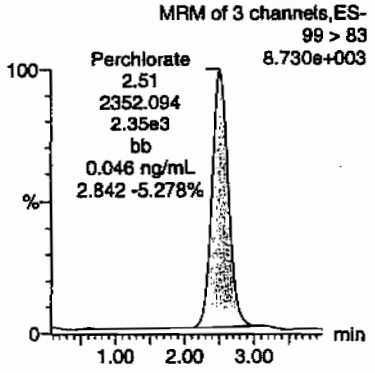
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

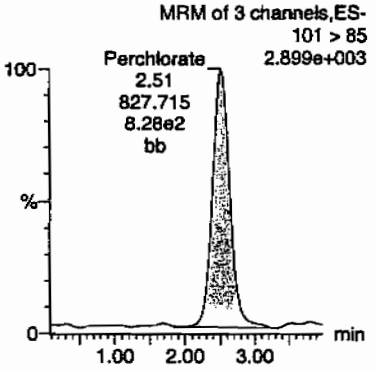
Name: per0107032a
Date: 07-Jan-2010
Time: 19:47:08
ID: WCL100104-07CRI
Vial: 1:2,B

Pass
01-08-10

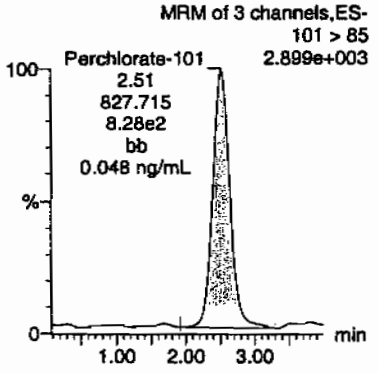
Perchlorate



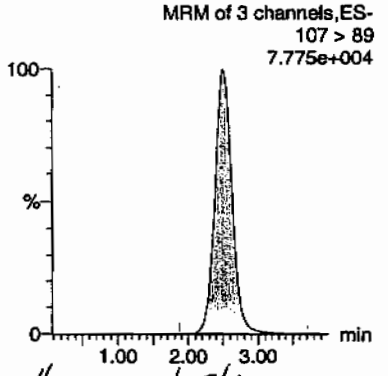
Perchlorate



Perchlorate-101



Perchlorate-O(18)



01/08/10

D	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL100104-07CRI	Perchlorate	99 > 83	2.51	2352.094	2352.094	bb			0.0456	91.10	-8.90	519.643	2.84
WCL100104-07CRI	Perchlorate-101	101 > 85	2.51	827.715	827.715	bb			0.0478	95.55	-4.45	197.311	
WCL100104-07CRI	Perchlorate-O(18)	107 > 89	2.50	21922.520	21922.520	bb			0.4804	96.08	-3.92	4271.7...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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QUALITY CONTROL

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
MB

Date Received: 07-JAN-10

GEL Job No (SDG): 10-1037

GEL Sample ID: 1202004148

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	0.500	ug/kg	U	1	07-JAN-10 17:26	per0107012a
	Perchlorate Isotope Ratio						1	07-JAN-10 17:26	per0107012a
14797-73-0	Perchlorate-101	.5	2	0.500	ug/kg	U	1	07-JAN-10 17:26	per0107012a
	Perchlorate-O(18)			4.83	ug/kg		1	07-JAN-10 17:26	per0107012a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

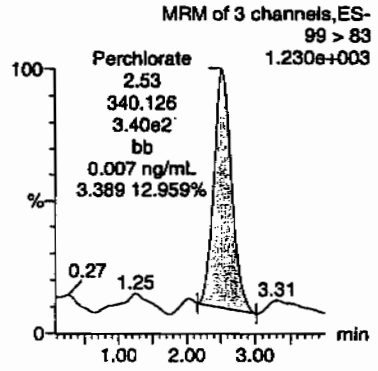
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107012a
Date: 07-Jan-2010
Time: 17:26:22
ID: 1202004148
Vial: 1:3,A

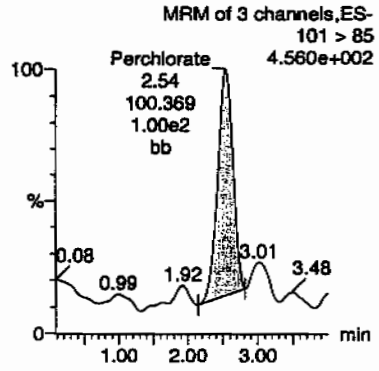
LANL|936672|5020|MB|11

GWW 01-08-10

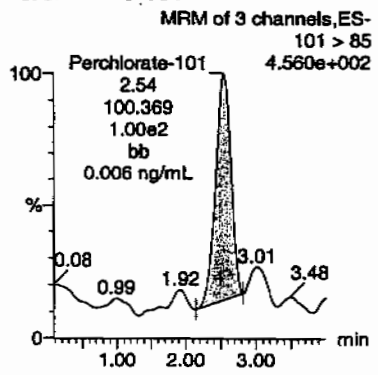
Perchlorate



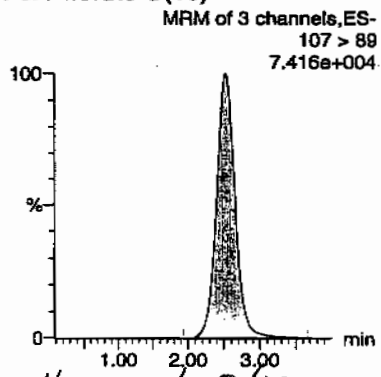
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HNM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202004148	Perchlorate	99 > 83	2.53	340.126	340.126	bb			0.0066			88.909	3.39
1202004148	Perchlorate-101	101 > 85	2.54	100.369	100.369	bb			0.0058			50.038	
1202004148	Perchlorate-O(18)	107 > 89	2.53	22035.615	22035.615	bb			0.4829	96.57	-3.43	5132.4...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
LCS

Date Received: 07-JAN-10

GEL Job No (SDG): 10-1037

GEL Sample ID: 1202004149

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 100

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.5	2	1.99	ug/kg	J	1	07-JAN-10 17:33	per0107013a
	Perchlorate Isotope Ratio			2.89			1	07-JAN-10 17:33	per0107013a
14797-73-0	Perchlorate-101	.5	2	2.05	ug/kg		1	07-JAN-10 17:33	per0107013a
	Perchlorate-O(18)			4.90	ug/kg		1	07-JAN-10 17:33	per0107013a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

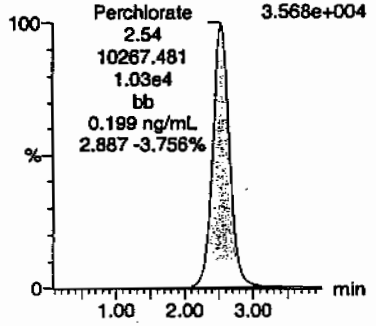
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107013a
Date: 07-Jan-2010
Time: 17:33:25
ID: 1202004149
Vial: 1:3,B

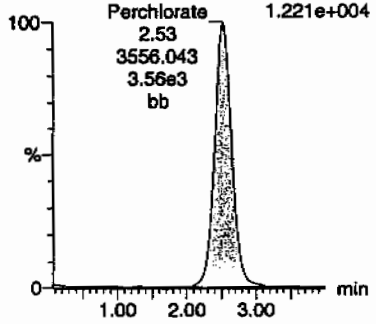
|LANL|936672|SOL20|LCS|11

AWJ
01-08-10

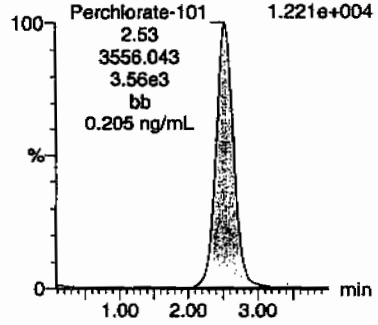
Perchlorate



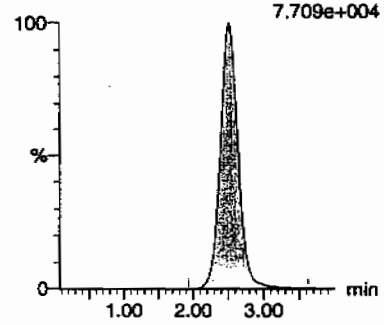
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202004149	Perchlorate	99 > 83	2.54	10267.481	10267.481	bb			0.1988	99.42	-0.58	1028.4...	2.89
1202004149	Perchlorate-101	101 > 85	2.53	3556.043	3556.043	bb			0.2053	102.63	2.63	1533.4...	
1202004149	Perchlorate-O(18)	107 > 89	2.51	22367.807	22367.807	bb			0.4901	98.03	-1.97	609.755	

$\frac{10267.481}{51634.9} = 0.1988$

HMK
01/08/10

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7288MS

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 1202004150

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.2	2.55	ug/kg		1	07-JAN-10 18:36	per0107022a
	Perchlorate Isotope Ratio			3.17			1	07-JAN-10 18:36	per0107022a
14797-73-0	Perchlorate-101	.551	2.2	2.40	ug/kg		1	07-JAN-10 18:36	per0107022a
	Perchlorate-O(18)			5.56	ug/kg		1	07-JAN-10 18:36	per0107022a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

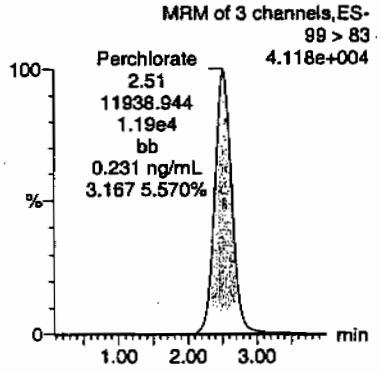
Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

Name: per0107022a
Date: 07-Jan-2010
Time: 18:36:44
ID: 1202004150
Vial: 1:4,B

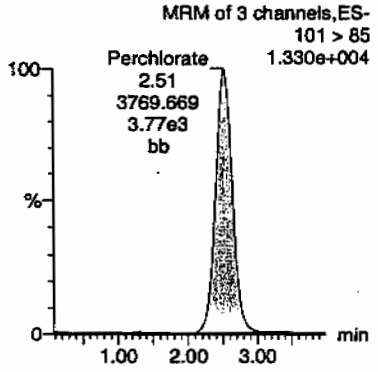
|LANL|936672|5020|MS|11

WW 01-08-10

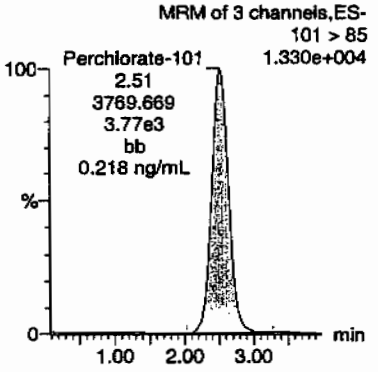
Perchlorate



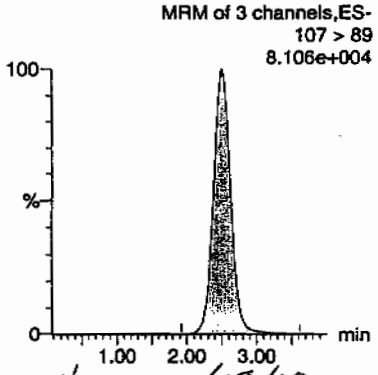
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202004150	Perchlorate	99 > 83	2.51	11938.944	11938.944	bb			0.2312	115.61	15.61	1936.2...	3.17
1202004150	Perchlorate-101	101 > 85	2.51	3769.669	3769.669	bb			0.2176	108.79	8.79	1901.3...	
1202004150	Perchlorate-O(18)	107 > 89	2.50	23055.266	23055.266	bb			0.5052	101.04	1.04	11818....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: SOIL

Extraction Batch ID: 936671

Extraction Type: Solid Prep

Sample Volume/Weight: 2.00 g

Concentrated Extract Volume: 20.0

Client Sample No.
RE12-10-7288MSD

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037

GEL Sample ID: 1202004151

Date Filtered: 07-JAN-10

Injection Volume (uL): 20

%Solids: 90.8

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.551	2.2	2.49	ug/kg		1	07-JAN-10 18:43	per0107023a
	Perchlorate Isotope Ratio			3.03			1	07-JAN-10 18:43	per0107023a
14797-73-0	Perchlorate-101	.551	2.2	2.45	ug/kg		1	07-JAN-10 18:43	per0107023a
	Perchlorate-O(18)			5.59	ug/kg		1	07-JAN-10 18:43	per0107023a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Charlers W. Wilson

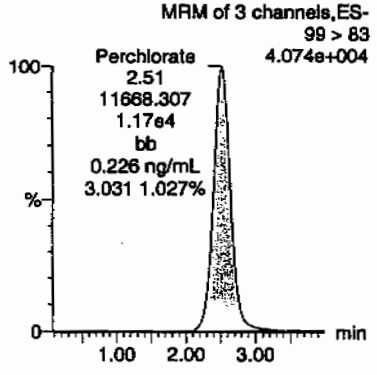
Dataset: C:\MassLynx\Perchlorate.PRO\per010710a.qld

Last Altered: Friday, January 08, 2010 8:57:25 AM Eastern Standard Time
Printed: Friday, January 08, 2010 9:06:04 AM Eastern Standard Time

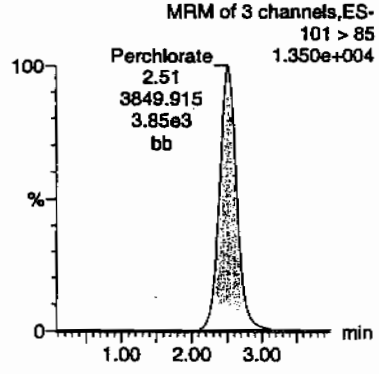
Name: per0107023a
Date: 07-Jan-2010
Time: 18:43:46
ID: 1202004151 |LANL|936672|50120|MSD|1|
Vial: 1:4,C

CWW
01-08-10

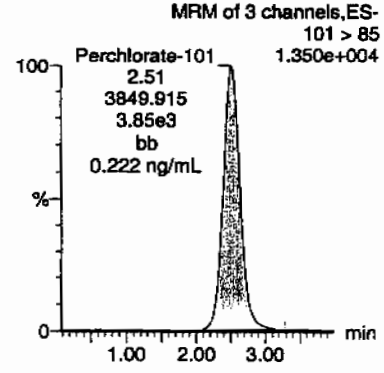
Perchlorate



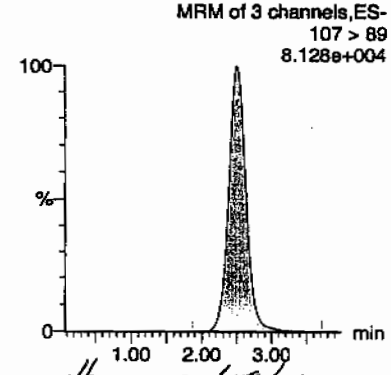
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 01/08/10

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202004151	Perchlorate	99 > 83	2.51	11668.307	11668.307	bb			0.2260	112.99	12.99	1341.6...	3.03
1202004151	Perchlorate-101	101 > 85	2.51	3849.915	3849.915	bb			0.2222	111.11	11.11	813.774	
1202004151	Perchlorate-O(18)	107 > 89	2.50	23189.414	23189.414	bb			0.5081	101.63	1.63	8174.4...	

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 936671 **Verified by:** _____

Analyst: Jareth Shirley

Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6

Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Aliquot (g)	Prepped Aliquot (mL)	Prepped Factor (mL/g)
1202004148 MB	07-JAN-2010 13:57:59	2	20	10
1202004149 LCS	07-JAN-2010 13:57:59	2	20	10
243472001	07-JAN-2010 13:57:59	2	20	10
243472002	07-JAN-2010 13:57:59	2	20	10
243472003	07-JAN-2010 13:57:59	2	20	10
243492001	07-JAN-2010 13:57:59	2	20	10
1202004150 MS (243492001)	07-JAN-2010 13:57:59	2	20	10
1202004151 MSD (243492001)	07-JAN-2010 13:57:59	2	20	10
243492002	07-JAN-2010 13:57:59	2	20	10
243492003	07-JAN-2010 13:57:59	2	20	10
243492004	07-JAN-2010 13:57:59	2	20	10
243492005	07-JAN-2010 13:57:59	2	20	10
243492006	07-JAN-2010 13:57:59	2	20	10
243492007	07-JAN-2010 13:57:59	2	20	10
1202004152 ICS	07-JAN-2010 13:57:59	2	20	10

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1202004152	10 ug/L ICV/CCV Second Source	UCL091201-01.2	.4	mL
LCS	1202004149	10 ug/L ICV/CCV Second Source	UCL091201-01.2	.4	mL
MS	1202004150	10 ug/L ICV/CCV Second Source	UCL091201-01.2	.4	mL
MSD	1202004151	10 ug/L ICV/CCV Second Source	UCL091201-01.2	.4	mL

Comments:

Desalting cartridges used: 090410-1-Ba & 091002-1-H

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GEL ORGANIC RUN LOG

INSTRUMENT ID: LCMSMS#2

Date: 01/07/10
Extr. Injection Volume: 20uL
Sequence Number: per010710a
Initial Calibration Date: 01/07/10

Method: EPA 6850-Modified
Int. Std.: UCL091019-03.2
Mobile Phase Lot#: 1233781, 1233976
Standard-Samp Reagent Lot#:: 1233976

Reviewed BY: [signature]
Date: 01/08/10
SOP: GL-OA-E-067 Rev.6
Alt Check Std. ID: WCL100104-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per0107001a	IPB001	CWW	1/7/2010 16:08			1		USE	B
per0107002a	IPB001	CWW	1/7/2010 16:15			1		USE	B
per0107003a	WCLICAL-01	CWW	1/7/2010 16:22			1		USE	I
per0107004a	WCLICAL-02	CWW	1/7/2010 16:29			1		USE	I
per0107005a	WCLICAL-03	CWW	1/7/2010 16:37			1		USE	I
per0107006a	WCLICAL-04	CWW	1/7/2010 16:44			1		USE	I
per0107007a	WCLICAL-05	CWW	1/7/2010 16:51			1		USE	I
per0107008a	IPB002	CWW	1/7/2010 16:58			1		USE	B
per0107009a	WCLICV	CWW	1/7/2010 17:05			1		USE	C
per0107010a	IPB003	CWW	1/7/2010 17:12			1		USE	B
per0107011a	WCLCRI	CWW	1/7/2010 17:19			1		USE	C
per0107012a	1202004148	CWW	1/7/2010 17:26	936672	VARIOUS	1	LANL	USE	S
per0107013a	1202004149	CWW	1/7/2010 17:33	936672	VARIOUS	1	LANL	USE	S
per0107014a	1202004152	CWW	1/7/2010 17:40	936672	VARIOUS	1	LANL	USE	S
per0107015a	243472001	CWW	1/7/2010 17:47	936672	10-1057	1	LANL	USE	S
per0107016a	243472002	CWW	1/7/2010 17:54	936672	10-1057	1	LANL	USE	S
per0107017a	243472003	CWW	1/7/2010 18:01	936672	10-1057	1	LANL	USE	S
per0107018a	WCLCCV	CWW	1/7/2010 18:08			1		USE	C
per0107019a	IPB004	CWW	1/7/2010 18:15			1		USE	B
per0107020a	WCLCRI	CWW	1/7/2010 18:22			1		USE	C
per0107021a	243492001	CWW	1/7/2010 18:29	936672	10-1037	1	LANL	USE	S
per0107022a	1202004150	CWW	1/7/2010 18:36	936672	10-1037	1	LANL	USE	S
per0107023a	1202004151	CWW	1/7/2010 18:43	936672	10-1037	1	LANL	USE	S
per0107024a	243492002	CWW	1/7/2010 18:50	936672	10-1037	1	LANL	USE	S
per0107025a	243492003	CWW	1/7/2010 18:57	936672	10-1037	1	LANL	USE	S
per0107026a	243492004	CWW	1/7/2010 19:04	936672	10-1037	1	LANL	USE	S
per0107027a	243492005	CWW	1/7/2010 19:11	936672	10-1037	1	LANL	USE	S
per0107028a	243492006	CWW	1/7/2010 19:18	936672	10-1037	1	LANL	USE	S
per0107029a	243492007	CWW	1/7/2010 19:26	936672	10-1037	1	LANL	USE	S

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per0107030a	WCLCCV	CWW	1/7/2010 19:33			1		USE	C
per0107031a	IPB005	CWW	1/7/2010 19:40			1		USE	B
per0107032a	WCLCRI	CWW	1/7/2010 19:47			1		USE	C
per0107033a	1202004371	CWW	1/7/2010 19:54	936781	VARIOUS	1	LANL	USE	S
per0107034a	1202004374	CWW	1/7/2010 20:01	936781	VARIOUS	1	LANL	USE	S
per0107035a	1202004375	CWW	1/7/2010 20:08	936781	VARIOUS	1	LANL	USE	S
per0107036a	243521001	CWW	1/7/2010 20:15	936781	10-1075	1	LANL	USE	S
per0107037a	1202004372	CWW	1/7/2010 20:22	936781	10-1075	1	LANL	USE	S
per0107038a	1202004373	CWW	1/7/2010 20:29	936781	10-1075	1	LANL	USE	S
per0107039a	243521002	CWW	1/7/2010 20:36	936781	10-1075	1	LANL	USE	S
per0107040a	243521003	CWW	1/7/2010 20:43	936781	10-1075	1	LANL	USE	S
per0107041a	243521004	CWW	1/7/2010 20:50	936781	10-1075	1	LANL	USE	S
per0107042a	WCLCCV	CWW	1/7/2010 20:57			1		USE	C
per0107043a	IPB006	CWW	1/7/2010 21:04			1		USE	B
per0107044a	WCLCRI	CWW	1/7/2010 21:11			1		USE	C
per0107045a	243521005	CWW	1/7/2010 21:18	936781	10-1075	1	LANL	USE	S
per0107046a	243521006	CWW	1/7/2010 21:25	936781	10-1075	1	LANL	USE	S
per0107047a	243521007	CWW	1/7/2010 21:33	936781	10-1075	1	LANL	USE	S
per0107048a	243521008	CWW	1/7/2010 21:40	936781	10-1075	1	LANL	USE	S
per0107049a	243521009	CWW	1/7/2010 21:47	936781	10-1075	1	LANL	USE	S
per0107050a	243521010	CWW	1/7/2010 21:54	936781	10-1075	1	LANL	USE	S
per0107051a	243521011	CWW	1/7/2010 22:01	936781	10-1075	1	LANL	USE	S
per0107052a	243547002	CWW	1/7/2010 22:08	936781	10-1084	1	LANL	USE	S
per0107053a	243547003	CWW	1/7/2010 22:15	936781	10-1084	1	LANL	USE	S
per0107054a	WCLCCV	CWW	1/7/2010 22:22			1		USE	C
per0107055a	IPB007	CWW	1/7/2010 22:29			1		USE	B
per0107056a	WCLCRI	CWW	1/7/2010 22:36			1		USE	C

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

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LC/MS/MS PERCHLORATE ANALYSIS

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Perchlorate by LC/MSMS
Los Alamos National Laboratory (LANL)
SDG 10-1037-1

Method/Analysis Information

Procedure:	**Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)**
Analytical Method:	SW846 6850 Modified
Prep Method:	SW846 6850 Modified
Analytical Batch Number:	936066
Prep Batch Number:	936065

Sample Analysis

Sample ID	Client ID
243493001	RE12-10-7298
1202002920	Interference Check Sample (ICS)
1202002916	Method Blank (MB)
1202002917	Laboratory Control Sample (LCS)
1202003536	243396001(RE16-10-2848) Matrix Spike (MS)
1202003537	243396001(RE16-10-2848) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on an "as received" basis.

Preparation/Analytical Method Verification

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-067 REV# 6.

Calibration Information

Initial Calibration
All initial calibration requirements have been met for this SDG. Due to software constraints, all Initial Calibration Blanks must be designated as IPB001.

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CCV Requirements
All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

CCB Requirements
All continuing calibration blanks (CCB) bracketing the analyses associated with this batch were within acceptance criteria.

CCV Requirements
All continuing calibration checks (CCV) requirements were met by all bracketing CCV standards.

Low Level Standard (CRI) Requirements
All low level calibration verification (CRI) requirements were met by all bracketing CRI standards.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB(s) analyzed with this SDG met the acceptance criteria.

Interference Check Sample (ICS)
The interference check sample (ICS) met all recovery acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

QC Sample Designation
Client sample 243396001 (RE16-10-2848) from SDG 10-1010 was chosen for matrix spike and matrix spike duplicate analysis. Please see the raw data in the Miscellaneous Section.

Matrix Spike (MS) Recovery Statement
The MS recoveries were within the established acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries were within the established acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Retention Time Standard Area Acceptance
The retention time standard areas were within the required acceptance criteria for all samples and QC.

Retention Time
During the analysis of Perchlorate by LC/MS/MS, retention time shifts are commonly observed. These retention time shifts, which are caused by fouling of the column by the sample matrices, are problematic when the retention time is used as one of the criterion for confirmation. To overcome this problem, a known amount of O(18)-labeled Perchlorate was added to each sample as a retention time standard. The presence of Perchlorate was confirmed by the relative retention time (RRT) of the Perchlorate peak and the O(18) standard. A RRT window of 0.98 to 1.02, as required by Method 332.0, has been used. In addition to the isotopic ratio, the presence of Perchlorate in the samples associated with this data package have been confirmed using the relative retention criteria stated above, not the absolute retention time.

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Technical Information

Holding Time Specifications
All samples in this SDG in this analytical batch met the specified holding time. GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration.

Preparation/Analytical Method Verification
All procedures were performed as stated in the SOP.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis
Re-extractions or re-analyses were not required in this SDG except for dilutions.

Miscellaneous Information

Nonconformance (NCR) Documentation
Nonconformance reports (NCRs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integrations
Some initial calibration standards, continuing calibration standards, and/or samples may require manual integrations due to software limitations.

Method Comments
The sample in this SDG was not originally analyzed using EPA Method 314.0.

Additional Comments
The Perchlorate Isotope Ratio on the Form I may differ slightly from the ratio on the corresponding raw data due to rounding rules and/or significant figures or due to software limitations when there are manual integrations, dilutions or other factors. The ratio value of the Form I is the correct value.

The retention time marker, Perchlorate-O (18), is added to all samples, instrument blanks, and standards prior to injection. It is used to verify the retention time of Perchlorate and Perchlorate-101 and to insure an accurate injection occurred. Due to various anions affecting the recovery of Perchlorate-O (18) and not Perchlorate and Perchlorate-101, the calibration curves of Perchlorate and Perchlorate-101 are not internally corrected for using Perchlorate-O (18). They are external calibrations.

Perchlorate Isotope Ratio
The Perchlorate isotope ratio met acceptance criteria for all samples and QC samples. Please see the isotope ratio criteria in the Miscellaneous Section.

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System Configuration

The laboratory utilizes a Waters LC 2795 liquid chromatography instrument for perchlorate analysis. It is coupled with either a Micromass Quattro Micro Mass Spectrometer/ Mass Spectrometer, or a Micromass Quattro Ultima Mass Spectrometer/ Mass Spectrometer. Each being designated as LCMSMS #1, and LCMSMS #2, respectively. It is fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis. The laboratory may also utilize an Agilent 1100 liquid chromatography instrument for perchlorate analysis. It is coupled with an Applied Biosystems 4000 Mass Spectrometer/ Mass Spectrometer, designated as LCMSMS #3 or LCMSMS #4. It is also fitted with an electrospray probe that is operated in the negative electrospray ionization mode for perchlorate analysis.

Chromatographic Columns

Chromatographic separation of perchlorate is accomplished through analysis on the following anion column:

Dionex: IonPac AG-16 2 x 50 mm.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Herbert M. Maier **Date:** 01/12/10

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SAMPLE DATA SUMMARY

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 936065

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
RE12-10-7298

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037-1

GEL Sample ID: 243493001

Date Filtered: 29-DEC-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	29-DEC-09 22:56	per1229082a
	Perchlorate Isotope Ratio						1	29-DEC-09 22:56	per1229082a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	29-DEC-09 22:56	per1229082a
	Perchlorate-O(18)			0.434	ug/L		1	29-DEC-09 22:56	per1229082a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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QUALITY CONTROL SUMMARY

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Form 5

Perchlorate Laboratory Control Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1037–1

Extract Batch Code: 936065

Date Filtered: 29–DEC–09

Matrix: GROUND WATER

Sample ID: 1202002917

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.183	ug/L	91.5		85 – 115
Perchlorate Isotope Ratio		3.02				–
Perchlorate–101	0.200	.184	ug/L	92.2		85 – 115
Perchlorate–O(18)		.463	ug/L			–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Form 5a

Perchlorate Interference Check Sample

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No. (SDG): 10–1037–1

Extract Batch Code: 936065

Date Filtered: 29–DEC–09

Matrix: GROUND WATER

Sample ID: 1202002920

Analyte^	True	Found	Units	%Rec	Q	Control Limits
Perchlorate	0.200	.199	ug/L	99.6		70 – 130
Perchlorate Isotope Ratio		2.97				
Perchlorate–101	0.200	.204	ug/L	102		70 – 130
Perchlorate–O(18)		.546	ug/L			

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

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ntify Sample Report **MassLynx 4.0 SP4**

GEL Group, LLC Analyst: Michael A. Penny

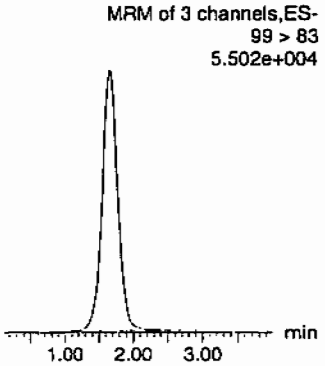
set: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
ed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

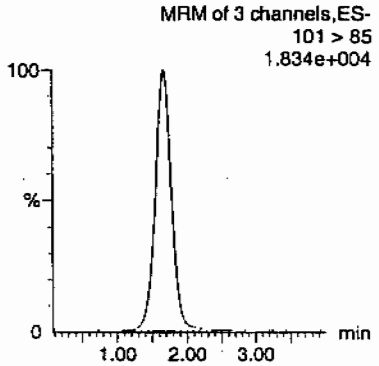
e: per1229058a
: 29-Dec-2009
: 20:07:03
202002920 | LANL | 936066 | LIQ | ICS | 1 |
2:4,C

MAP 12/30/09

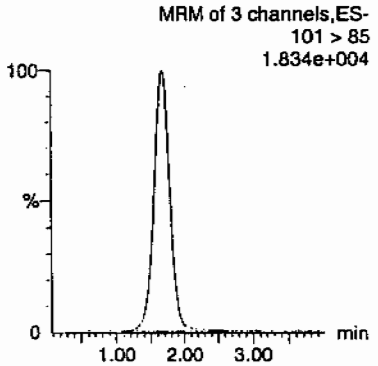
nlorate



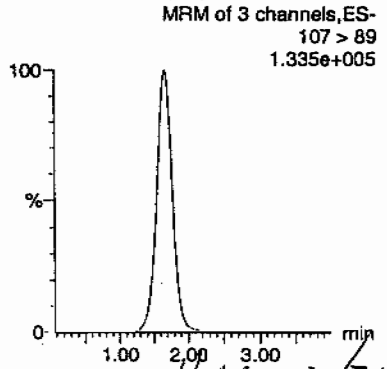
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HMM 12/30/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
)02920	Perchlorate	99 > 83	1.68	14811.310	14811.310	bb			0.1993	99.63	-0.37	723.005	2.97
)02920	Perchlorate-101	101 > 85	1.67	4987.850	4987.850	bb			0.2038	101.92	1.92	1557.5...	
)02920	Perchlorate-O(18)	107 > 89	1.67	36368.996	36368.996	bb			0.5463	109.27	9.27	6107.0...	

SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Form 6

Perchlorate Spike/Spike Duplicate Summary

Lab Name: General Engineering Laboratories

Lab Code: GEL

GEL Job No (SDG): 10–1037–1

Extract Batch Code: 936065

Date Extracted: 29–DEC–09

GEL MS/PS ID: 1202003536

Client ID: RE16–10–2848

GEL MSD/PSD ID: 1202003537

QC Type: MS

Compound^	Spike Added	Sample Conc	Units	MS Conc	MS Rec #	MSD Conc	MSD Rec #	RPD #	RPD Limit	Recovery Limit
Perchlorate	0.200	0.00154	ug/L	0.184	91.2	.182	90.4	.955	30	75 – 125
Perchlorate Isotope Ratio	0	0.00		3.07		3.22		0		–
Perchlorate–101	0.200	0.00	ug/L	0.182	91.1	.172	86	5.76	30	75 – 125
Perchlorate–O(18)	0	0.438	ug/L	0.448		.436		2.62		–

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate–101 peak area. The Perchlorate–101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

Comments:

Form 4

Perchlorate Initial Calibration Blank

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	29–DEC–09	per1229001a	IPB001
Perchlorate–101	0.00	0	NA	29–DEC–09	per1229001a	IPB001
Perchlorate	0.00	0	NA	29–DEC–09	per1229002a	IPB001
Perchlorate–101	0.00	0	NA	29–DEC–09	per1229002a	IPB001

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tify Sample Report MassLynx 4.0 SP4 Page 1 of 85
iEL Group, LLC Analyst: Michael A. Penny

et: C:\MassLynx\Perchlorate.PRO\per122909a.qld

ltered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
d: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

od: C:\MassLynx\Perchlorate.PRO\MethDB\per122909a.mdb 29 Dec 2009 14:36:05
ration: C:\MassLynx\Perchlorate.PRO\CurveDB\per122909a.cdb 30 Dec 2009 06:51:17

: per1229001a
29-Dec-2009
13:24:44
B001
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MM 12/30/09

lorate
MRM of 3 channels,ES-
99 > 83
1.342e+003
.08
1.68
2.43
3.30
min
1.00 2.00 3.00

Perchlorate
MRM of 3 channels,ES-
101 > 85
5.325e+002
0.08
0.56
1.33
1.83
3.06
3.37
%
min
1.00 2.00 3.00

Perchlorate-101
MRM of 3 channels,ES-
101 > 85
5.325e+002
0.08
0.56
1.33
1.83
3.06
3.37
%
min
1.00 2.00 3.00

Perchlorate-O(18)
MRM of 3 channels,ES-
107 > 89
1.258e+005
%
min
1.00 2.00 3.00

Hmm 12/30/09

Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											0.00
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	1.67	35086.422	35086.422	bb			0.5271	105.42	5.42	10266....	

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ıtify Sample Report MassLynx 4.0 SP4
ɜEL Group, LLC Analyst: Michael A. Penny

ıet: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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ɜd: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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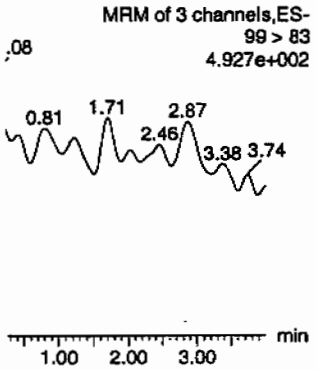
ılorate



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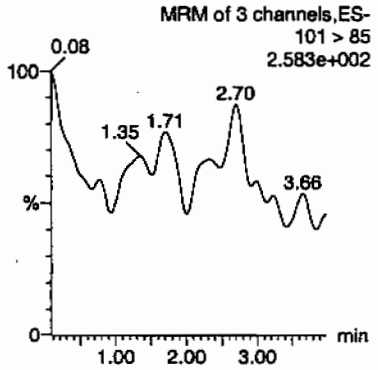

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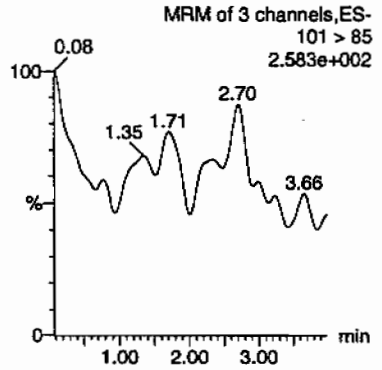

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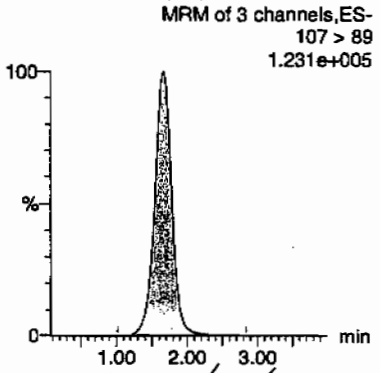

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
I	Perchlorate	99 > 83											0.00
I	Perchlorate-101	101 > 85											
I	Perchlorate-O(18)	107 > 89	1.67	34490.836	34490.836	bb			0.5181	103.63	3.63	3293.3...	

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Form 4

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1037-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate	0.00	0	NA	29-DEC-09	per1229008a	IPB002
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229008a	IPB002
Perchlorate	0.00	0	NA	29-DEC-09	per1229010a	IPB003
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229010a	IPB003
Perchlorate	0.00	0	NA	29-DEC-09	per1229023a	IPB004
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229023a	IPB004
Perchlorate	0.00	0	NA	29-DEC-09	per1229030a	IPB005
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229030a	IPB005
Perchlorate	0.00	0	NA	29-DEC-09	per1229043a	IPB006
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229043a	IPB006
Perchlorate	0.00	0	NA	29-DEC-09	per1229054a	IPB007
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229054a	IPB007
Perchlorate	0.00	0	NA	29-DEC-09	per1229066a	IPB008

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Form 4

Perchlorate Continuing Calibration Blank

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10-1037-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id	GEL Sample ID
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229066a	IPB008
Perchlorate	0.00	0	NA	29-DEC-09	per1229078a	IPB009
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229078a	IPB009
Perchlorate	0.00	0	NA	29-DEC-09	per1229084a	IPB010
Perchlorate-101	0.00	0	NA	29-DEC-09	per1229084a	IPB010

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tify Sample Report MassLynx 4.0 SP4
;EL Group, LLC Analyst: Michael A. Penny

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:d: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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29-Dec-2009
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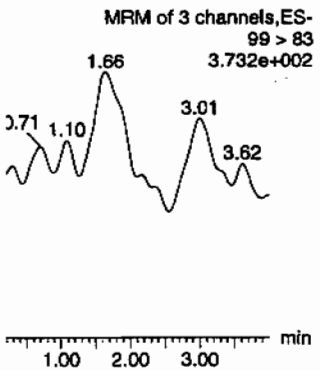
MAP 12/30/09

ılorate



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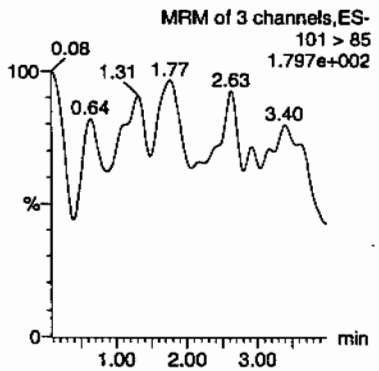

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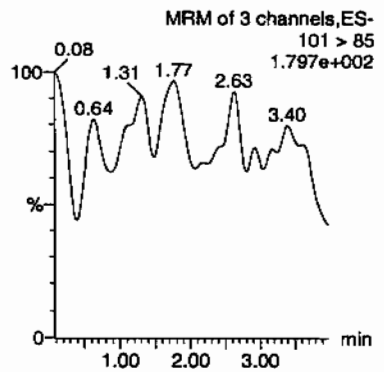
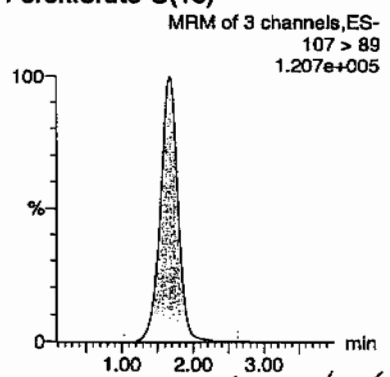


Perchlorate-O(18)



Hnm 12/30/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
2	Perchlorate	99 > 83											0.00
2	Perchlorate-101	101 > 85											
2	Perchlorate-O(18)	107 > 89	1.67	33924.273	33924.273	bb			0.5096	101.92	1.92	7224.2...	

EL Group, LLC Analyst: Michael A. Penny

at: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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14:28:12
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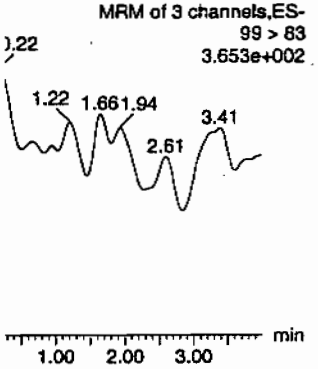
lorate



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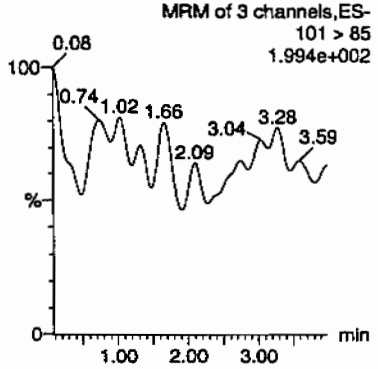

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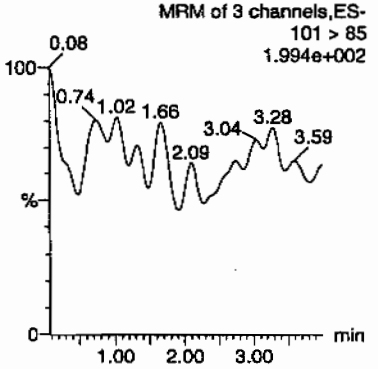

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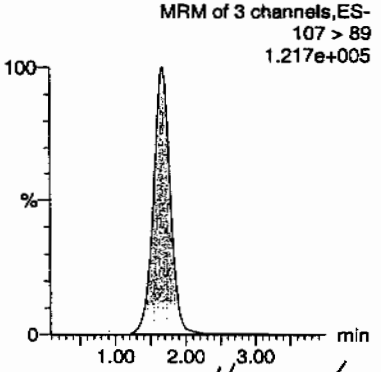

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3	Perchlorate	99 > 83											0.00
3	Perchlorate-101	101 > 85											
3	Perchlorate-O(18)	107 > 89	1.67	34074.816	34074.816	bb			0.5119	102.38	2.38	3513.1...	

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lfy Sample Report MassLynx 4.0 SP4
EL Group, LLC Analyst: Michael A. Penny

ɜt: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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ɪ: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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29-Dec-2009
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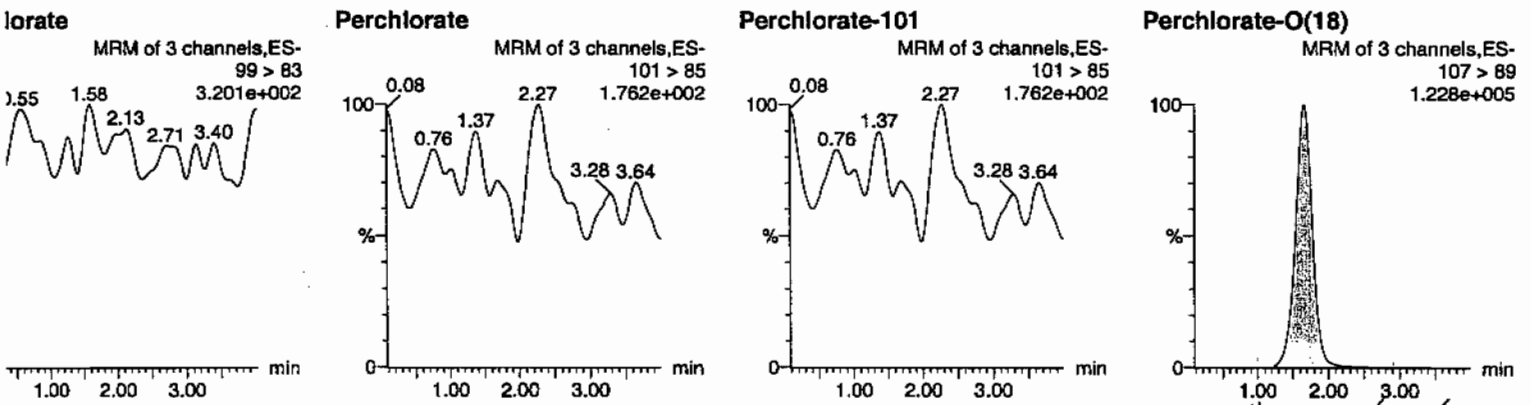
MAP 12/30/09



Hmm 12/30/09

Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											0.00
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	1.67	34397.980	34397.980	bb			0.5167	103.35	3.35	5102.0...	

ɜOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

lfy Sample Report MassLynx 4.0 SP4
EL Group, LLC Analyst: Michael A. Penny

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29-Dec-2009
16:49:06
3005
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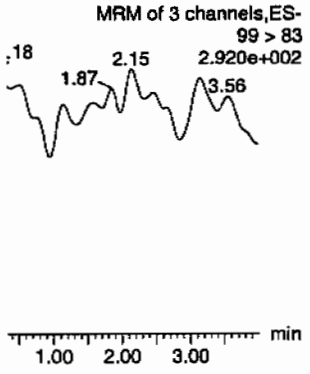
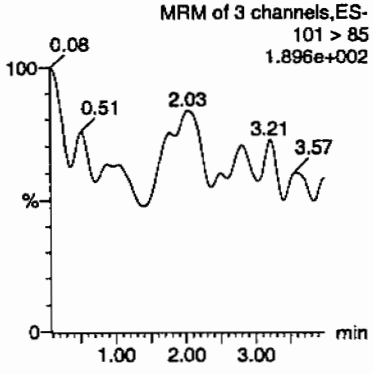
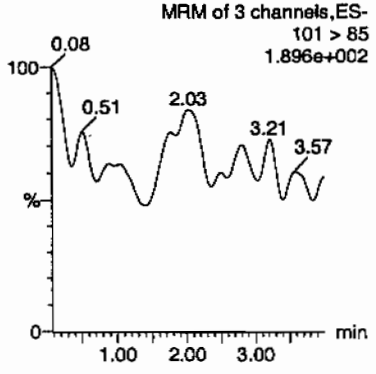
lorate



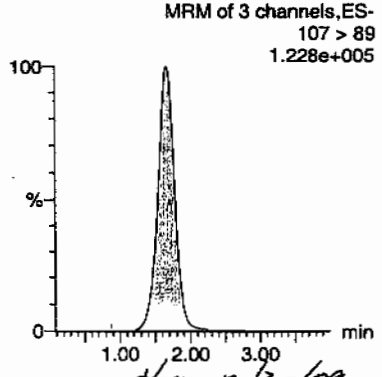
Perchlorate



Perchlorate-101



Perchlorate-O(18)



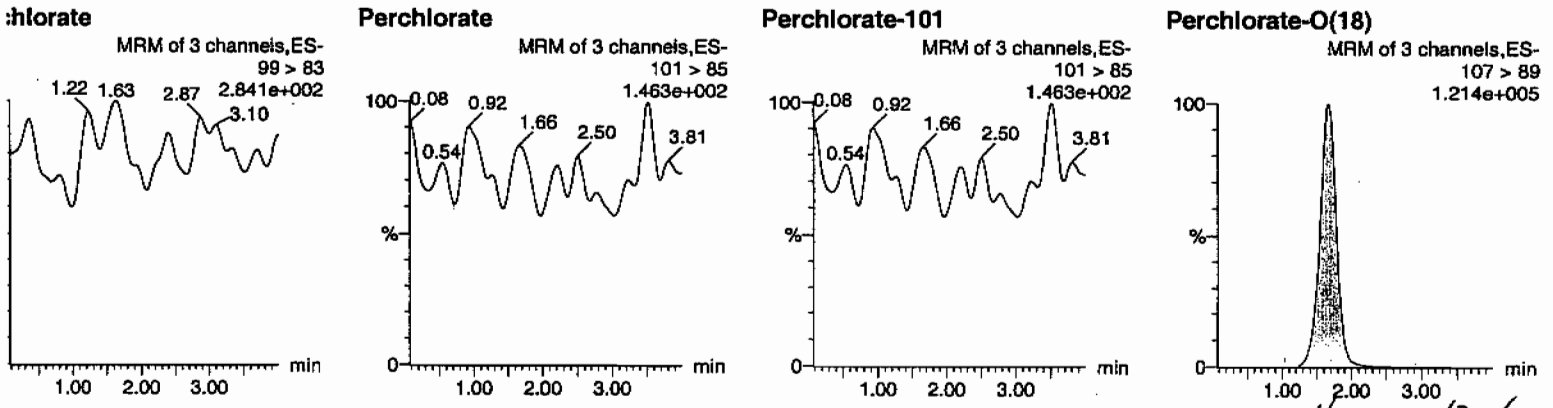
Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											0.00
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	1.67	34324.867	34324.867	bb			0.5156	103.13	3.13	20032....	

PROPRIETARY INFORMATION NO UNAUTHORIZED REPRODUCTION WITHOUT WRITTEN PERMISSION FROM GEL

iset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
ed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

ie: per1229043a
i: 29-Dec-2009
e: 18:20:54
PB006
: 1:1,A



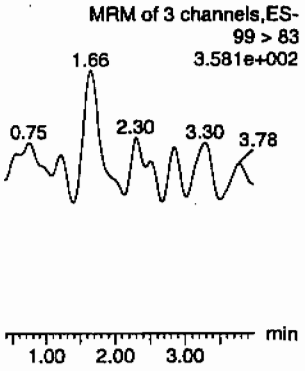
	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
06	Perchlorate	99 > 83											0.00
06	Perchlorate-101	101 > 85											
06	Perchlorate-O(18)	107 > 89	1.66	33675.824	33675.824	bb			0.5059	101.18	1.18	6382.0...	

t: C:\MassLynx\Perchlorate.PRO\per122909a.qld

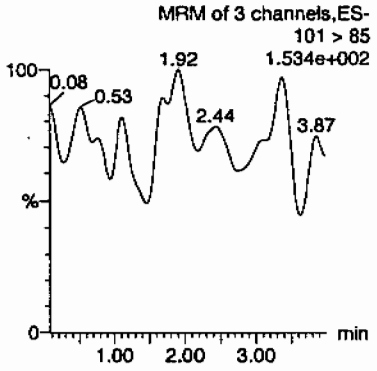
tered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
l: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

per1229054a
29-Dec-2009
19:38:41
3007
:1,A

orate



Perchlorate



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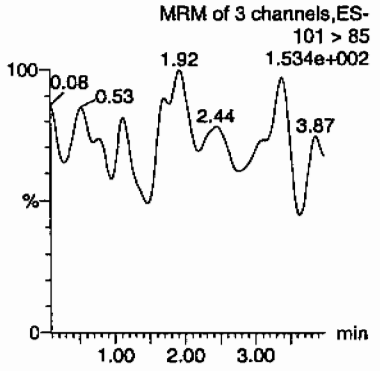
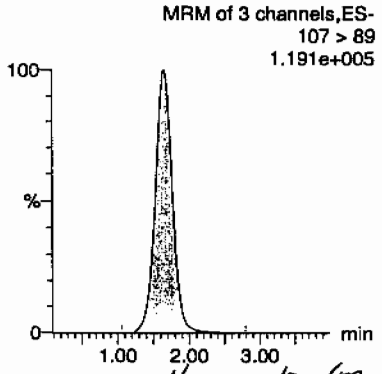


Perchlorate-O(18)



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											0.00
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	1.66	32852.363	32852.363	bb			0.4935	98.70	-1.30	3290.1...	

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ify Sample Report MassLynx 4.0 SP4
EL Group, LLC Analyst: Michael A. Penny

ɜt: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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f: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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29-Dec-2009
21:03:40
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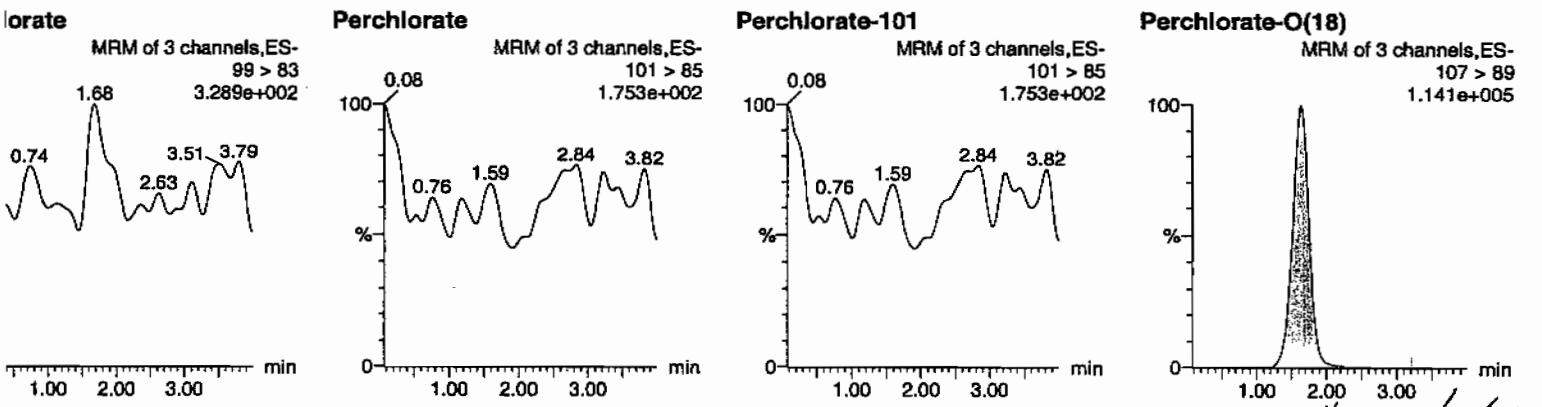
MAP 12/30/09



Hmm 12/30/09

Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											0.00
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	1.63	31623.988	31623.988	bb			0.4751	95.01	-4.99	16903....	

ɔP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

st: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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29-Dec-2009
22:28:37
3009
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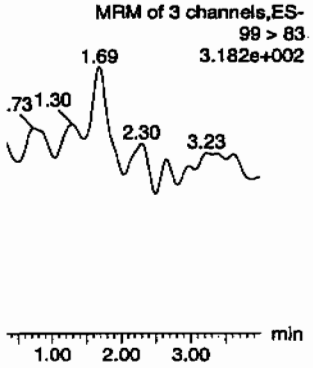
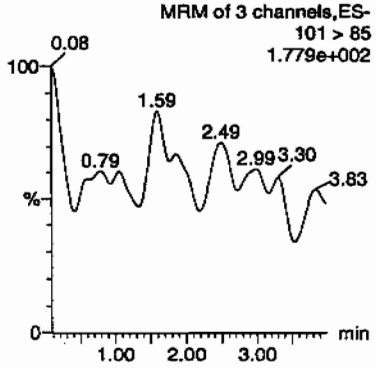
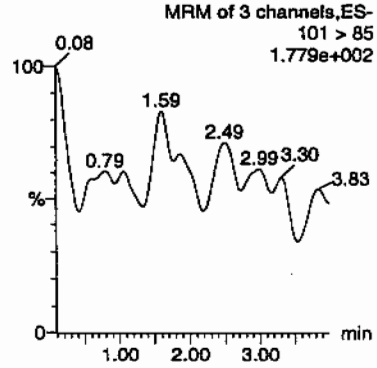
lorate



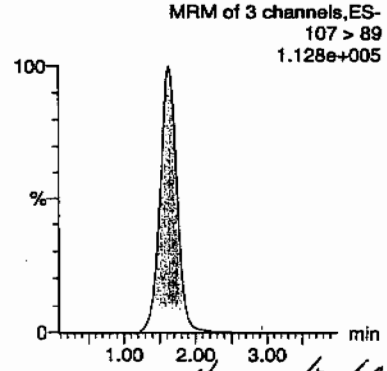
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
Perchlorate	99 > 83											0.00
Perchlorate-101	101 > 85											
Perchlorate-O(18)	107 > 89	1.63	30921.221	30921.221	bb			0.4645	92.90	-7.10	7650.0...	

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et: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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d: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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29-Dec-2009
23:11:20
B010
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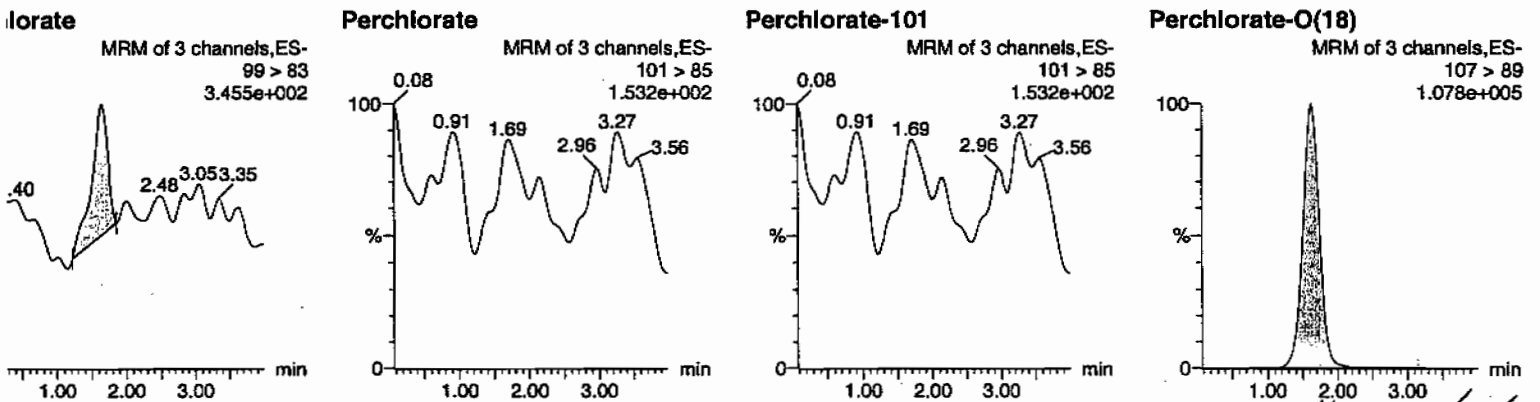
MAP 12/30/09



Hmm 12/30/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
)	Perchlorate	99 > 83	1.64	46.600	46.600	bb			0.0006			7.347	0.00
)	Perchlorate-101	101 > 85											
)	Perchlorate-O(18)	107 > 89	1.63	29742.018	29742.018	bb			0.4468	89.36	-10.64	23332....	

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Nairb.ref

;Positive ion monoisotopic and average masses from solution
;of NaI/RbI (2.0/0.05ug/ul) in 50/20 2-propanol/H2O.
;Most useful general purpose calibrant for all low
;MW applications, including MS/MS work.
;At high resolution, readily covers from m/z 50-2000.
;At reduced resolution, can be used to over m/z 3000.
;NOT RECOMMENDED FOR PROTEIN WORK. USE MYO, MYOTRP or TRP.
Updated 20 April '95

22.9898	100
84.9118	100
172.8840	100
322.7782	100
472.6725	100
622.5667	100
772.4610	100
922.3552	100
1072.2494	100
; 1222.1437	100
; 1372.0379	100
; 1521.9321	100
; 1671.8264	100
; 1821.7206	100
; 1971.6149	100
; 2121.5091	100
; 2271.4033	100
; 2421.2976	100
; 2571.1918	100
; 2721.0861	100
; 2870.9803	100
; 3020.8745	100
; 3170.7688	100
; 3320.6630	100
; 3470.5572	100
; 3620.4515	100
; 3770.3457	100
; 3920.2400	100

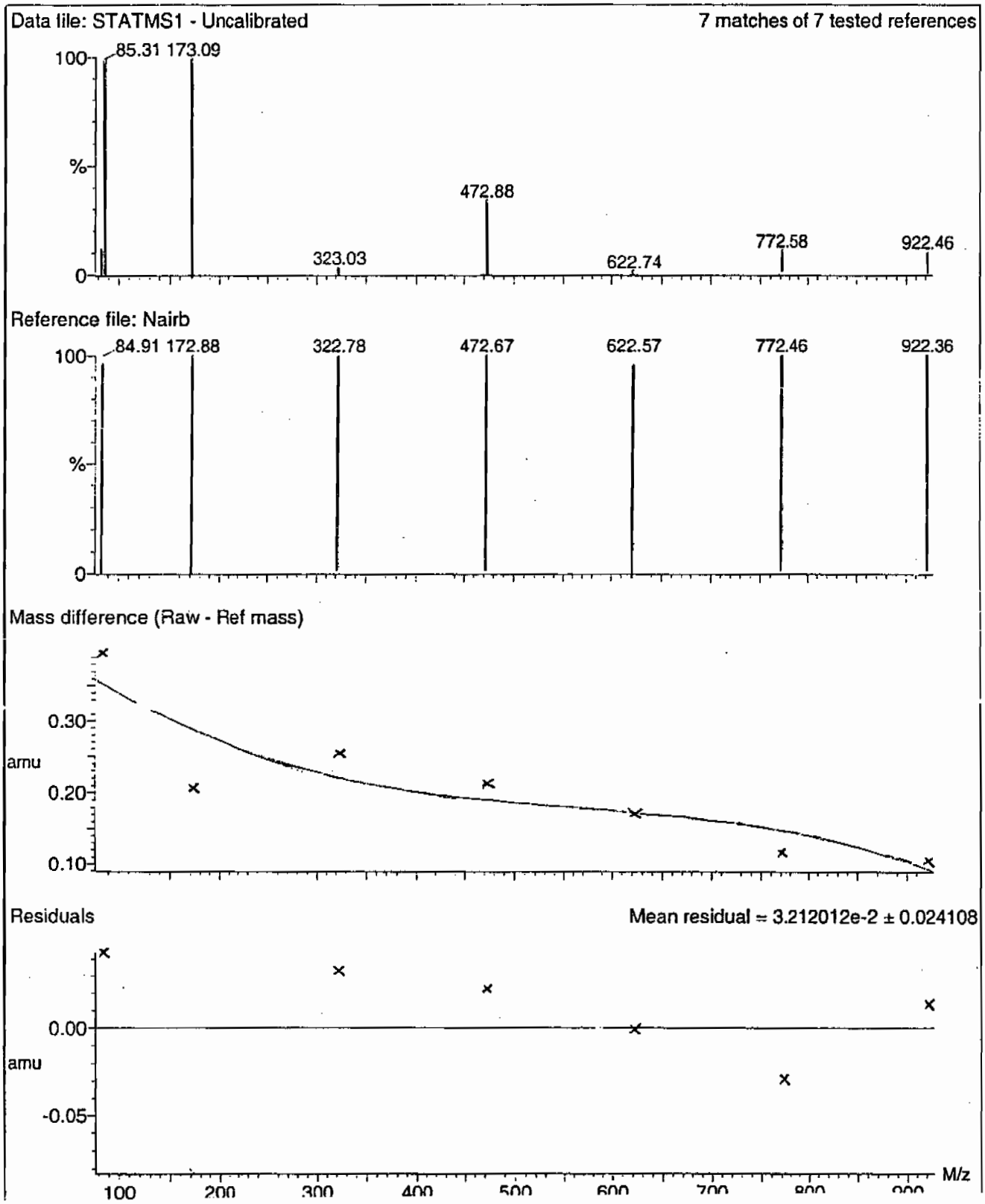
PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GSK.

QUATTRO ULTIMA: nairb_01_08_08.ca1

Calibration Report - MS1 Static

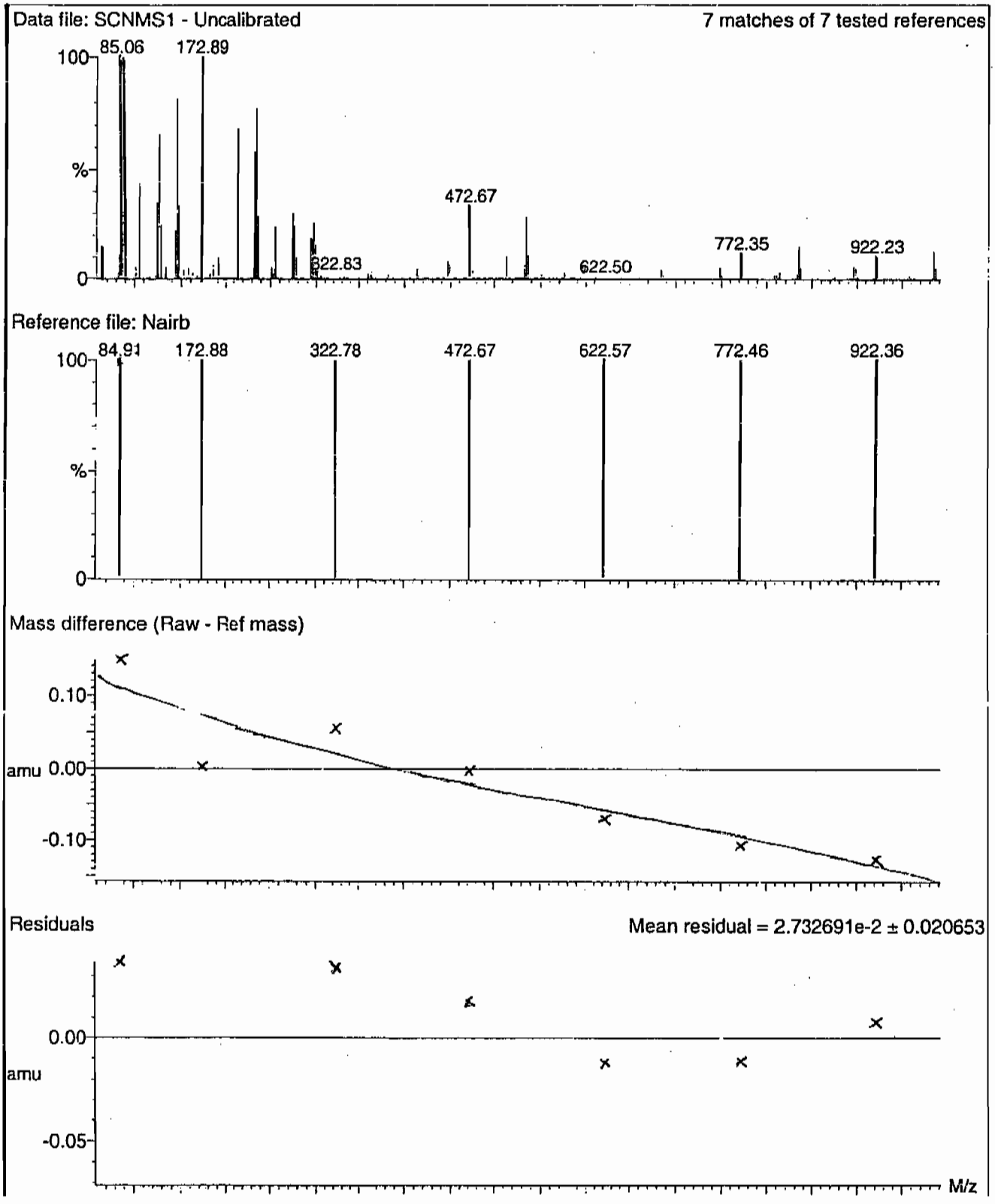
Printed: Tue Jan 08 12:19:12 2008

PEAKS HIGHLIGHTED BY CWW 01-09-08



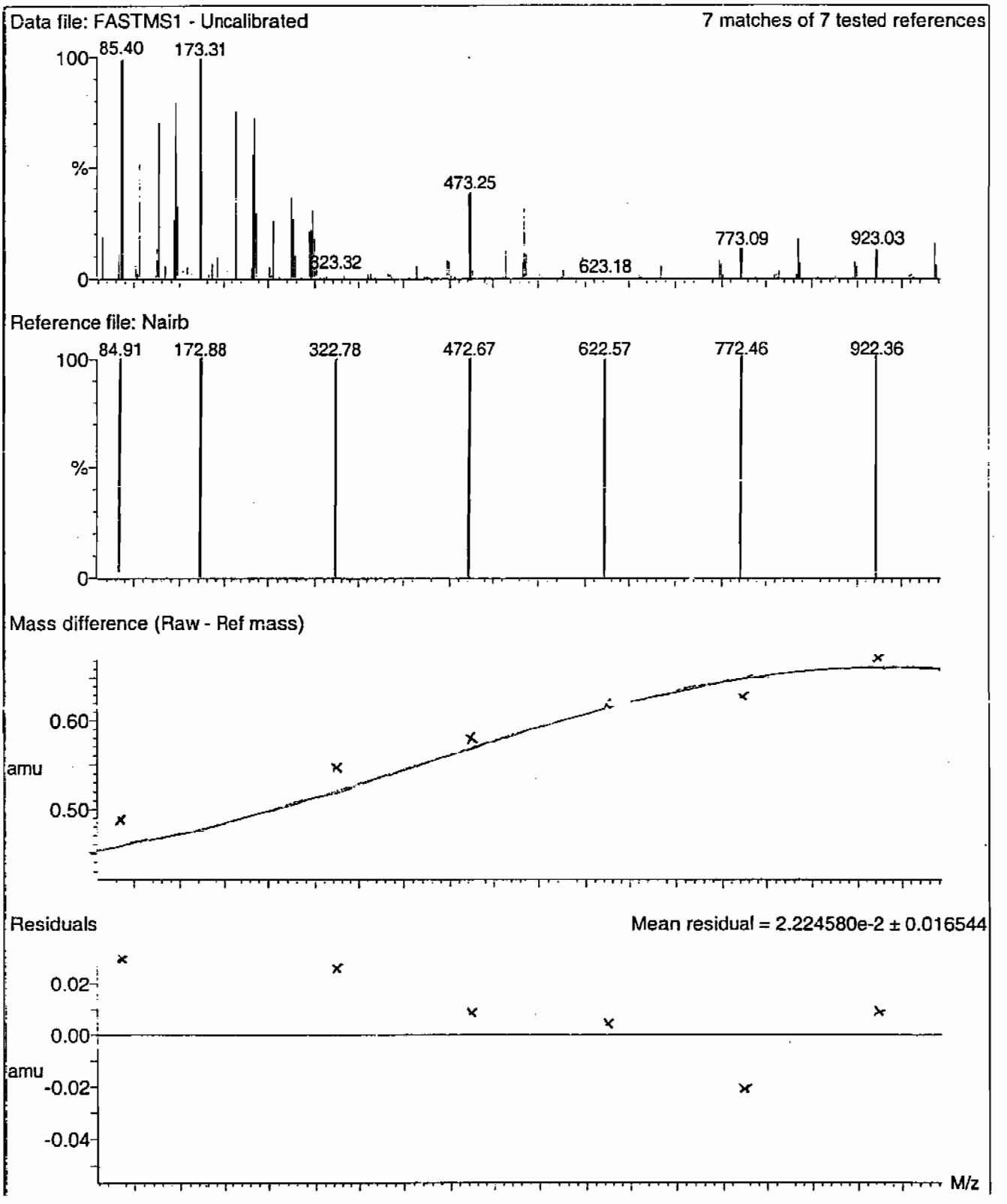
PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GEL.

Printed: Tue Jan 08 12:20:09 2008



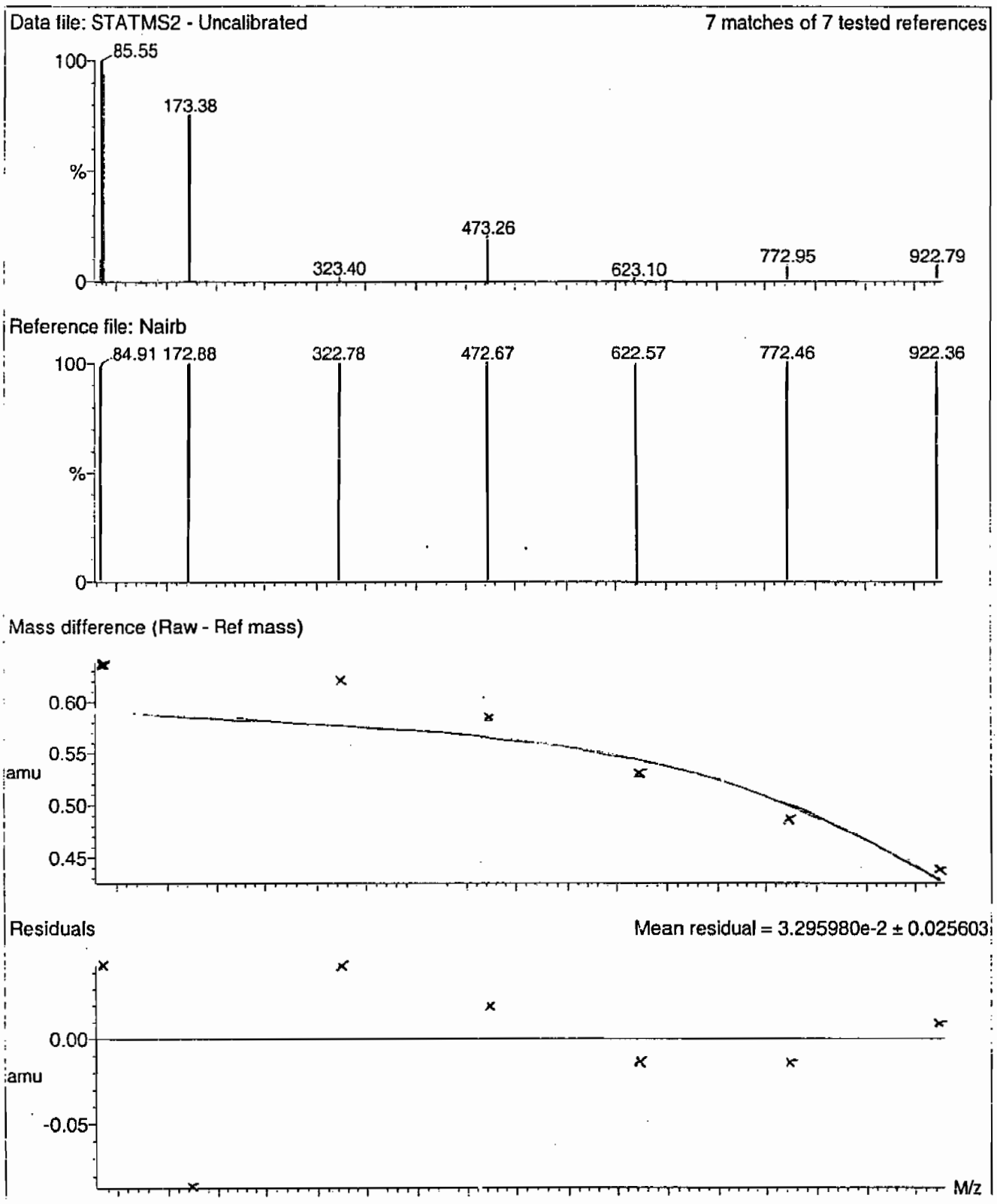
PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GEL.

Printed: Tue Jan 08 12:21:04 2008



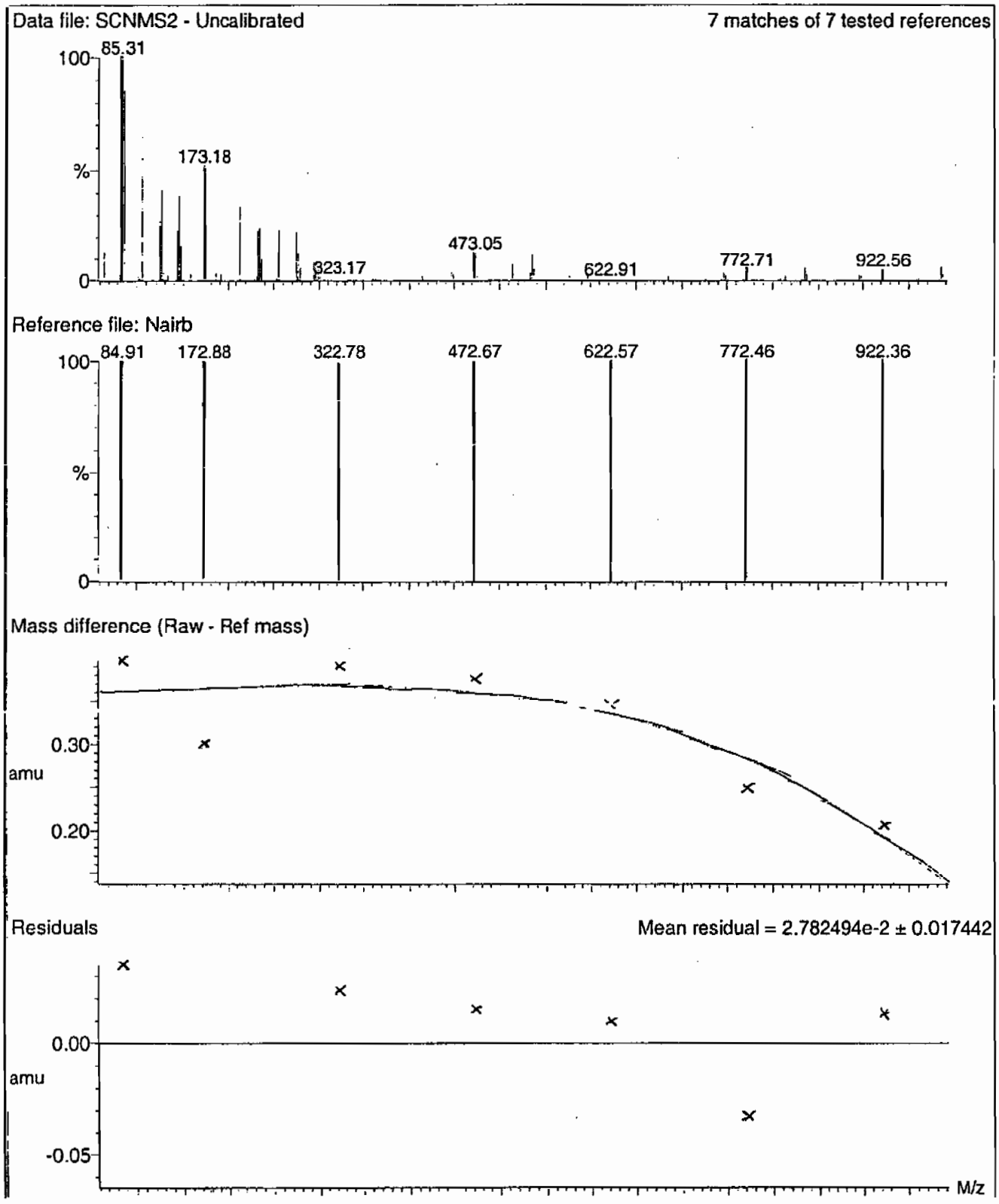
PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GRL.

Printed: Tue Jan 08 12:21:59 2008



PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GEL.

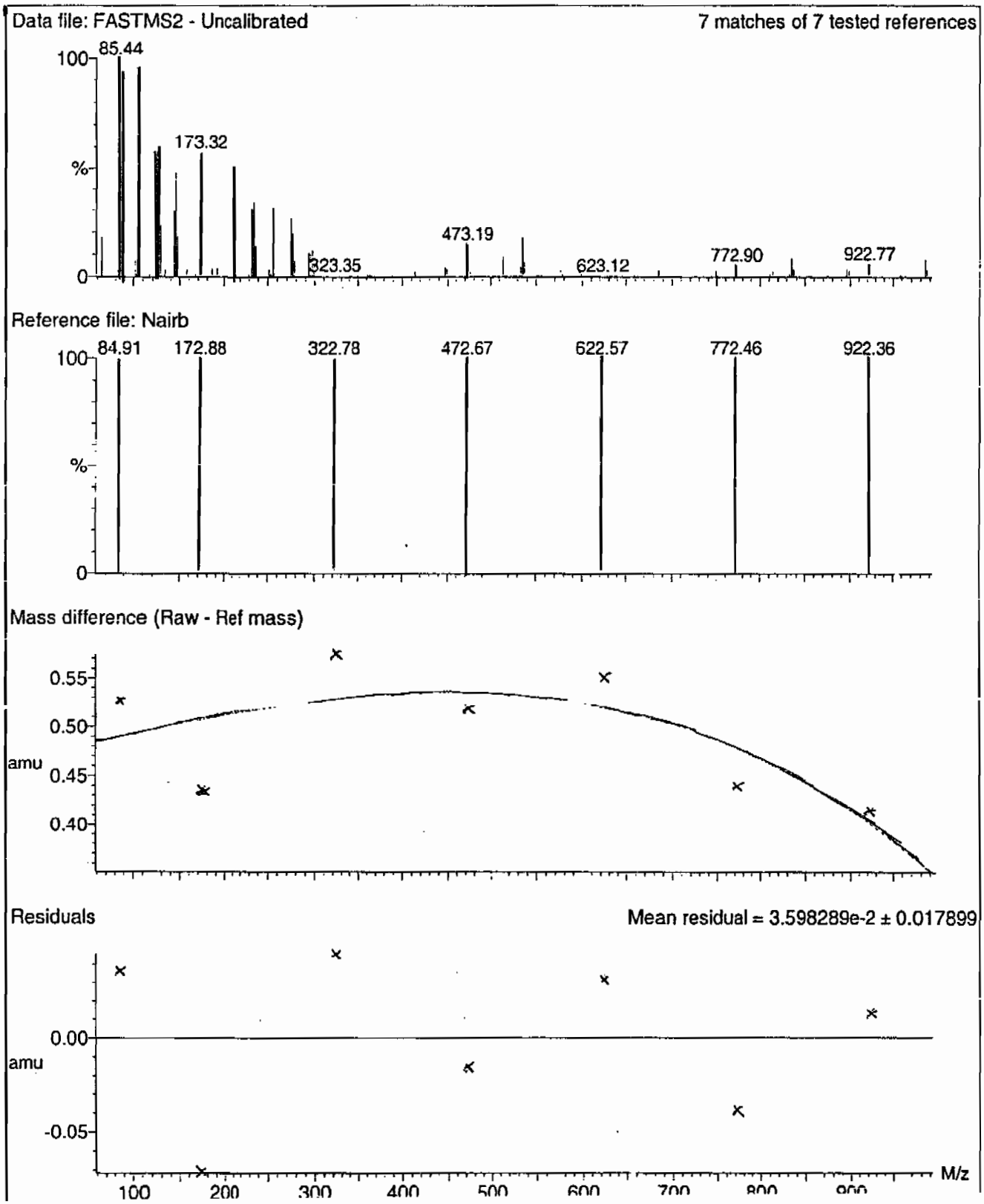
Printed: Tue Jan 08 12:22:56 2008



PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GE.

Calibration Report - MS2 Scan Speed Compensation

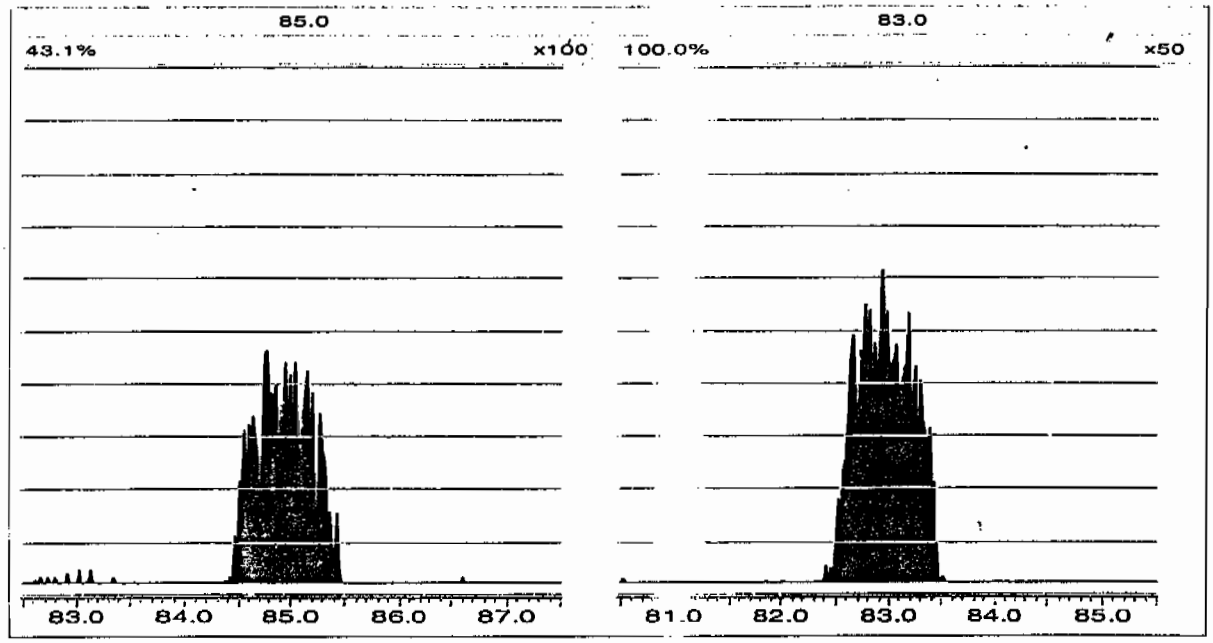
Printed: Tue Jan 08 12:23:51 2008



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

File: C:\MassLynx\Perchlorate.PRO\ACQUDB\Perchlorate.IPR

Printed: Tuesday, December 29, 2009 13:23:13 Eastern Standard Time



PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Form 8

Perchlorate RT And Area Summary

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1037–1

Lab Code: GEL

Instrument ID: LCMSMS

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Sample ID	Datafile	Run Date	Area	RT	RT CLO4	RRT	Q 0.98–1.02
MidLevel Standard Area	**per1229006a**	**29–DEC–09**	**33335.8**				
Lower Area Limit			**16667.9**				
Upper Area Limit			**66671.6**				
1202002916	per1229056a	29–DEC–09 19:52	31050.6	1.66	1.64433	.991	
1202002917	per1229057a	29–DEC–09 20:00	30836.8	1.64	1.65668	1.01	
1202002920	per1229058a	29–DEC–09 20:07	36369	1.67	1.68162	1.007	
243493001	per1229082a	29–DEC–09 22:56	28864.6	1.62			

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SAMPLE DATA

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL

Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: SW846 6850 Modified

Matrix: WATER

Extraction Batch ID: 936065

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
RE12-10-7298

Date Received: 23-DEC-09

GEL Job No (SDG): 10-1037-1

GEL Sample ID: 243493001

Date Filtered: 29-DEC-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	29-DEC-09 22:56	per1229082a
	Perchlorate Isotope Ratio						1	29-DEC-09 22:56	per1229082a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	29-DEC-09 22:56	per1229082a
	Perchlorate-O(18)			0.434	ug/L		1	29-DEC-09 22:56	per1229082a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

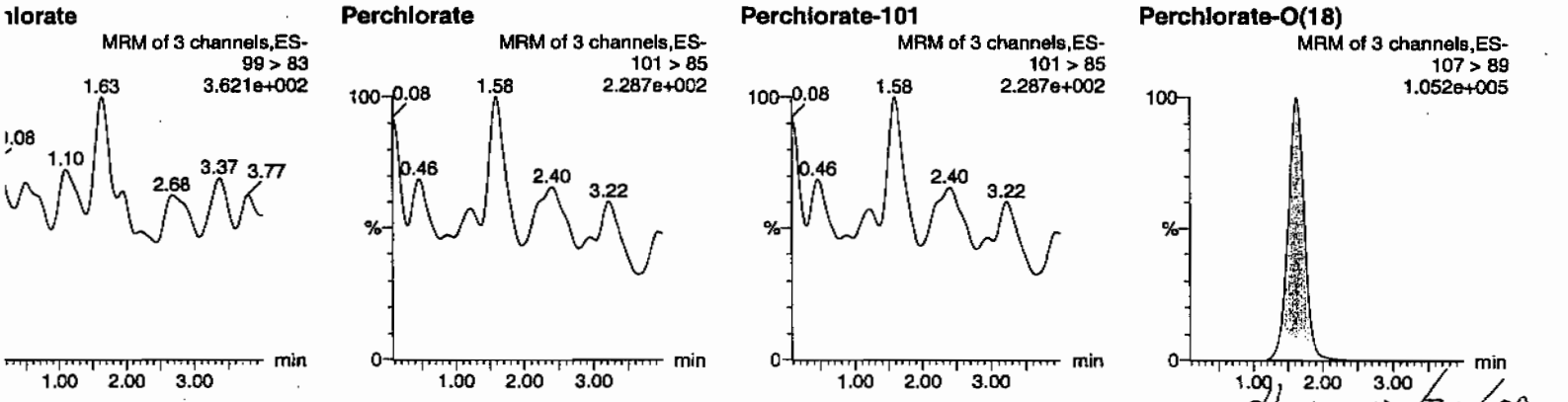
$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

et: C:\MassLynx\Perchlorate.PRO\per122909a.qld

ltered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
d: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

: per1229082a
29-Dec-2009
: 22:56:59
3493001
2:7,C | LAW | 936066 | LIQ | 1 |

MM 12/30/09



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
3001	Perchlorate	99 > 83											0.00
3001	Perchlorate-101	101 > 85											
3001	Perchlorate-O(18)	107 > 89	1.62	28864.625	28864.625	bb			0.4336	86.72	-13.28	9464.8...	

Hnm 12/30/09

SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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STANDARDS DATA

Form 2

Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 29–DEC–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate

Coefficient of Determination:

Calibration Curve: 74334.32

Response Type: External Standard

Curve Type: RF

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Perchlorate Initial Calibration

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037–1

Lab Code: GEL

Instrument ID: LCMSMS **Date Analyzed:** 29–DEC–09

HPLC Column: Phenomenex Ion Pac AG–16 2 X 50 mm

Calibration Level	1	2	3	4	5
Cal Concentration (ug/L)	0.05	0.1	0.25	0.50	1.0

Parmname Perchlorate–101

Coefficient of Determination:

Calibration Curve: 24468.6

Response Type: External Standard

Curve Type: RF

PROPRIETARY INFORMATION: Unauthorized reproduction without written permission from GEL.

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL

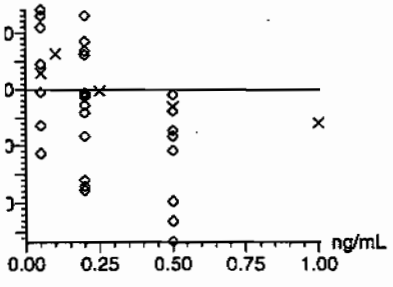
ıtify Calibration Report MassLynx 4.0 SP4
GEL Group, LLC Analyst: Michael A. Penny

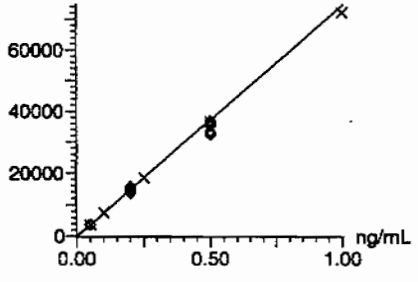
set: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
ed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

od: C:\MassLynx\Perchlorate.PRO\MethDB\per122909a.mdb 29 Dec 2009 14:36:05
ration: C:\MassLynx\Perchlorate.PRO\CurveDB\per122909a.cdb 30 Dec 2009 06:51:17

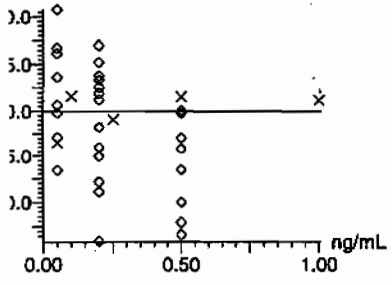
ound name: Perchlorate
onse Factor: 74334.3
SD: 1798.79, % Relative SD: 2.41986
onse type: External Std, Area
type: RF

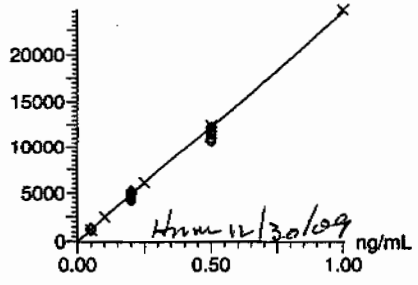




MAP 12/30/09

ound name: Perchlorate-101
onse Factor: 24468.6
SD: 542.853, % Relative SD: 2.21857
onse type: External Std, Area
type: RF





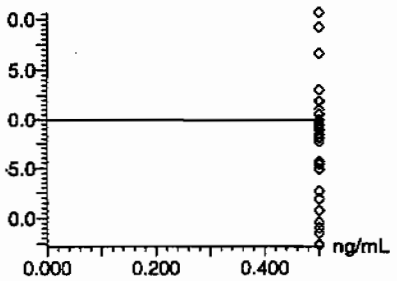
Hmm 12/30/09

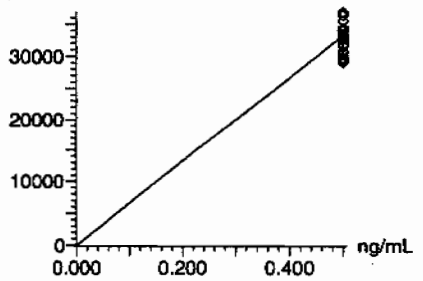
SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

set: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
ed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

pound name: Perchlorate-O(18)
ionse Factor: 66568.2
SD: 652.618, % Relative SD: 0.980376
ionse type: External Std, Area
e type: RF





Perchlorate Initial Calibration Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10-1037-1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.5	99.53	29-DEC-09 14:21	per1229009a
Perchlorate Isotope Ratio		3.02		29-DEC-09 14:21	per1229009a
Perchlorate-101	.5	.5	100.07	29-DEC-09 14:21	per1229009a

PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GEL

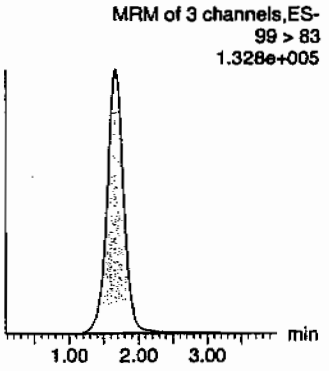
3EL Group, LLC Analyst: Michael A. Penny

set: C:\MassLynx\Perchlorate.PRO\per122909a.qld

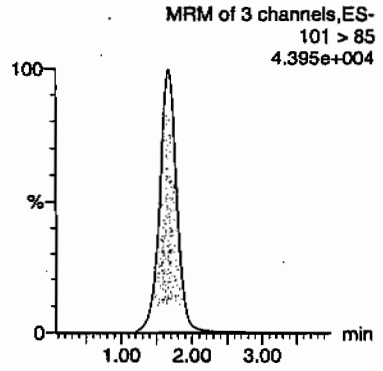
Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
ed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

e: per1229009a
: 29-Dec-2009
: 14:21:09
/CL091218-06ICV
1:2,A

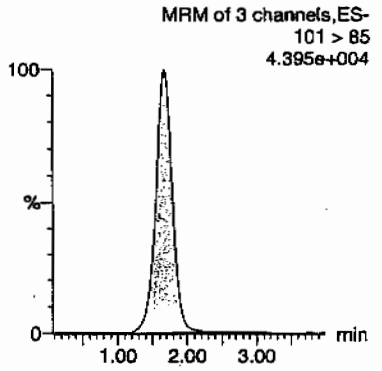
hlorate



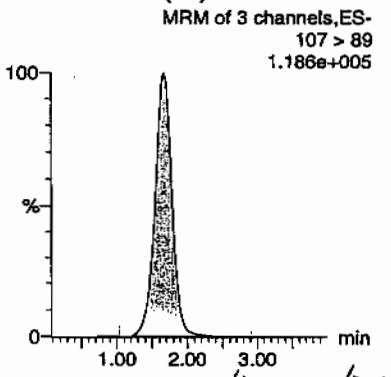
Perchlorate



Perchlorate-101



Perchlorate-O(18)



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
091218-06ICV	Perchlorate	99 > 83	1.68	36993.602	36993.602	bb			0.4977	99.53	-0.47	3237.0...	3.02
091218-06ICV	Perchlorate-101	101 > 85	1.67	12242.883	12242.883	bb			0.5004	100.07	0.07	2677.3...	
091218-06ICV	Perchlorate-O(18)	107 > 89	1.67	33292.156	33292.156	bb			0.5001	100.02	0.02	9403.9...	

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL

Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1037–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.5	.49	98.1	29–DEC–09 15:52	per1229022a
Perchlorate Isotope Ratio		2.99		29–DEC–09 15:52	per1229022a
Perchlorate–101	.5	.5	99.76	29–DEC–09 15:52	per1229022a
Perchlorate	.5	.48	96.39	29–DEC–09 16:42	per1229029a
Perchlorate Isotope Ratio		3.06		29–DEC–09 16:42	per1229029a
Perchlorate–101	.5	.48	95.84	29–DEC–09 16:42	per1229029a
Perchlorate	.5	.48	95.84	29–DEC–09 18:13	per1229042a
Perchlorate Isotope Ratio		3		29–DEC–09 18:13	per1229042a
Perchlorate–101	.5	.49	97.07	29–DEC–09 18:13	per1229042a
Perchlorate	.5	.47	94.57	29–DEC–09 19:31	per1229053a
Perchlorate Isotope Ratio		3.07		29–DEC–09 19:31	per1229053a
Perchlorate–101	.5	.47	93.48	29–DEC–09 19:31	per1229053a
Perchlorate	.5	.45	90.16	29–DEC–09 20:56	per1229065a

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Form 3

Perchlorate Continuing Calibration Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1037–1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.04		29–DEC–09 20:56	per1229065a
Perchlorate–101	.5	.45	90.08	29–DEC–09 20:56	per1229065a
Perchlorate	.5	.44	88.49	29–DEC–09 22:21	per1229077a
Perchlorate Isotope Ratio		3.06		29–DEC–09 22:21	per1229077a
Perchlorate–101	.5	.44	87.92	29–DEC–09 22:21	per1229077a
Perchlorate	.5	.43	86.72	29–DEC–09 23:04	per1229083a
Perchlorate Isotope Ratio		3.04		29–DEC–09 23:04	per1229083a
Perchlorate–101	.5	.43	86.7	29–DEC–09 23:04	per1229083a

ıset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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ted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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ɜ: 29-Dec-2009
e: 15:52:44
***N*CL091218-06CCV**
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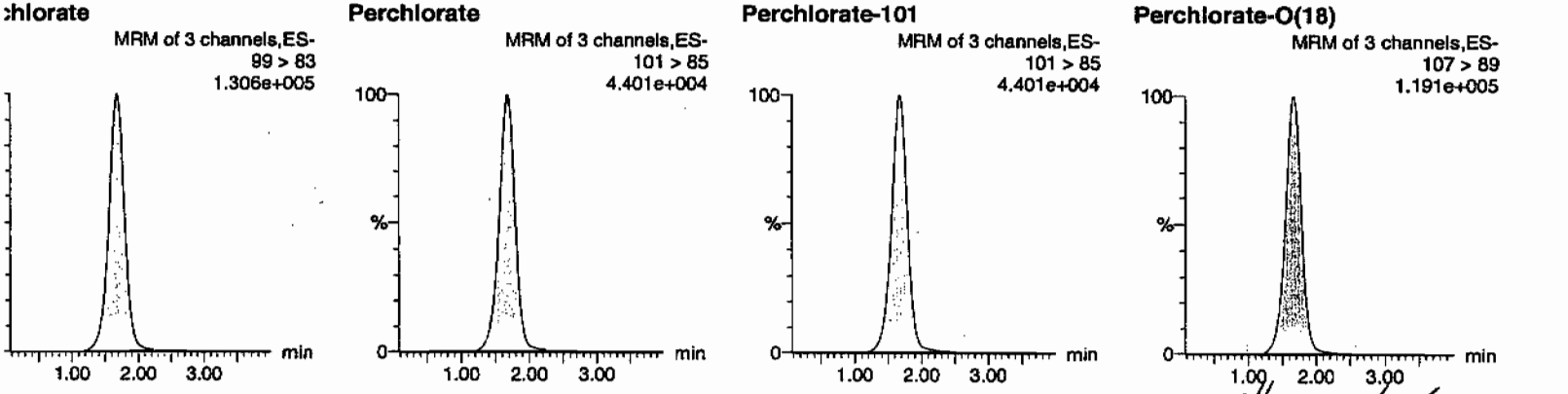

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
.091218-06CCV	Perchlorate	99 > 83	1.68	36461.191	36461.191	bb			0.4905	98.10	-1.90	3999.9...	2.99
.091218-06CCV	Perchlorate-101	101 > 85	1.67	12204.641	12204.641	bb			0.4988	99.76	-0.24	3695.9...	
.091218-06CCV	Perchlorate-O(18)	107 > 89	1.67	32995.398	32995.398	bb			0.4957	99.13	-0.87	10703....	

. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-Not authorized reproduction without permission from GEL.

ıset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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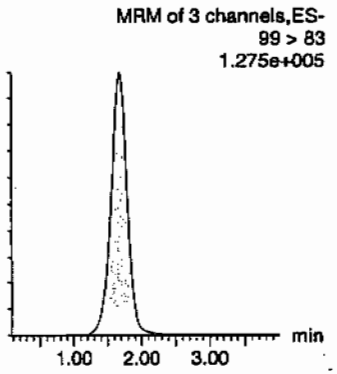
ed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

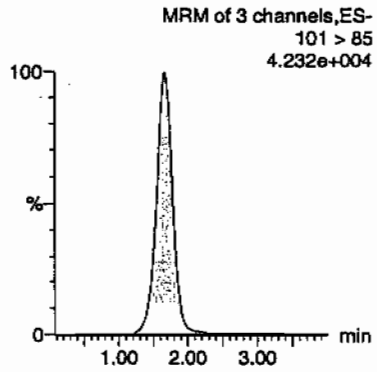
ıe: per1229029a
ı: 29-Dec-2009
e: 16:42:03
NCL091218-06CCV
: 1:2,A

MM 12/30/09

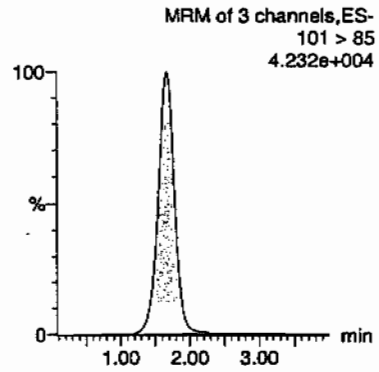
hlorate



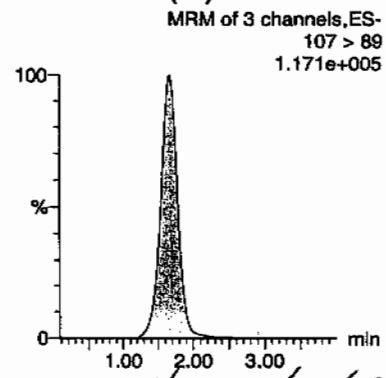
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Anne 12/30/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
.091218-06CCV	Perchlorate	99 > 83	1.67	35824.668	35824.668	bb			0.4819	96.39	-3.61	5571.2...	3.06
.091218-06CCV	Perchlorate-101	101 > 85	1.67	11724.945	11724.945	bb			0.4792	95.84	-4.16	2980.9...	
.091218-06CCV	Perchlorate-O(18)	107 > 89	1.66	32661.146	32661.146	bb			0.4906	98.13	-1.87	5311.3...	

. SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

set: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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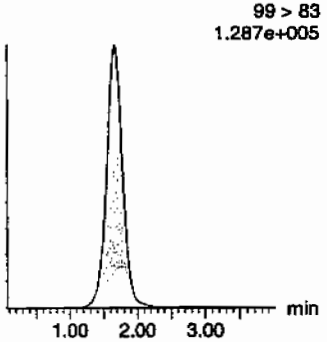
ɜd: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

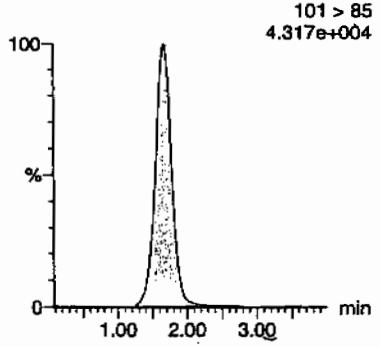
e: per1229042a
: 29-Dec-2009
: 18:13:37
VCL091218-06CCV
1:2,A

MAT 12/30/09

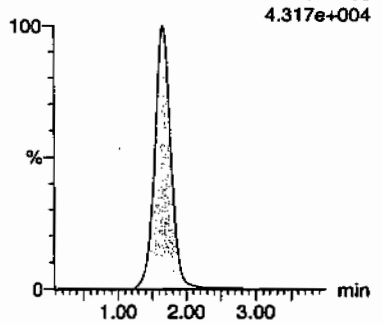
hlorate



Perchlorate



Perchlorate-101



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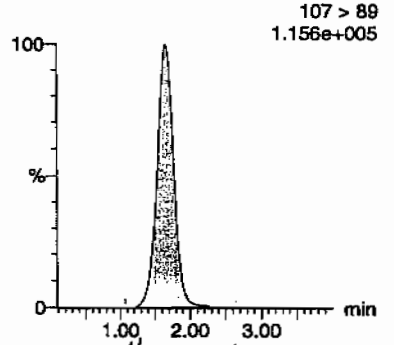

Hume 12/30/09

	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
.091218-06CCV	Perchlorate	99 > 83	1.67	35622.629	35622.629	bb			0.4792	95.84	-4.16	4705.1...	3.00
.091218-06CCV	Perchlorate-101	101 > 85	1.66	11875.902	11875.902	bb			0.4854	97.07	-2.93	3464.2...	
.091218-06CCV	Perchlorate-O(18)	107 > 89	1.66	31837.980	31837.980	bb			0.4783	95.66	-4.34	2223.5...	

_ SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

uantify Sample Report **MassLynx 4.0 SP4**
e GEL Group, LLC Analyst: Michael A. Penny

taset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

st Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
inted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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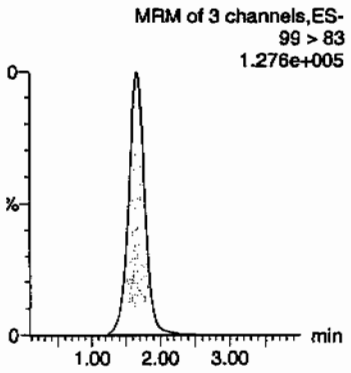
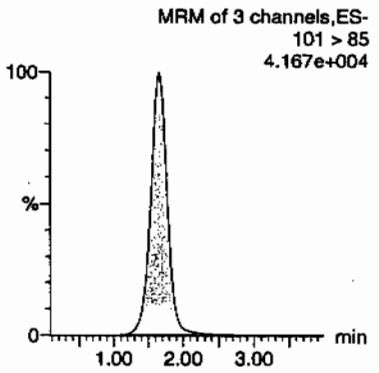
te: 29-Dec-2009
ne: 19:31:24
: WCL091218-06CCV
al: 1:2,A

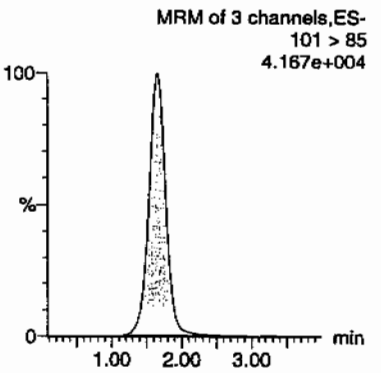
rchlorate



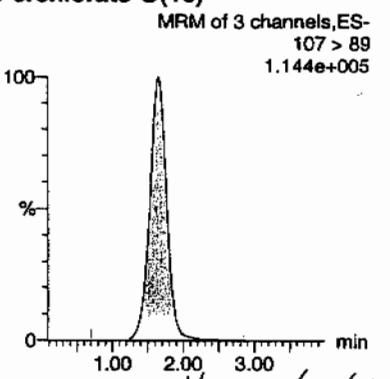
Perchlorate



Perchlorate-101



Perchlorate-O(18)



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-06CCV	Perchlorate	99 > 83	1.66	35149.563	35149.563	bb			0.4729	94.57	-5.43	4413.5...	3.07
CL091218-06CCV	Perchlorate-101	101 > 85	1.66	11436.879	11436.879	bb			0.4674	93.48	-6.52	1527.3...	
CL091218-06CCV	Perchlorate-O(18)	107 > 89	1.64	31572.385	31572.385	bb			0.4743	94.86	-5.14	9724.2...	

EL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GEL.

ıantify Sample Report MassLynx 4.0 SP4
e GEL Group, LLC Analyst: Michael A. Penny

.taset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

st Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
nted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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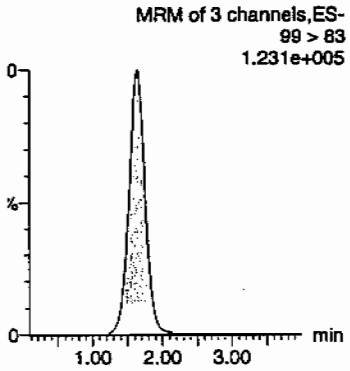
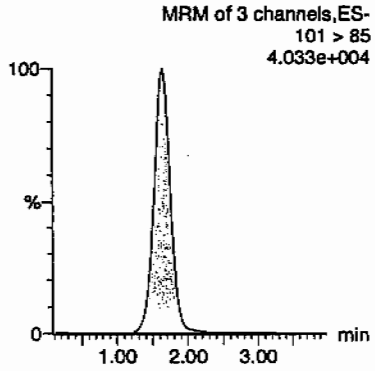
te: 29-Dec-2009
ne: 20:56:23
: WCL091218-06CCV
ıl: 1:2,A

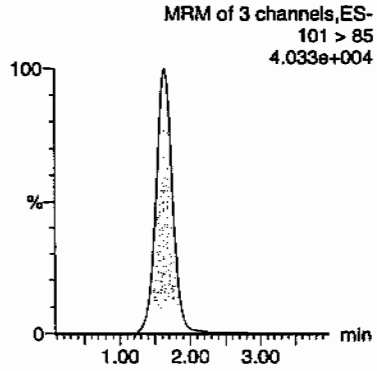
rchlorate



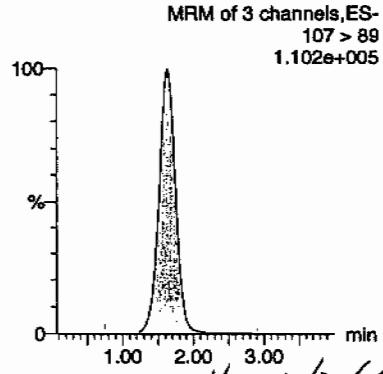
Perchlorate



Perchlorate-101



Perchlorate-O(18)



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-06CCV	Perchlorate	99 > 83	1.64	33508.137	33508.137	bb			0.4508	90.16	-9.84	2316.7...	3.04
CL091218-06CCV	Perchlorate-101	101 > 85	1.64	11020.529	11020.529	bb			0.4504	90.08	-9.92	2074.1...	
CL091218-06CCV	Perchlorate-O(18)	107 > 89	1.63	30210.842	30210.842	bb			0.4538	90.77	-9.23	4885.1...	

EL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

ataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

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inted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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: WCL091218-06CCV
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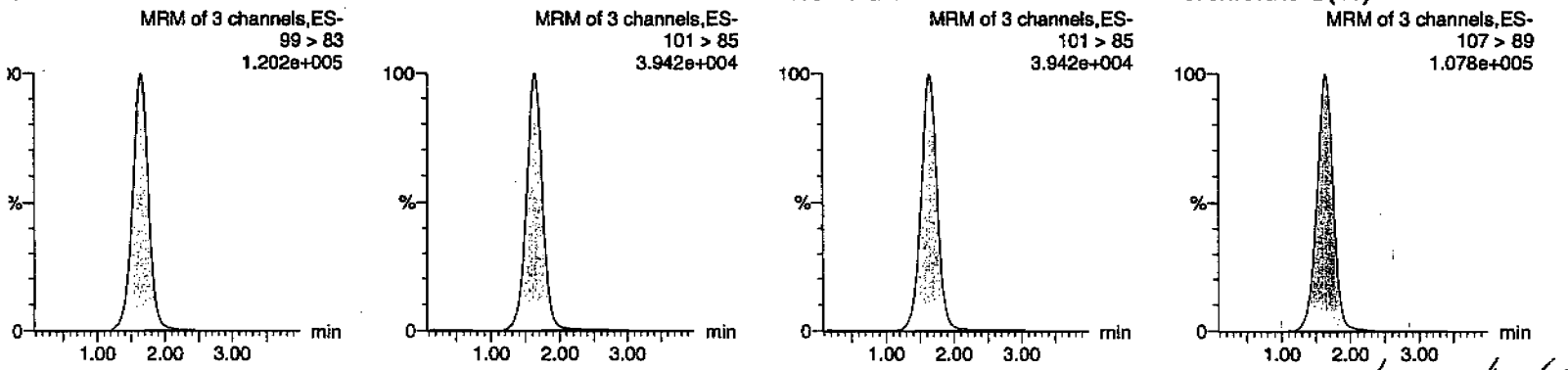

Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-06CCV	Perchlorate	99 > 83	1.64	32890.695	32890.695	bb		0.4425	88.49	-11.51	7122.0...	3.06
CL091218-06CCV	Perchlorate-101	101 > 85	1.63	10756.576	10756.576	bb		0.4396	87.92	-12.08	1987.1...	
CL091218-06CCV	Perchlorate-O(18)	107 > 89	1.63	29638.262	29638.262	bb		0.4452	89.05	-10.95	1781.8...	

EL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

PROPRIETARY INFORMATION-NO unauthorized reproduction without written permission from GEL.

taset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

st Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
inted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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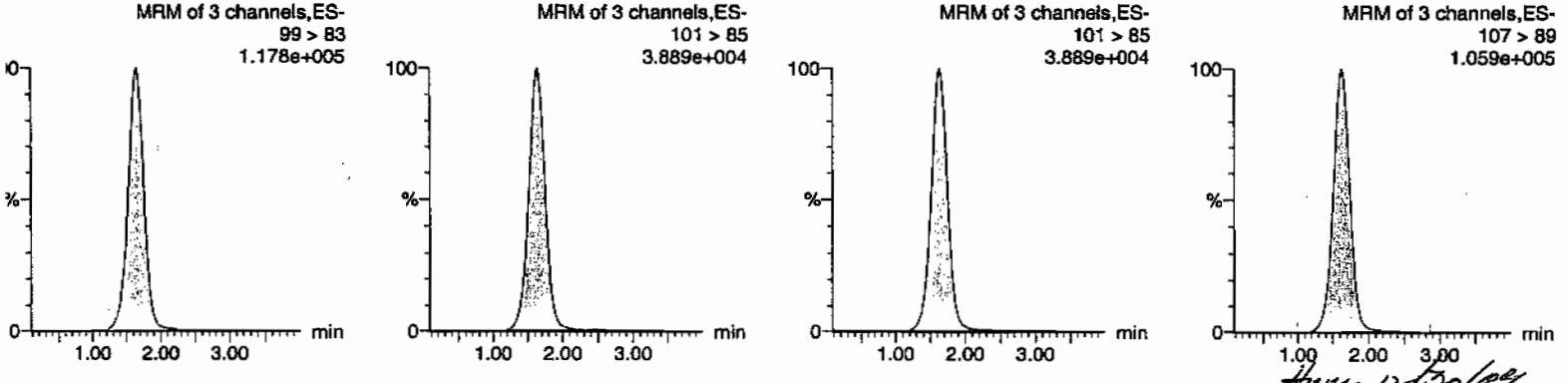
: WCL091218-06CCV
al: 1:2,A



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-06CCV	Perchlorate	99 > 83	1.64	32230.635	32230.635	bb			0.4336	86.72	-13.28	5369.9...	3.04
CL091218-06CCV	Perchlorate-101	101 > 85	1.63	10606.676	10606.676	bb			0.4335	86.70	-13.30	1503.7...	
CL091218-06CCV	Perchlorate-O(18)	107 > 89	1.63	29108.000	29108.000	bb			0.4373	87.45	-12.55	9089.9...	

PROPRIETARY INFORMATION - NO unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037–1

Lab Code: GEL

Reporting Units: ug/L

Analyte	True	Found	%Rec	Date Analyzed	GEL File Id
Perchlorate	.05	.05	106.51	29–DEC–09 14:35	per1229011a
Perchlorate Isotope Ratio		3.12		29–DEC–09 14:35	per1229011a
Perchlorate–101	.05	.05	103.65	29–DEC–09 14:35	per1229011a
Perchlorate	.05	.05	102.28	29–DEC–09 16:06	per1229024a
Perchlorate Isotope Ratio		2.8		29–DEC–09 16:06	per1229024a
Perchlorate–101	.05	.06	110.81	29–DEC–09 16:06	per1229024a
Perchlorate	.05	.05	107.05	29–DEC–09 16:56	per1229031a
Perchlorate Isotope Ratio		3.05		29–DEC–09 16:56	per1229031a
Perchlorate–101	.05	.05	106.72	29–DEC–09 16:56	per1229031a
Perchlorate	.05	.05	105.47	29–DEC–09 18:27	per1229044a
Perchlorate Isotope Ratio		3.02		29–DEC–09 18:27	per1229044a

PROPRIETARY INFORMATION-No unauthorized reproduction without written permission from GEL.

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories

GEL Job No.(SDG): 10–1037–1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate–101	.05	.05	106.16	29–DEC–09 18:27	per1229044a
Perchlorate	.05	.05	99.78	29–DEC–09 19:45	per1229055a
Perchlorate Isotope Ratio		3.01		29–DEC–09 19:45	per1229055a
Perchlorate–101	.05	.05	100.67	29–DEC–09 19:45	per1229055a
Perchlorate	.05	.05	94.36	29–DEC–09 21:10	per1229067a
Perchlorate Isotope Ratio		2.95		29–DEC–09 21:10	per1229067a
Perchlorate–101	.05	.05	97.14	29–DEC–09 21:10	per1229067a
Perchlorate	.05	.05	99.75	29–DEC–09 22:35	per1229079a
Perchlorate Isotope Ratio		3.04		29–DEC–09 22:35	per1229079a
Perchlorate–101	.05	.05	99.81	29–DEC–09 22:35	per1229079a
Perchlorate	.05	.05	96.81	29–DEC–09 23:18	per1229085a

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Form 3

Perchlorate MDL Verification

Lab Name: General Engineering Laboratories **GEL Job No.(SDG):** 10–1037–1

Lab Code: GEL

Reporting Units: ug/L

Perchlorate Isotope Ratio		3.15		29–DEC–09 23:18	per1229085a
Perchlorate–101	.05	.05	93.41	29–DEC–09 23:18	per1229085a

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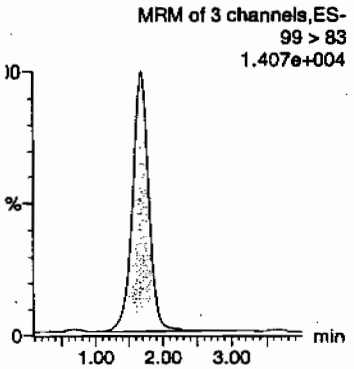
taset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

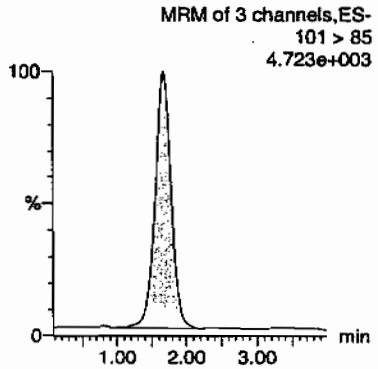
st Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
inted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

me: per1229011a
te: 29-Dec-2009
me: 14:35:14
: WCL091218-07CRI
al: 1:2,B

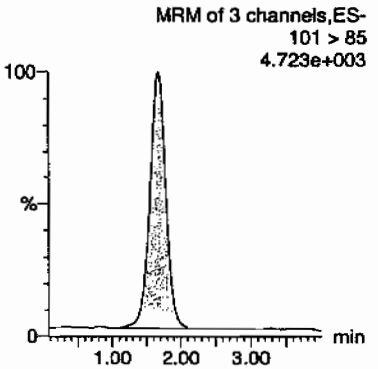
rchlorate



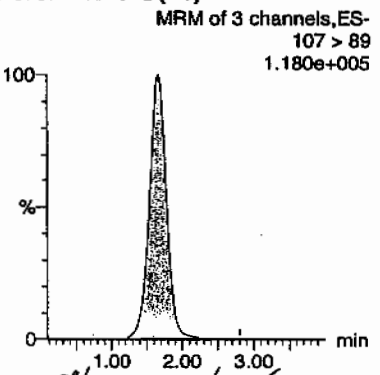
Perchlorate



Perchlorate-101



Perchlorate-O(18)



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-07CRI	Perchlorate	99 > 83	1.68	3958.786	3958.786	bb			0.0533	106.51	6.51	363.360	3.12
CL091218-07CRI	Perchlorate-101	101 > 85	1.67	1268.100	1268.100	bb			0.0518	103.65	3.65	235.884	
CL091218-07CRI	Perchlorate-O(18)	107 > 89	1.67	33050.422	33050.422	bb			0.4965	99.30	-0.70	5866.9...	

EL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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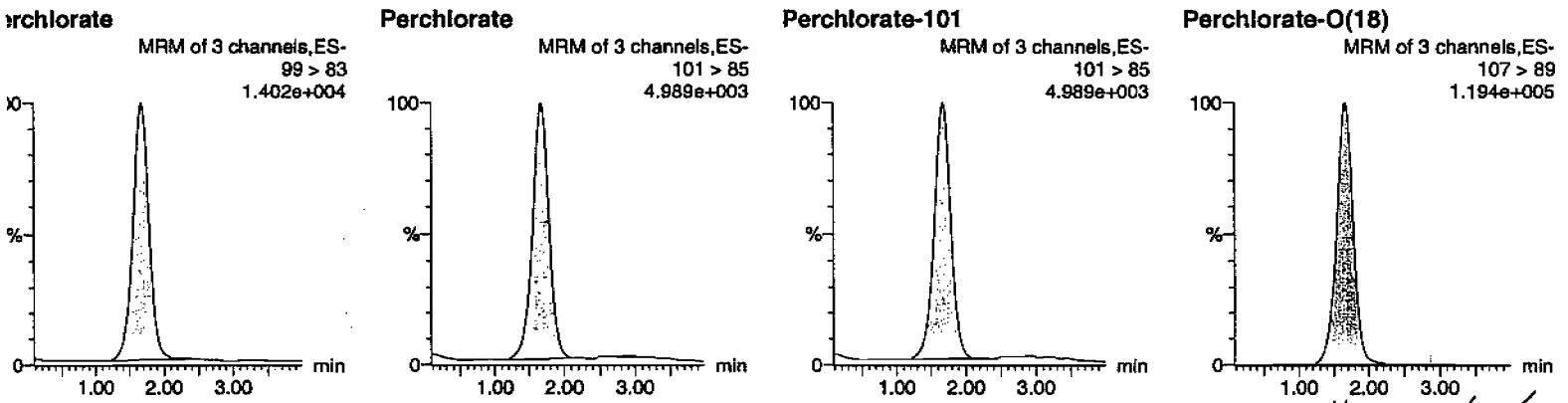
ataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

st Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
inted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

ame: per1229024a
ate: 29-Dec-2009
me: 16:06:49
: WCL091218-07CRI
al: 1:2,B



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-07CRI	Perchlorate	99 > 83	1.67	3801.353	3801.353	bb			0.0511	102.28	2.28	372.962	2.80
CL091218-07CRI	Perchlorate-101	101 > 85	1.67	1355.651	1355.651	bb			0.0554	110.81	10.81	171.230	
CL091218-07CRI	Perchlorate-O(18)	107 > 89	1.66	33458.375	33458.375	bb			0.5026	100.52	0.52	8206.0...	

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ataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

ıst Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
rinted: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

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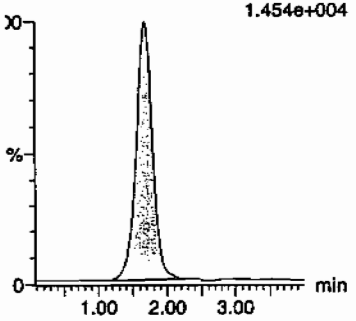
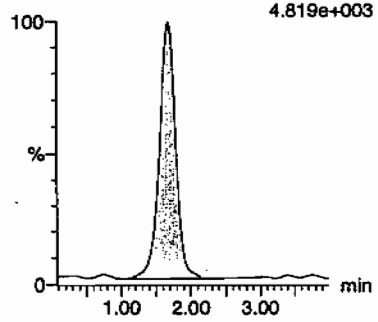
ate: 29-Dec-2009
me: 16:56:08
: WCL091218-07CRI
al: 1:2,B

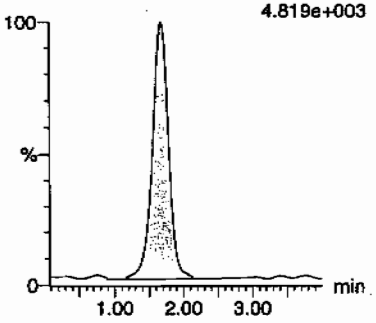
erchlorate



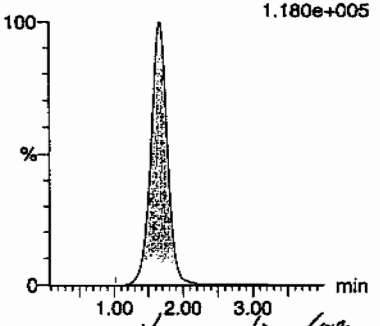
Perchlorate



Perchlorate-101



Perchlorate-O(18)



	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
CL091218-07CRI	Perchlorate	99 > 83	1.67	3978.753	3978.753	bb			0.0535	107.05	7.05	1632.9...	3.05
CL091218-07CRI	Perchlorate-101	101 > 85	1.67	1305.628	1305.628	bb			0.0534	106.72	6.72	556.260	
CL091218-07CRI	Perchlorate-O(18)	107 > 89	1.66	32789.859	32789.859	bb			0.4926	98.52	-1.48	4096.5...	

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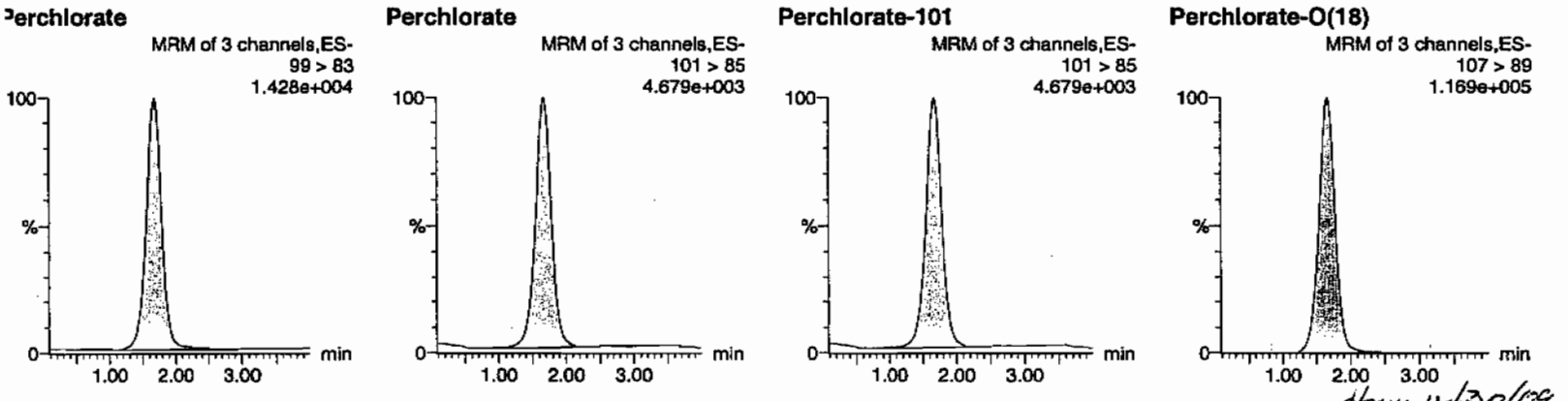
Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229044a
Date: 29-Dec-2009
Time: 18:27:56
ID: WCL091218-07CRI
Vial: 1:2,B



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL091218-07CRI	Perchlorate	99 > 83	1.67	3920.063	3920.063	bb			0.0527	105.47	5.47	653.754	3.02
WCL091218-07CRI	Perchlorate-101	101 > 85	1.67	1298.797	1298.797	bb			0.0531	106.16	6.16	251.043	
WCL091218-07CRI	Perchlorate-O(18)	107 > 89	1.66	32513.240	32513.240	bb			0.4884	97.68	-2.32	2527.9...	

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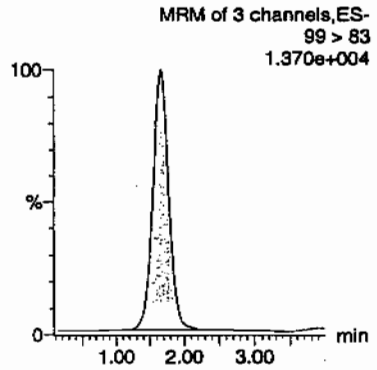
Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

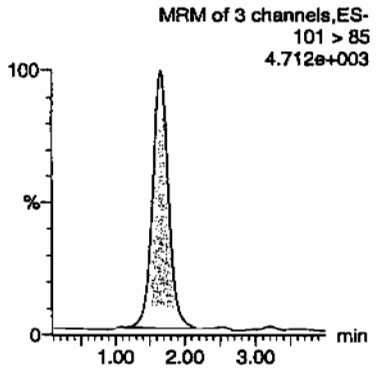
Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229055a
Date: 29-Dec-2009
Time: 19:45:43
ID: WCL091218-07CRI
Vial: 1:2,B

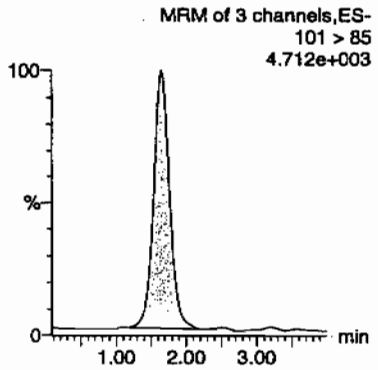
Perchlorate



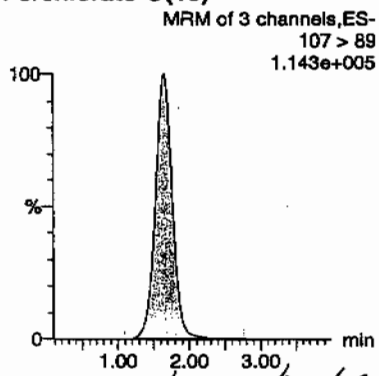
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL091218-07CRI	Perchlorate	99 > 83	1.67	3708.720	3708.720	bb			0.0499	99.78	-0.22	588.082	3.01
WCL091218-07CRI	Perchlorate-101	101 > 85	1.66	1231.665	1231.665	bb			0.0503	100.67	0.67	180.729	
WCL091218-07CRI	Perchlorate-O(18)	107 > 89	1.66	31600.350	31600.350	bb			0.4747	94.94	-5.06	6698.1...	

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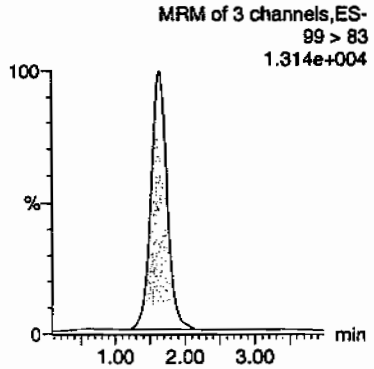
Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

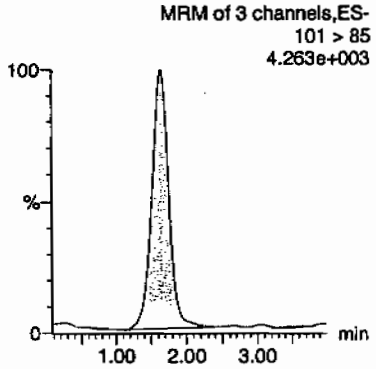
Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229067a
Date: 29-Dec-2009
Time: 21:10:42
ID: WCL091218-07CRI
Vial: 1:2,B

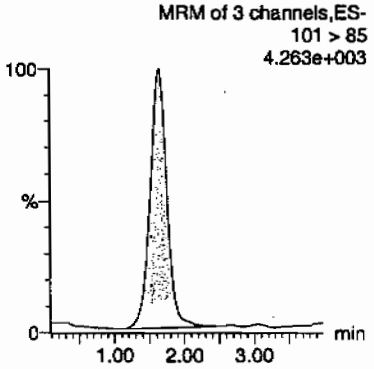
Perchlorate



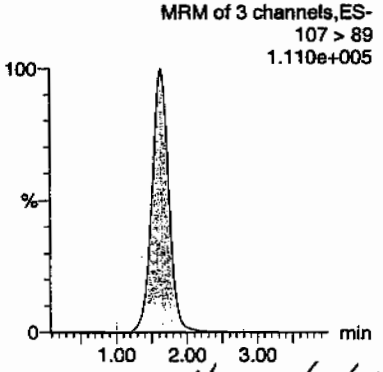
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL091218-07CRI	Perchlorate	99 > 83	1.64	3507.066	3507.066	bb			0.0472	94.36	-5.64	669.069	2.95
WCL091218-07CRI	Perchlorate-101	101 > 85	1.63	1188.469	1188.469	bb			0.0486	97.14	-2.86	224.189	
WCL091218-07CRI	Perchlorate-O(18)	107 > 89	1.63	30583.959	30583.959	bb			0.4594	91.89	-8.11	4818.5...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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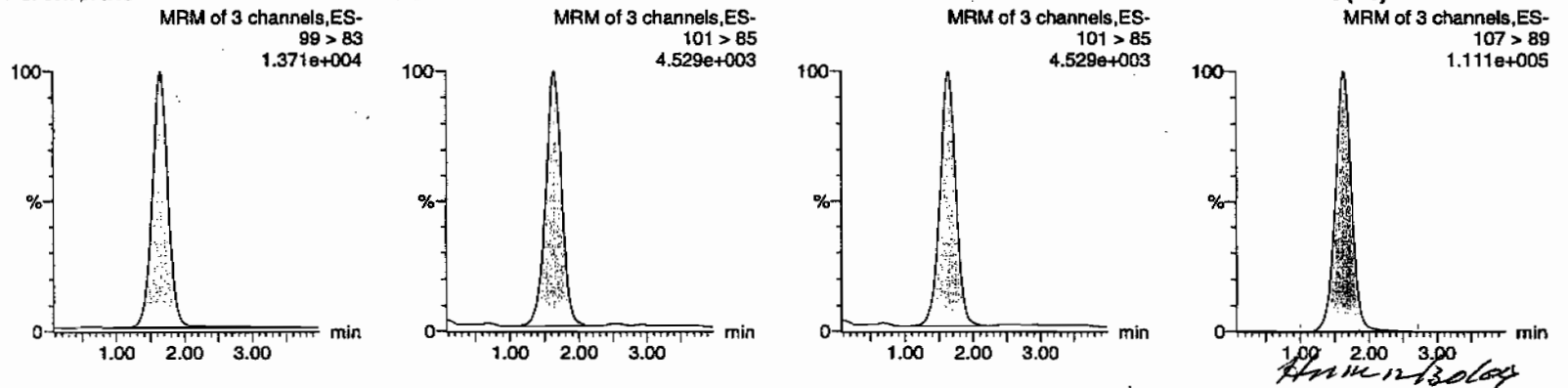
Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229079a
Date: 29-Dec-2009
Time: 22:35:38
ID: WCL091218-07CRI
Vial: 1:2,B



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL091218-07CRI	Perchlorate	99 > 83	1.64	3707.391	3707.391	bb			0.0499	99.75	-0.25	538.964	3.04
WCL091218-07CRI	Perchlorate-101	101 > 85	1.64	1221.163	1221.163	bb			0.0499	99.81	-0.19	244.604	
WCL091218-07CRI	Perchlorate-O(18)	107 > 89	1.63	30587.445	30587.445	bb			0.4595	91.90	-8.10	20819....	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Michael A. Penny

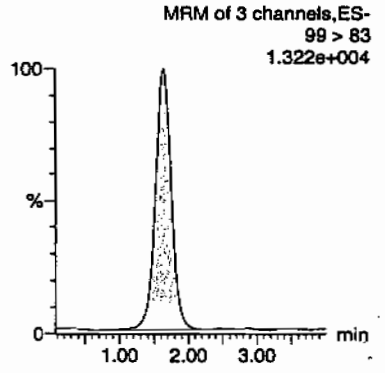
Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

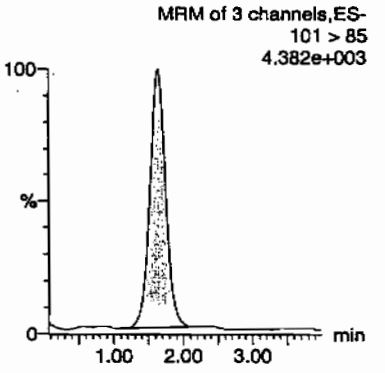
Name: per1229085a
Date: 29-Dec-2009
Time: 23:18:22
ID: WCL091218-07CRI
Vial: 1:2,B

MM 12/30/09

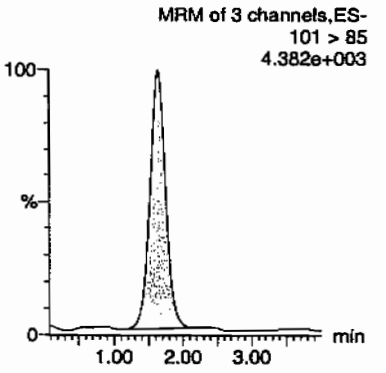
Perchlorate



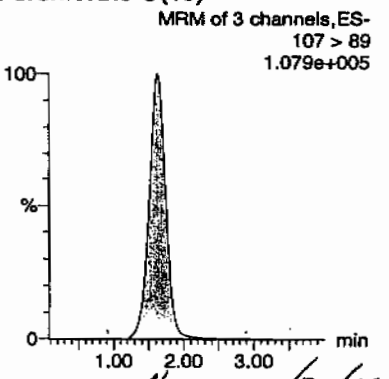
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 12/30/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
WCL091218-07CRI	Perchlorate	99 > 83	1.64	3598.090	3598.090	bb			0.0484	96.81	-3.19	538.434	3.15
WCL091218-07CRI	Perchlorate-101	101 > 85	1.63	1142.785	1142.785	bb			0.0467	93.41	-6.59	226.192	
WCL091218-07CRI	Perchlorate-O(18)	107 > 89	1.63	29460.975	29460.975	bb			0.4426	88.51	-11.49	5574.6...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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QUALITY CONTROL

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 936065

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
MB

Date Received: 29-DEC-09

GEL Job No (SDG): 10-1037-1

GEL Sample ID: 1202002916

Date Filtered: 29-DEC-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.050	ug/L	U	1	29-DEC-09 19:52	per1229056a
	Perchlorate Isotope Ratio						1	29-DEC-09 19:52	per1229056a
14797-73-0	Perchlorate-101	.05	.2	0.050	ug/L	U	1	29-DEC-09 19:52	per1229056a
	Perchlorate-O(18)			0.466	ug/L		1	29-DEC-09 19:52	per1229056a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

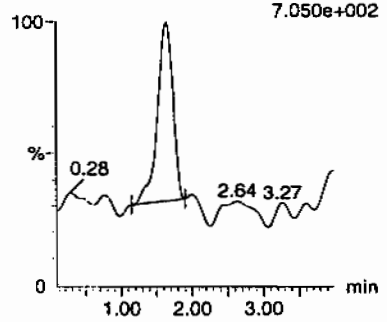
Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229056a
Date: 29-Dec-2009
Time: 19:52:47
ID: 1202002916
Vial: 2:4,A

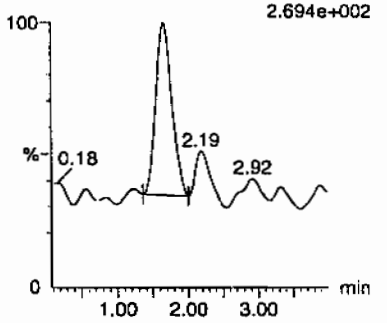
| LANL | 936066 | LCQ | MB | 1 |

MM 12/29/09

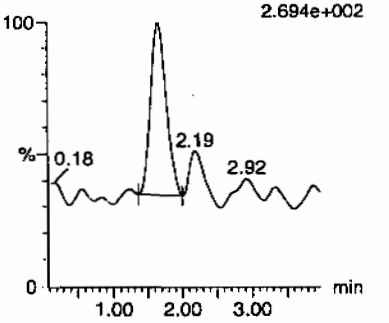
Perchlorate



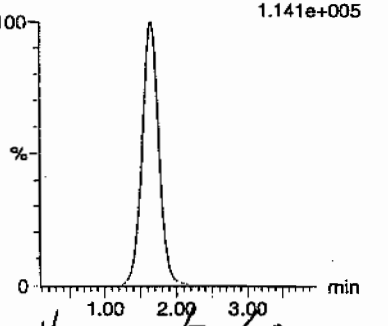
Perchlorate



Perchlorate-101



Perchlorate-O(18)



HM 12/30/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202002916	Perchlorate	99 > 83	1.64	122.341	122.341	bb			0.0016			16.810	2.62
1202002916	Perchlorate-101	101 > 85	1.66	46.639	46.639	bb			0.0019			6.498	
1202002916	Perchlorate-O(18)	107 > 89	1.66	31050.627	31050.627	bb			0.4664	93.29	-6.71	3575.2...	

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Form 1

Perchlorate Analysis Data Sheet

Lab Name: GEL Laboratories LLC

Lab Code: GEL

Instrument: LCMSMS

Method: EPA 6850 Modified

Matrix: GROUND WATER

Extraction Batch ID: 936065

Extraction Type: Filter/DAI

Sample Volume/Weight: 10.0 mL

Concentrated Extract Volume: 10.0

Client Sample No.
LCS

Date Received: 29-DEC-09

GEL Job No (SDG): 10-1037-1

GEL Sample ID: 1202002917

Date Filtered: 29-DEC-09

Injection Volume (uL): 20

%Solids:

CAS No.	Analyte^	MDL	RL	Conc*	Units	Q	Dilution Factor	Date Analyzed	GEL File ID
14797-73-0	Perchlorate	.05	.2	0.183	ug/L	J	1	29-DEC-09 20:00	per1229057a
	Perchlorate Isotope Ratio			3.02			1	29-DEC-09 20:00	per1229057a
14797-73-0	Perchlorate-101	.05	.2	0.184	ug/L	J	1	29-DEC-09 20:00	per1229057a
	Perchlorate-O(18)			0.463	ug/L		1	29-DEC-09 20:00	per1229057a

^ When the analyte name is Perchlorate Isotope Ratio the concentration is a unitless value calculated from the ratio of Perchlorate peak area to Perchlorate-101 peak area. The Perchlorate-101 and isotopic ratio results are provided for qualitative purposes only. The results are used to verify the presence and quantitation of Perchlorate.

*Concentration =

$$\text{Instrument Value} \times \frac{\text{Concentrated Extract Volume}}{\text{Aliquot}} \times \frac{1}{\%\text{Solids}}$$

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Quantify Sample Report **MassLynx 4.0 SP4**
The GEL Group, LLC Analyst: Michael A. Penny

Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

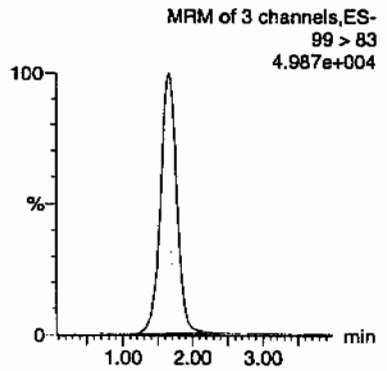
Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229057a
Date: 29-Dec-2009
Time: 20:00:00
ID: 1202002917
Vial: 2:4,B

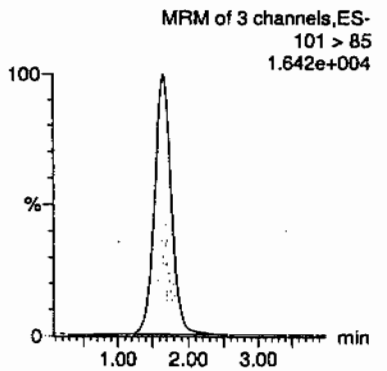
| LANL | 936066 | LCS | LCS | 1 |

MM 12/30/09

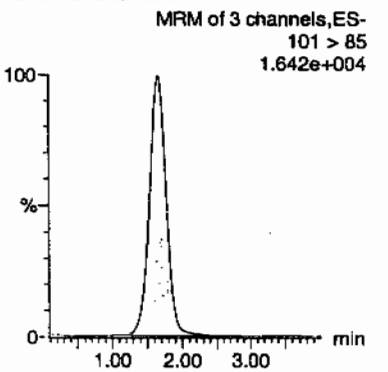
Perchlorate



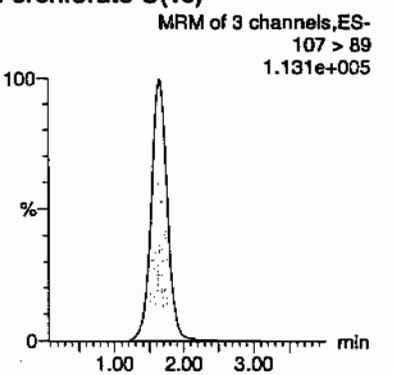
Perchlorate



Perchlorate-101



Perchlorate-O(18)



ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202002917	Perchlorate	99 > 83	1.66	13602.565	13602.565	bb			0.1630	91.50	-8.50	1408.8...	3.02
1202002917	Perchlorate-101	101 > 85	1.66	4510.471	4510.471	bb			0.1643	92.17	-7.83	506.288	
1202002917	Perchlorate-O(18)	107 > 89	1.64	30836.791	30836.791	bb			0.4632	92.65	-7.35	4099.3...	

$\frac{13602.565}{74334.3} = 0.1830$ MM 12/30/09

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MISCELLANEOUS DATA

Prep Logbook

Definitive Low Level Perchlorate Analysis Utilizing Liquid Chromatography/Mass Spectrometry/Mass Spectrometry (LC/MS/MS) by EPA Method 6850 Modified (6850M)

Batch ID: 936065 **Verified by:** _____
Analyst: Lynne Russell
Method: SW846 6850 Modified

Lab SOP: GL-OA-E-067 REV# 6
Instrument: MicroMass Quatro Ultima

Sample ID	Run Date	Initial Volume (mL)	Final Volume (mL)	Prepped Factor (mL/mL)
1202002916 MB	29-DEC-2009 15:24:56	10	10	1
1202002917 LCS	29-DEC-2009 15:24:56	10	10	1
243285002	29-DEC-2009 15:24:56	10	10	1
243286001	29-DEC-2009 15:24:56	10	10	1
243286004	29-DEC-2009 15:24:56	10	10	1
1202002918 MS (243286004)	29-DEC-2009 15:24:56	10	10	1
1202002919 MSD (243286004)	29-DEC-2009 15:24:56	10	10	1
243386001	29-DEC-2009 15:24:56	10	10	1
1202002920 ICS	29-DEC-2009 15:24:56	10	10	1
243396001	29-DEC-2009 15:24:56	10	10	1
1202003536 MS (243396001)	29-DEC-2009 15:24:56	10	10	1
1202003537 MSD (243396001)	29-DEC-2009 15:24:56	10	10	1
243400001	29-DEC-2009 15:24:56	10	10	1
243400004	29-DEC-2009 15:24:56	10	10	1
243405001	29-DEC-2009 15:24:56	10	10	1
243459001	29-DEC-2009 15:24:56	10	10	1
243459002	29-DEC-2009 15:24:56	10	10	1
243461002	29-DEC-2009 15:24:56	10	10	1
243466001	29-DEC-2009 15:24:56	10	10	1
243466002	29-DEC-2009 15:24:56	10	10	1
243493001	29-DEC-2009 15:24:56	10	10	1

Type	Sample Id	Description	Serial Number	Spike Amt	Units
ICS	1202002920	10 ug/L ICV/CCV Second Source	UCL091201-01.1	.2	mL
LCS	1202002917	10 ug/L ICV/CCV Second Source	UCL091201-01.1	.2	mL
MS	1202002918	10 ug/L ICV/CCV Second Source	UCL091201-01.1	.2	mL
MS	1202003536	10 ug/L ICV/CCV Second Source	UCL091201-01.1	.2	mL
MSD	1202002919	10 ug/L ICV/CCV Second Source	UCL091201-01.1	.2	mL
MSD	1202003537	10 ug/L ICV/CCV Second Source	UCL091201-01.1	.2	mL
RGNT	All	500 ppm Carbonate, Bicarbonate, Chloride, Sulfate	1236492	10	mL

Comments:
De-salting cartridges used: 090403-1-Ba and 091029-1-H.

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GEL ORGANIC RUN LOG INSTRUMENT ID: LCMSMS#2

Date: 12/29/09 Method: EPA 6850-Modified Reviewed BY: [signature]
Extr. Injection Volume: 20uL Int. Std.: UCL091019-03.2 Date: 12/30/09
Sequence Number: per122909a Mobile Phase Lot#: 1233781, 1233976 SOP: GL-OA-E-067 Rev.6
Initial Calibration Date: 12/29/09 Standard-Samp Reagent Lot#:: 1233976 Alt Check Std. ID: WCL091218-06

DataFile	Sample	Analyst	Injection Date	Batch	SDG	Dilution	Client	Comments	QC_Flag
per1229001a	IPB001	MAP	12/29/2009 13:24			1		USE	B
per1229002a	IPB001	MAP	12/29/2009 13:31			1		USE	B
per1229003a	WCLICAL-01	MAP	12/29/2009 13:39			1		USE	I
per1229004a	WCLICAL-02	MAP	12/29/2009 13:46			1		USE	I
per1229005a	WCLICAL-03	MAP	12/29/2009 13:53			1		USE	I
per1229006a	WCLICAL-04	MAP	12/29/2009 14:00			1		USE	I
per1229007a	WCLICAL-05	MAP	12/29/2009 14:07			1		USE	I
per1229008a	IPB002	MAP	12/29/2009 14:14			1		USE	B
per1229009a	WCLICV	MAP	12/29/2009 14:21			1		USE	C
per1229010a	IPB003	MAP	12/29/2009 14:28			1		USE	B
per1229011a	WCLCRI	MAP	12/29/2009 14:35			1		USE	C
per1229012a	1202004322	MAP	12/29/2009 14:42	936761	Various	1	LANL	USE	S
per1229013a	1202004325	MAP	12/29/2009 14:49	936761	Various	1	LANL	USE	S
per1229014a	1202004326	MAP	12/29/2009 14:56	936761	Various	1	LANL	USE	S
per1229015a	243506001	MAP	12/29/2009 15:03	936761	10-1066-1	1	LANL	USE	S
per1229016a	1202004323	MAP	12/29/2009 15:10	936761	10-1066-1	1	LANL	USE	S
per1229017a	1202004324	MAP	12/29/2009 15:17	936761	10-1066-1	1	LANL	USE	S
per1229018a	243513001	MAP	12/29/2009 15:24	936761	10-1071	1	LANL	USE	S
per1229019a	243513002	MAP	12/29/2009 15:31	936761	10-1071	1	LANL	USE	S
per1229020a	243539001	MAP	12/29/2009 15:38	936761	10-1079	1	LANL	USE	S
per1229021a	243539002	MAP	12/29/2009 15:45	936761	10-1079	1	LANL	USE	S
per1229022a	WCLCCV	MAP	12/29/2009 15:52			1		USE	C
per1229023a	IPB004	MAP	12/29/2009 15:59			1		USE	B
per1229024a	WCLCRI	MAP	12/29/2009 16:06			1		USE	C
per1229025a	243554001	MAP	12/29/2009 16:13	936761	10-1087-1	1	LANL	USE	S
per1229026a	243554002	MAP	12/29/2009 16:20	936761	10-1087-1	1	LANL	USE	S
per1229027a	243554003	MAP	12/29/2009 16:27	936761	10-1087-1	1	LANL	USE	S
per1229028a	243554004	MAP	12/29/2009 16:34	936761	10-1087-1	1	LANL	USE	S
per1229029a	WCLCCV	MAP	12/29/2009 16:42			1		USE	C

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per1229030a	IPB005	MAP	12/29/2009 16:49			1		USE	B
per1229031a	WCLCRI	MAP	12/29/2009 16:56			1		USE	C
per1229032a	1202004143	MAP	12/29/2009 17:03	936669	Various	1	LANL	USE	S
per1229033a	1202004144	MAP	12/29/2009 17:10	936669	Various	1	LANL	USE	S
per1229034a	1202004147	MAP	12/29/2009 17:17	936669	Various	1	LANL	USE	S
per1229035a	243407001	MAP	12/29/2009 17:24	936669	10-1012-1	1	LANL	USE	S
per1229036a	243407002	MAP	12/29/2009 17:31	936669	10-1012-1	1	LANL	USE	S
per1229037a	243407003	MAP	12/29/2009 17:38	936669	10-1012-1	1	LANL	USE	S
per1229038a	243407004	MAP	12/29/2009 17:45	936669	10-1012-1	1	LANL	USE	S
per1229039a	243407005	MAP	12/29/2009 17:52	936669	10-1012-1	1	LANL	USE	S
per1229040a	243407006	MAP	12/29/2009 17:59	936669	10-1012-1	1	LANL	USE	S
per1229041a	243407007	MAP	12/29/2009 18:06	936669	10-1012-1	1	LANL	USE	S
per1229042a	WCLCCV	MAP	12/29/2009 18:13			1		USE	C
per1229043a	IPB006	MAP	12/29/2009 18:20			1		USE	B
per1229044a	WCLCRI	MAP	12/29/2009 18:27			1		USE	C
per1229045a	243407008	MAP	12/29/2009 18:34	936669	10-1012-1	1	LANL	USE	S
per1229046a	243407009	MAP	12/29/2009 18:42	936669	10-1012-1	1	LANL	USE	S
per1229047a	243457001	MAP	12/29/2009 18:49	936669	10-1038	1	LANL	USE	S
per1229048a	1202004145	MAP	12/29/2009 18:56	936669	10-1038	1	LANL	USE	S
per1229049a	1202004146	MAP	12/29/2009 19:03	936669	10-1038	1	LANL	USE	S
per1229050a	243457002	MAP	12/29/2009 19:10	936669	10-1038	1	LANL	USE	S
per1229051a	243457003	MAP	12/29/2009 19:17	936669	10-1038	1	LANL	USE	S
per1229052a	243457004	MAP	12/29/2009 19:24	936669	10-1038	1	LANL	USE	S
per1229053a	WCLCCV	MAP	12/29/2009 19:31			1		USE	C
per1229054a	IPB007	MAP	12/29/2009 19:38			1		USE	B
per1229055a	WCLCRI	MAP	12/29/2009 19:45			1		USE	C
per1229056a	1202002916	MAP	12/29/2009 19:52	936066	Various	1	LANL	USE	S
per1229057a	1202002917	MAP	12/29/2009 20:00	936066	Various	1	LANL	USE	S
per1229058a	1202002920	MAP	12/29/2009 20:07	936066	Various	1	LANL	USE	S
per1229059a	243285002	MAP	12/29/2009 20:14	936066	10-995	1	LANL	USE	S
per1229060a	243286001	MAP	12/29/2009 20:21	936066	10-998	1	LANL	USE	S
per1229061a	243286004	MAP	12/29/2009 20:28	936066	10-998	1	LANL	USE	S
per1229062a	1202002918	MAP	12/29/2009 20:35	936066	10-998	1	LANL	USE	S
per1229063a	1202002919	MAP	12/29/2009 20:42	936066	10-998	1	LANL	USE	S
per1229064a	243386001	MAP	12/29/2009 20:49	936066	10-1032-1	1	LANL	USE	S
per1229065a	WCLCCV	MAP	12/29/2009 20:56			1		USE	C
per1229066a	IPB008	MAP	12/29/2009 21:03			1		USE	B

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per1229067a	WCLCRI	MAP	12/29/2009 21:10			1		USE	C
per1229068a	243396001	MAP	12/29/2009 21:17	936066	10-1010	1	LANL	USE	S
per1229069a	1202003536	MAP	12/29/2009 21:24	936066	10-1010	1	LANL	USE	S
per1229070a	1202003537	MAP	12/29/2009 21:31	936066	10-1010	1	LANL	USE	S
per1229071a	243400001	MAP	12/29/2009 21:39	936066	10-1021	1	LANL	USE	S
per1229072a	243400004	MAP	12/29/2009 21:46	936066	10-1021	1	LANL	USE	S
per1229073a	243405001	MAP	12/29/2009 21:53	936066	10-1012	1	LANL	USE	S
per1229074a	243459001	MAP	12/29/2009 22:00	936066	10-1045	1	LANL	USE	S
per1229075a	243459002	MAP	12/29/2009 22:07	936066	10-1045	1	LANL	USE	S
per1229076a	243461002	MAP	12/29/2009 22:14	936066	10-1050	1	LANL	USE	S
per1229077a	WCLCCV	MAP	12/29/2009 22:21			1		USE	C
per1229078a	IPB009	MAP	12/29/2009 22:28			1		USE	B
per1229079a	WCLCRI	MAP	12/29/2009 22:35			1		USE	C
per1229080a	243466001	MAP	12/29/2009 22:42	936066	10-1056	1	LANL	DUSE-DL	S
per1229081a	243466002	MAP	12/29/2009 22:49	936066	10-1056	1	LANL	DUSE-DL	S
per1229082a	243493001	MAP	12/29/2009 22:56	936066	10-1037-1	1	LANL	USE	S
per1229083a	WCLCCV	MAP	12/29/2009 23:04			1		USE	C
per1229084a	IPB010	MAP	12/29/2009 23:11			1		USE	B
per1229085a	WCLCRI	MAP	12/29/2009 23:18			1		USE	C

Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

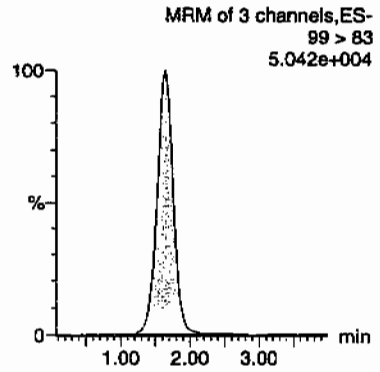
Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229069a
Date: 29-Dec-2009
Time: 21:24:58
ID: 1202003536
Vial: 2:5,E

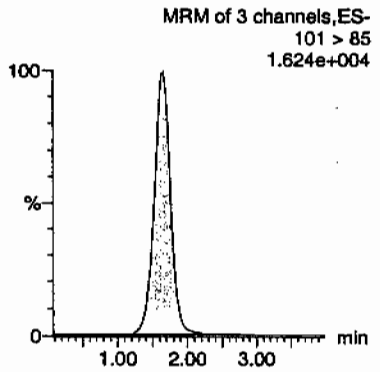
| LANL | 936066 | GEL | 243396001 MS | 1 |

MMP 12/30/09

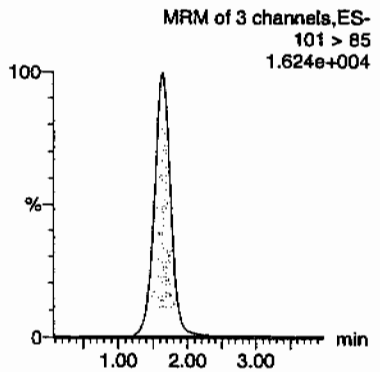
Perchlorate



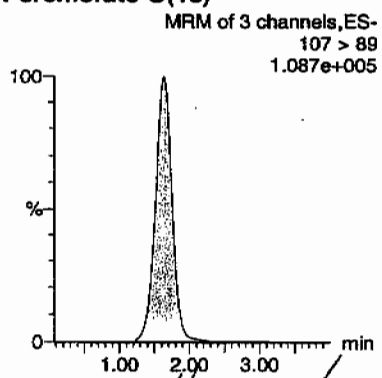
Perchlorate



Perchlorate-101



Perchlorate-O(18)



Hmm 12/30/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202003536	Perchlorate	99 > 83	1.64	13679.760	13679.760	bb			0.1840	92.02	-7.98	1496.8...	3.07
1202003536	Perchlorate-101	101 > 85	1.64	4458.971	4458.971	bb			0.1822	91.12	-8.88	1939.8...	
1202003536	Perchlorate-O(18)	107 > 89	1.63	29823.100	29823.100	bb			0.4480	89.60	-10.40	4121.7...	

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Quantify Sample Report MassLynx 4.0 SP4
The GEL Group, LLC Analyst: Michael A. Penny

Dataset: C:\MassLynx\Perchlorate.PRO\per122909a.qld

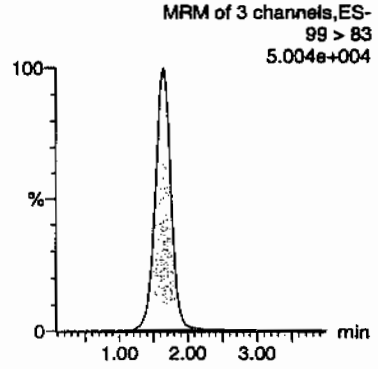
Last Altered: Wednesday, December 30, 2009 6:51:18 AM Eastern Standard Time
Printed: Wednesday, December 30, 2009 6:56:40 AM Eastern Standard Time

Name: per1229070a
Date: 29-Dec-2009
Time: 21:31:59
ID: 1202003537
Vial: 2:5,F

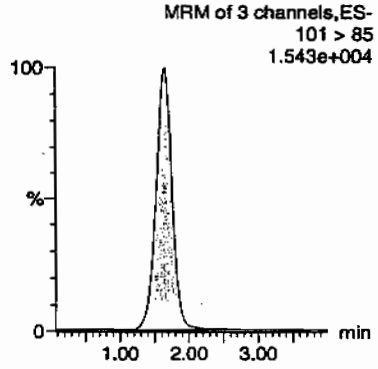
LANL | 936066 | LIQ | 243396001 MSD | 1 |

MM 12/30/09

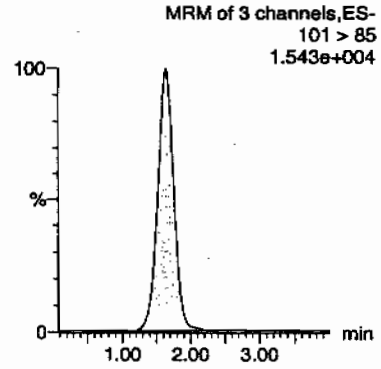
Perchlorate



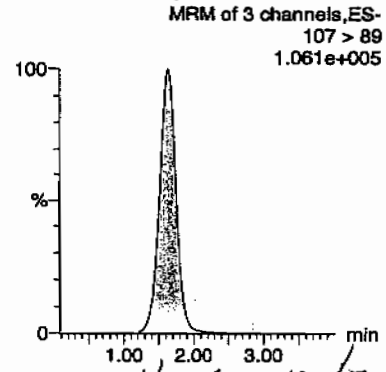
Perchlorate



Perchlorate-101



Perchlorate-O(18)



MM 12/30/09

ID	Name	Trace	RT	Area	Response	Flags	Mod.Date	Mod.Time	ng/mL	%Rec	%Dev	S/N	Ion Ratio
1202003537	Perchlorate	99 > 83	1.64	13549.634	13549.634	bb			0.1823	91.14	-8.86	5376.9...	3.22
1202003537	Perchlorate-101	101 > 85	1.64	4209.393	4209.393	bb			0.1720	86.02	-13.98	677.871	
1202003537	Perchlorate-O(18)	107 > 89	1.63	29051.781	29051.781	bb			0.4364	87.28	-12.72	3965.5...	

GEL SOP GL-OA-E-067, Method 6850-Modified / MM = Manual Modification

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Isotope Ratio Criteria

Isotope Ratio $_{35}Cl/_{37}CL$

2.31-3.85

Tune Criteria

The tuning solution is introduced directly into the mass spectrometer using the ESI interface in the positive ion mode. The mass range scanned is 20 to 1100 amu using at least six scans. The observed mass for the target compound in the daily calibration standards must be within 0.2 amu of the expected value. If it is greater than 0.2 amu, then a mass calibration is performed and the instrument is re-calibrated.

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037

Sample Analysis

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202004426	Method Blank (MB) **ICP**
1202014118	Method Blank (MB) **ICP**
1202004427	Laboratory Control Sample (LCS)
1202014119	Laboratory Control Sample (LCS)
1202004430	243549002(WST03-10-2148L) Serial Dilution (SD)
1202004428	243549002(WST03-10-2148D) Sample Duplicate (DUP)
1202004429	243549002(WST03-10-2148S) Matrix Spike (MS)
1202004431	243549002(WST03-10-2148SD) Matrix Spike Duplicate (MSD)
1202004420	Method Blank (MB) **ICP-MS**
1202004421	Laboratory Control Sample (LCS)
1202004424	243549002(WST03-10-2148L) Serial Dilution (SD)
1202004422	243549002(WST03-10-2148D) Sample Duplicate (DUP)
1202004423	243549002(WST03-10-2148S) Matrix Spike (MS)
1202004425	243549002(WST03-10-2148SD) Matrix Spike Duplicate (MSD)
1202006441	Method Blank (MB) **CVAA**
1202006446	Laboratory Control Sample (LCS)
1202006443	243492001(RE12-10-7288L) Serial Dilution (SD)
1202006442	243492001(RE12-10-7288D) Sample Duplicate (DUP)
1202006444	243492001(RE12-10-7288S) Matrix Spike (MS)
1202006445	243492001(RE12-10-7288SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	936808, 941050, 936805 and 937635
Prep Batch :	936807, 941049, 936804 and 937634
Standard Operating Procedures:	GL-MA-E-013 REV# 20, GL-MA-E-009 REV# 19, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23
Analytical Method:	SW846 3050B/6010B, SW846 3050B/6020 and SW846 7471A
Prep Method :	SW846 3050B and SW846 7471A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS analyzed with this SDG met the acceptance criteria for percent recovery.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 243549002 (WST03-10-2148)-ICP and ICP-MS and 243492001 (RE12-10-7288)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of calcium, magnesium and potassium as indicated by the "N" qualifiers.

Matrix Spike Duplicate (MSD) Recovery Statement
The percent recovery (%R) obtained from the MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MSD met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exceptions of selenium, magnesium and potassium as indicated by the "N" qualifiers.

MS/MSD Relative Percent Difference (RPD) Statement
The RPD(s) between the MS and MSD met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the contract required detection limit (RL), a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements with the exceptions of beryllium, nickel, cobalt and vanadium as indicated by the "*" qualifiers.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D) with the exception of iron as indicated by the "E" qualifier.

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG were diluted the standard 2x for solids on the ICPMS.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not

generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: DER ID 779262, 780456 and 780714. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Nik-Cole A. Elmore **Date:** 1·19·10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492001 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7288 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 90.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	16400000	ug/Kg		7130	21000	21000	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-36-0	Antimony	1050	ug/Kg	U	346	1050	1050	1	P	HSC	01/14/10 22:20	011410-2	941050
7440-38-2	Arsenic	2.3	mg/kg		0.216	1.08	1.08	2	MS	RMJ	01/13/10 22:33	100113-4	936805
7440-39-3	Barium	221000	ug/Kg		105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-41-7	Beryllium	1.05	mg/kg		0.0216	0.108	0.108	2	MS	RMJ	01/12/10 13:30	100111-3	936805
7440-43-9	Cadmium	299	ug/Kg	J	105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-70-2	Calcium	3070000	ug/Kg		8390	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-47-3	Chromium	18700	ug/Kg		157	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-48-4	Cobalt	9620	ug/Kg		157	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-50-8	Copper	12100	ug/Kg		315	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-89-6	Iron	21700000	ug/Kg		8390	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-92-1	Lead	23400	ug/Kg		262	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-95-4	Magnesium	3000000	ug/Kg		8910	31500	31500	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-96-5	Manganese	604000	ug/Kg		210	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808
7439-97-6	Mercury	13.6	ug/kg		4.41	13	13	1	AV	JXL1	01/07/10 10:24	010710S1-7	937635
7440-02-0	Nickel	8.06	mg/kg		0.108	0.433	0.433	2	MS	RMJ	01/12/10 13:30	100111-3	936805
7440-09-7	Potassium	2990000	ug/Kg		6710	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7782-49-2	Selenium	1.08	mg/kg	U	0.541	1.08	1.08	2	MS	RMJ	01/12/10 13:30	100111-3	936805
7440-22-4	Silver	239	ug/Kg	J	105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-23-5	Sodium	222000	ug/Kg		7340	26200	26200	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-28-0	Thallium	0.219	mg/kg		0.0649	0.216	0.216	2	MS	RMJ	01/13/10 22:33	100113-4	936805
7440-61-1	Uranium	2.6	mg/kg		0.0143	0.0433	0.0433	2	MS	RMJ	01/13/10 22:33	100113-4	936805
7440-62-2	Vanadium	47500	ug/Kg		105	524	524	1	P	HSC	01/12/10 01:29	011110A-1	936808
7440-66-6	Zinc	42900	ug/Kg		346	1050	1050	1	P	HSC	01/12/10 01:29	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.509	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.525	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.509	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.525	g	50	mL	01/13/10	FGA

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492002 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7290 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 96.9

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	2670000	ug/Kg		7020	20600	20600	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-36-0	Antimony	1000	ug/Kg	U	330	1000	1000	1	P	HSC	01/14/10 22:27	011410-2	941050
7440-38-2	Arsenic	0.920	mg/kg	J	0.206	1.03	1.03	2	MS	RMJ	01/13/10 22:45	100113-4	936805
7440-39-3	Barium	37700	ug/Kg		103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-41-7	Beryllium	0.424	mg/kg		0.0206	0.103	0.103	2	MS	RMJ	01/12/10 13:47	100111-3	936805
7440-43-9	Cadmium	516	ug/Kg	U	103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-70-2	Calcium	1370000	ug/Kg		8260	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-47-3	Chromium	21300	ug/Kg		155	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-48-4	Cobalt	7120	ug/Kg		155	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-50-8	Copper	3270	ug/Kg		310	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-89-6	Iron	7230000	ug/Kg		8260	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-92-1	Lead	6900	ug/Kg		258	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-95-4	Magnesium	867000	ug/Kg		8770	31000	31000	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-96-5	Manganese	319000	ug/Kg		206	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808
7439-97-6	Mercury	7.41	ug/kg	J	3.94	11.6	11.6	1	AV	JXL1	01/07/10 10:33	010710S1-7	937635
7440-02-0	Nickel	3.5	mg/kg		0.103	0.413	0.413	2	MS	RMJ	01/12/10 13:47	100111-3	936805
7440-09-7	Potassium	667000	ug/Kg		6610	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7782-49-2	Selenium	1.03	mg/kg	U	0.516	1.03	1.03	2	MS	RMJ	01/12/10 13:47	100111-3	936805
7440-22-4	Silver	277	ug/Kg	J	103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-23-5	Sodium	357000	ug/Kg		7230	25800	25800	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-28-0	Thallium	0.0731	mg/kg	J	0.0619	0.206	0.206	2	MS	RMJ	01/13/10 22:45	100113-4	936805
7440-61-1	Uranium	0.735	mg/kg		0.0136	0.0413	0.0413	2	MS	RMJ	01/13/10 22:45	100113-4	936805
7440-62-2	Vanadium	6040	ug/Kg		103	516	516	1	P	HSC	01/12/10 01:37	011110A-1	936808
7440-66-6	Zinc	28500	ug/Kg		341	1030	1030	1	P	HSC	01/12/10 01:37	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.5	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.5	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.535	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.516	g	50	mL	01/13/10	FGA

METALS
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INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492003 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7289 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 90.1

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	9270000	ug/Kg		7240	21300	21300	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-36-0	Antimony	373	ug/Kg	J	338	1020	1020	1	P	HSC	01/14/10 22:34	011410-2	941050
7440-38-2	Arsenic	1.88	mg/kg		0.219	1.09	1.09	2	MS	RMJ	01/13/10 22:50	100113-4	936805
7440-39-3	Barium	121000	ug/Kg		107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-41-7	Beryllium	0.895	mg/kg		0.0219	0.109	0.109	2	MS	RMJ	01/12/10 13:53	100111-3	936805
7440-43-9	Cadmium	533	ug/Kg	U	107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-70-2	Calcium	2260000	ug/Kg		8520	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-47-3	Chromium	8880	ug/Kg		160	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-48-4	Cobalt	7690	ug/Kg		160	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-50-8	Copper	6230	ug/Kg		320	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-89-6	Iron	12100000	ug/Kg		8520	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-92-1	Lead	11500	ug/Kg		266	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-95-4	Magnesium	1900000	ug/Kg		9050	32000	32000	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-96-5	Manganese	304000	ug/Kg		213	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808
7439-97-6	Mercury	13.8	ug/kg		4.18	12.3	12.3	1	AV	JXL1	01/07/10 10:34	010710S1-7	937635
7440-02-0	Nickel	6.57	mg/kg		0.109	0.438	0.438	2	MS	RMJ	01/12/10 13:53	100111-3	936805
7440-09-7	Potassium	1640000	ug/Kg		6820	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7782-49-2	Selenium	1.09	mg/kg	U	0.547	1.09	1.09	2	MS	RMJ	01/12/10 13:53	100111-3	936805
7440-22-4	Silver	259	ug/Kg	J	107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-23-5	Sodium	387000	ug/Kg		7460	26600	26600	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-28-0	Thallium	0.174	mg/kg	J	0.0657	0.219	0.219	2	MS	RMJ	01/13/10 22:50	100113-4	936805
7440-61-1	Uranium	0.832	mg/kg		0.0144	0.0438	0.0438	2	MS	RMJ	01/13/10 22:50	100113-4	936805
7440-62-2	Vanadium	22500	ug/Kg		107	533	533	1	P	HSC	01/12/10 01:44	011110A-1	936808
7440-66-6	Zinc	24400	ug/Kg		351	1070	1070	1	P	HSC	01/12/10 01:44	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.507	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.521	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.541	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.542	g	50	mL	01/13/10	FGA

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492004 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7291 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 91.8

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7410000	ug/Kg		7390	21700	21700	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-36-0	Antimony	1050	ug/Kg	U	346	1050	1050	1	P	HSC	01/14/10 22:41	011410-2	941050
7440-38-2	Arsenic	1.96	mg/kg		0.218	1.09	1.09	2	MS	RMJ	01/13/10 22:54	100113-4	936805
7440-39-3	Barium	118000	ug/Kg		109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-41-7	Beryllium	0.901	mg/kg		0.0218	0.109	0.109	2	MS	RMJ	01/12/10 13:59	100111-3	936805
7440-43-9	Cadmium	543	ug/Kg	U	109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-70-2	Calcium	2210000	ug/Kg		8690	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-47-3	Chromium	14000	ug/Kg		163	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-48-4	Cobalt	5120	ug/Kg		163	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-50-8	Copper	5900	ug/Kg		326	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-89-6	Iron	11800000	ug/Kg		8690	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-92-1	Lead	11200	ug/Kg		272	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-95-4	Magnesium	1630000	ug/Kg		9240	32600	32600	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-96-5	Manganese	310000	ug/Kg		217	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808
7439-97-6	Mercury	13.4	ug/kg		4.17	12.3	12.3	1	AV	JXL1	01/07/10 10:36	010710S1-7	937635
7440-02-0	Nickel	6.93	mg/kg		0.109	0.436	0.436	2	MS	RMJ	01/12/10 13:59	100111-3	936805
7440-09-7	Potassium	1600000	ug/Kg		6950	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7782-49-2	Selenium	1.09	mg/kg	U	0.544	1.09	1.09	2	MS	RMJ	01/12/10 13:59	100111-3	936805
7440-22-4	Silver	246	ug/Kg	J	109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-23-5	Sodium	79600	ug/Kg		7610	27200	27200	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-28-0	Thallium	0.174	mg/kg	J	0.0653	0.218	0.218	2	MS	RMJ	01/13/10 22:54	100113-4	936805
7440-61-1	Uranium	1.7	mg/kg		0.0144	0.0436	0.0436	2	MS	RMJ	01/13/10 22:54	100113-4	936805
7440-62-2	Vanadium	22800	ug/Kg		109	543	543	1	P	HSC	01/12/10 01:51	011110A-1	936808
7440-66-6	Zinc	25400	ug/Kg		359	1090	1090	1	P	HSC	01/12/10 01:51	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.5	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.501	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.533	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.52	g	50	mL	01/13/10	FGA

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492005 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7292 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 94

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	5780000	ug/Kg		7190	21100	21100	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-36-0	Antimony	1020	ug/Kg	U	337	1020	1020	1	P	HSC	01/14/10 22:49	011410-2	941050
7440-38-2	Arsenic	1.76	mg/kg		0.206	1.03	1.03	2	MS	RMJ	01/13/10 22:58	100113-4	936805
7440-39-3	Barium	406000	ug/Kg		106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-41-7	Beryllium	0.670	mg/kg		0.0206	0.103	0.103	2	MS	RMJ	01/12/10 14:05	100111-3	936805
7440-43-9	Cadmium	529	ug/Kg	U	106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-70-2	Calcium	3620000	ug/Kg		8460	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-47-3	Chromium	10500	ug/Kg		159	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-48-4	Cobalt	6070	ug/Kg		159	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-50-8	Copper	4120	ug/Kg		317	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-89-6	Iron	9670000	ug/Kg		8460	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-92-1	Lead	7830	ug/Kg		264	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-95-4	Magnesium	1320000	ug/Kg		8990	31700	31700	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-96-5	Manganese	300000	ug/Kg		211	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808
7439-97-6	Mercury	13.6	ug/kg		4.2	12.3	12.3	1	AV	JXL1	01/07/10 10:38	010710S1-7	937635
7440-02-0	Nickel	4.94	mg/kg		0.103	0.412	0.412	2	MS	RMJ	01/12/10 14:05	100111-3	936805
7440-09-7	Potassium	1080000	ug/Kg		6770	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7782-49-2	Selenium	1.03	mg/kg	U	0.515	1.03	1.03	2	MS	RMJ	01/12/10 14:05	100111-3	936805
7440-22-4	Silver	262	ug/Kg	J	106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-23-5	Sodium	214000	ug/Kg		7400	26400	26400	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-28-0	Thallium	0.112	mg/kg	J	0.0618	0.206	0.206	2	MS	RMJ	01/13/10 22:58	100113-4	936805
7440-61-1	Uranium	0.741	mg/kg		0.0136	0.0412	0.0412	2	MS	RMJ	01/13/10 22:58	100113-4	936805
7440-62-2	Vanadium	12700	ug/Kg		106	529	529	1	P	HSC	01/12/10 01:58	011110A-1	936808
7440-66-6	Zinc	24300	ug/Kg		349	1060	1060	1	P	HSC	01/12/10 01:58	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.516	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.503	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.517	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.52	g	50	mL	01/13/10	FGA

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492006 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7293 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 97.5

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	1580000	ug/Kg		6760	19900	19900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-36-0	Antimony	939	ug/Kg	U	310	939	939	1	P	HSC	01/14/10 22:56	011410-2	941050
7440-38-2	Arsenic	0.772	mg/kg	J	0.202	1.01	1.01	2	MS	RMJ	01/13/10 23:02	100113-4	936805
7440-39-3	Barium	22900	ug/Kg		99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-41-7	Beryllium	0.361	mg/kg		0.0202	0.101	0.101	2	MS	RMJ	01/12/10 14:11	100111-3	936805
7440-43-9	Cadmium	497	ug/Kg	U	99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-70-2	Calcium	787000	ug/Kg		7950	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-47-3	Chromium	2420	ug/Kg		149	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-48-4	Cobalt	4490	ug/Kg		149	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-50-8	Copper	2140	ug/Kg		298	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-89-6	Iron	6500000	ug/Kg		7950	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-92-1	Lead	3380	ug/Kg		249	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-95-4	Magnesium	351000	ug/Kg		8450	29800	29800	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-96-5	Manganese	227000	ug/Kg		199	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808
7439-97-6	Mercury	7.11	ug/kg	J	3.61	10.6	10.6	1	AV	JXL1	01/07/10 10:39	010710S1-7	937635
7440-02-0	Nickel	2.35	mg/kg		0.101	0.405	0.405	2	MS	RMJ	01/12/10 14:11	100111-3	936805
7440-09-7	Potassium	358000	ug/Kg		6360	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7782-49-2	Selenium	1.01	mg/kg	U	0.506	1.01	1.01	2	MS	RMJ	01/12/10 14:11	100111-3	936805
7440-22-4	Silver	247	ug/Kg	J	99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-23-5	Sodium	209000	ug/Kg		6960	24900	24900	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-28-0	Thallium	0.0654	mg/kg	J	0.0607	0.202	0.202	2	MS	RMJ	01/13/10 23:02	100113-4	936805
7440-61-1	Uranium	0.934	mg/kg		0.0134	0.0405	0.0405	2	MS	RMJ	01/13/10 23:02	100113-4	936805
7440-62-2	Vanadium	3620	ug/Kg		99.4	497	497	1	P	HSC	01/12/10 02:05	011110A-1	936808
7440-66-6	Zinc	20600	ug/Kg		328	994	994	1	P	HSC	01/12/10 02:05	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.507	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.516	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.58	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.546	g	50	mL	01/13/10	FGA

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243492007 **BASIS:** Dry Weight **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7296 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SOIL **%SOLIDS:** 92

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	7350000	ug/Kg		7350	21600	21600	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-36-0	Antimony	1070	ug/Kg	U	352	1070	1070	1	P	HSC	01/14/10 23:03	011410-2	941050
7440-38-2	Arsenic	1.88	mg/kg		0.214	1.07	1.07	2	MS	RMJ	01/13/10 23:06	100113-4	936805
7440-39-3	Barium	107000	ug/Kg		108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-41-7	Beryllium	0.858	mg/kg		0.0214	0.107	0.107	2	MS	RMJ	01/12/10 14:17	100111-3	936805
7440-43-9	Cadmium	540	ug/Kg	U	108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-70-2	Calcium	2010000	ug/Kg		8640	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-47-3	Chromium	17000	ug/Kg		162	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-48-4	Cobalt	4600	ug/Kg		162	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-50-8	Copper	5880	ug/Kg		324	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-89-6	Iron	11900000	ug/Kg		8640	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-92-1	Lead	10600	ug/Kg		270	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-95-4	Magnesium	1520000	ug/Kg		9180	32400	32400	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-96-5	Manganese	301000	ug/Kg		216	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808
7439-97-6	Mercury	13.1	ug/kg		3.95	11.6	11.6	1	AV	JXL1	01/07/10 10:44	010710S1-7	937635
7440-02-0	Nickel	6.64	mg/kg		0.107	0.427	0.427	2	MS	RMJ	01/12/10 14:17	100111-3	936805
7440-09-7	Potassium	1560000	ug/Kg		6910	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7782-49-2	Selenium	1.07	mg/kg	U	0.534	1.07	1.07	2	MS	RMJ	01/12/10 14:17	100111-3	936805
7440-22-4	Silver	325	ug/Kg	J	108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-23-5	Sodium	72500	ug/Kg		7560	27000	27000	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-28-0	Thallium	0.162	mg/kg	J	0.0641	0.214	0.214	2	MS	RMJ	01/13/10 23:06	100113-4	936805
7440-61-1	Uranium	1.3	mg/kg		0.0141	0.0427	0.0427	2	MS	RMJ	01/13/10 23:06	100113-4	936805
7440-62-2	Vanadium	22800	ug/Kg		108	540	540	1	P	HSC	01/12/10 02:26	011110A-1	936808
7440-66-6	Zinc	25000	ug/Kg		357	1080	1080	1	P	HSC	01/12/10 02:26	011110A-1	936808

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936805	936804	SW846 3050B	0.509	g	50	mL	12/29/09	FGA
936808	936807	SW846 3050B	0.503	g	50	mL	12/29/09	FGA
937635	937634	SW846 7471A Prep	0.561	g	30	mL	01/06/10	TXB3
941050	941049	SW846 3050B	0.509	g	50	mL	01/13/10	FGA

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Mercury	5.14	ug/L	5	ug/L	102.8	90.0 – 110.0	AV	07–JAN–10 09:36	010710S1–7
	Aluminum	4810	ug/L	5000	ug/L	96.2	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Barium	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Cadmium	487	ug/L	500	ug/L	97.4	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Calcium	4790	ug/L	5000	ug/L	95.8	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Chromium	478	ug/L	500	ug/L	95.6	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Cobalt	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Copper	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Iron	4860	ug/L	5000	ug/L	97.2	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Lead	495	ug/L	500	ug/L	99	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Magnesium	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Manganese	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Potassium	2380	ug/L	2500	ug/L	95	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Silver	257	ug/L	250	ug/L	102.7	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Sodium	2290	ug/L	2500	ug/L	91.6	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Vanadium	503	ug/L	500	ug/L	100.7	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Zinc	494	ug/L	500	ug/L	98.9	90.0 – 110.0	P	11–JAN–10 15:38	011110A–1
	Beryllium	49.2	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	12–JAN–10 11:37	100111–3
	Nickel	49.9	ug/L	50	ug/L	99.8	90.0 – 110.0	MS	12–JAN–10 11:37	100111–3
	Selenium	48	ug/L	50	ug/L	95.9	90.0 – 110.0	MS	12–JAN–10 11:37	100111–3
	Arsenic	46.4	ug/L	50	ug/L	92.9	90.0 – 110.0	MS	13–JAN–10 21:16	100113–4
	Thallium	49.5	ug/L	50	ug/L	98.9	90.0 – 110.0	MS	13–JAN–10 21:16	100113–4
	Uranium	54.1	ug/L	50	ug/L	108.2	90.0 – 110.0	MS	13–JAN–10 21:16	100113–4
	Antimony	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	14–JAN–10 10:32	011410–2
CCV01										
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 – 120.0	AV	07–JAN–10 09:41	010710S1–7
	Aluminum	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Barium	510	ug/L	500	ug/L	102	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Cadmium	511	ug/L	500	ug/L	102.1	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Calcium	5060	ug/L	5000	ug/L	101.3	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Cobalt	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Copper	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Iron	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Lead	512	ug/L	500	ug/L	102.5	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Manganese	507	ug/L	500	ug/L	101.5	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Potassium	5250	ug/L	5000	ug/L	104.9	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Silver	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Sodium	10400	ug/L	10000	ug/L	104	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Vanadium	515	ug/L	500	ug/L	103	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Zinc	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	11–JAN–10 16:24	011110A–1
	Beryllium	46.6	ug/L	50	ug/L	93.2	90.0 – 110.0	MS	12–JAN–10 12:07	100111–3
	Nickel	50.2	ug/L	50	ug/L	100.3	90.0 – 110.0	MS	12–JAN–10 12:07	100111–3
	Selenium	47.6	ug/L	50	ug/L	95.1	90.0 – 110.0	MS	12–JAN–10 12:07	100111–3
	Arsenic	45.5	ug/L	50	ug/L	91	90.0 – 110.0	MS	13–JAN–10 21:36	100113–4
	Thallium	48.3	ug/L	50	ug/L	96.6	90.0 – 110.0	MS	13–JAN–10 21:36	100113–4
	Uranium	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	13–JAN–10 21:36	100113–4
	Antimony	528	ug/L	500	ug/L	105.6	90.0 – 110.0	P	14–JAN–10 11:33	011410–2
CCV02										
	Mercury	5.24	ug/L	5	ug/L	104.8	80.0 – 120.0	AV	07–JAN–10 10:01	010710S1–7
	Aluminum	4990	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Barium	503	ug/L	500	ug/L	100.5	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Cadmium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Calcium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Cobalt	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Copper	496	ug/L	500	ug/L	99.2	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Iron	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Lead	505	ug/L	500	ug/L	101	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1

METALS
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Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Magnesium	5260	ug/L	5000	ug/L	105.1	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Manganese	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Potassium	5120	ug/L	5000	ug/L	102.4	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Silver	509	ug/L	500	ug/L	101.9	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Sodium	10100	ug/L	10000	ug/L	101	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Vanadium	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Zinc	499	ug/L	500	ug/L	99.8	90.0 – 110.0	P	11–JAN–10 16:38	011110A–1
	Beryllium	45.9	ug/L	50	ug/L	91.8	90.0 – 110.0	MS	12–JAN–10 12:36	100111–3
	Nickel	49.6	ug/L	50	ug/L	99.1	90.0 – 110.0	MS	12–JAN–10 12:36	100111–3
	Selenium	45.7	ug/L	50	ug/L	91.5	90.0 – 110.0	MS	12–JAN–10 12:36	100111–3
	Arsenic	47.6	ug/L	50	ug/L	95.2	90.0 – 110.0	MS	13–JAN–10 21:57	100113–4
	Thallium	50.1	ug/L	50	ug/L	100.1	90.0 – 110.0	MS	13–JAN–10 21:57	100113–4
	Uranium	54	ug/L	50	ug/L	107.9	90.0 – 110.0	MS	13–JAN–10 21:57	100113–4
	Antimony	535	ug/L	500	ug/L	107	90.0 – 110.0	P	14–JAN–10 11:54	011410–2
CCV03										
	Mercury	5.36	ug/L	5	ug/L	107.1	80.0 – 120.0	AV	07–JAN–10 10:21	010710S1–7
	Aluminum	4830	ug/L	5000	ug/L	96.7	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Barium	493	ug/L	500	ug/L	98.5	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Cadmium	493	ug/L	500	ug/L	98.6	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Chromium	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Cobalt	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Copper	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Iron	4900	ug/L	5000	ug/L	98	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Lead	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Magnesium	5000	ug/L	5000	ug/L	100.1	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Manganese	494	ug/L	500	ug/L	98.8	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Potassium	4910	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Silver	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Sodium	9470	ug/L	10000	ug/L	94.7	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1

METALS
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Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Vanadium	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Zinc	489	ug/L	500	ug/L	97.8	90.0 – 110.0	P	11–JAN–10 16:59	011110A–1
	Beryllium	49.8	ug/L	50	ug/L	99.6	90.0 – 110.0	MS	12–JAN–10 13:36	100111–3
	Nickel	50.8	ug/L	50	ug/L	101.7	90.0 – 110.0	MS	12–JAN–10 13:36	100111–3
	Selenium	46.8	ug/L	50	ug/L	93.5	90.0 – 110.0	MS	12–JAN–10 13:36	100111–3
	Arsenic	46.4	ug/L	50	ug/L	92.8	90.0 – 110.0	MS	13–JAN–10 22:37	100113–4
	Thallium	48.7	ug/L	50	ug/L	97.4	90.0 – 110.0	MS	13–JAN–10 22:37	100113–4
	Uranium	53.8	ug/L	50	ug/L	107.7	90.0 – 110.0	MS	13–JAN–10 22:37	100113–4
	Antimony	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	14–JAN–10 12:56	011410–2
CCV04										
	Mercury	5.13	ug/L	5	ug/L	102.6	80.0 – 120.0	AV	07–JAN–10 10:41	010710S1–7
	Aluminum	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Barium	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Cadmium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Calcium	4940	ug/L	5000	ug/L	98.9	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Chromium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Cobalt	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Copper	494	ug/L	500	ug/L	98.7	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Iron	5050	ug/L	5000	ug/L	101.1	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Lead	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Magnesium	5200	ug/L	5000	ug/L	104	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Manganese	498	ug/L	500	ug/L	99.7	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Potassium	4920	ug/L	5000	ug/L	98.4	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Silver	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Sodium	10100	ug/L	10000	ug/L	100.8	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Vanadium	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Zinc	496	ug/L	500	ug/L	99.3	90.0 – 110.0	P	11–JAN–10 17:54	011110A–1
	Beryllium	53.3	ug/L	50	ug/L	106.6	90.0 – 110.0	MS	12–JAN–10 14:35	100111–3
	Nickel	50.9	ug/L	50	ug/L	101.8	90.0 – 110.0	MS	12–JAN–10 14:35	100111–3
	Selenium	47.1	ug/L	50	ug/L	94.1	90.0 – 110.0	MS	12–JAN–10 14:35	100111–3

METALS
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Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Arsenic	47	ug/L	50	ug/L	94	90.0 – 110.0	MS	13–JAN–10 23:14	100113–4
	Thallium	48.5	ug/L	50	ug/L	97	90.0 – 110.0	MS	13–JAN–10 23:14	100113–4
	Uranium	53.3	ug/L	50	ug/L	106.6	90.0 – 110.0	MS	13–JAN–10 23:14	100113–4
	Antimony	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	14–JAN–10 14:19	011410–2
CCV05										
	Mercury	5.16	ug/L	5	ug/L	103.2	80.0 – 120.0	AV	07–JAN–10 11:01	010710S1–7
	Aluminum	4850	ug/L	5000	ug/L	97.1	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Barium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Cadmium	504	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Calcium	4910	ug/L	5000	ug/L	98.2	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Chromium	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Cobalt	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Copper	500	ug/L	500	ug/L	99.9	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Lead	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Magnesium	5110	ug/L	5000	ug/L	102.2	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Manganese	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Potassium	4900	ug/L	5000	ug/L	97.9	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Silver	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Sodium	10100	ug/L	10000	ug/L	100.7	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Vanadium	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Zinc	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	11–JAN–10 18:58	011110A–1
	Beryllium	53.1	ug/L	50	ug/L	106.3	90.0 – 110.0	MS	12–JAN–10 15:16	100111–3
	Nickel	49.4	ug/L	50	ug/L	98.7	90.0 – 110.0	MS	12–JAN–10 15:16	100111–3
	Selenium	46.2	ug/L	50	ug/L	92.4	90.0 – 110.0	MS	12–JAN–10 15:16	100111–3
	Arsenic	45.9	ug/L	50	ug/L	91.7	90.0 – 110.0	MS	13–JAN–10 23:46	100113–4
	Thallium	48.6	ug/L	50	ug/L	97.3	90.0 – 110.0	MS	13–JAN–10 23:46	100113–4
	Uranium	52.9	ug/L	50	ug/L	105.8	90.0 – 110.0	MS	13–JAN–10 23:46	100113–4
	Antimony	526	ug/L	500	ug/L	105.1	90.0 – 110.0	P	14–JAN–10 15:04	011410–2

METALS
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Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV06										
	Aluminum	4820	ug/L	5000	ug/L	96.4	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Barium	500	ug/L	500	ug/L	100	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Cadmium	499	ug/L	500	ug/L	99.7	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Calcium	4930	ug/L	5000	ug/L	98.6	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Chromium	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Cobalt	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Copper	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Iron	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Lead	498	ug/L	500	ug/L	99.5	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Magnesium	5170	ug/L	5000	ug/L	103.5	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Manganese	500	ug/L	500	ug/L	100	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Potassium	4830	ug/L	5000	ug/L	96.6	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Silver	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Sodium	9780	ug/L	10000	ug/L	97.8	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Vanadium	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Zinc	497	ug/L	500	ug/L	99.3	90.0 – 110.0	P	11–JAN–10 20:14	011110A–1
	Antimony	505	ug/L	500	ug/L	101	90.0 – 110.0	P	14–JAN–10 15:45	011410–2
CCV07										
	Aluminum	4850	ug/L	5000	ug/L	96.9	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Barium	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Cadmium	501	ug/L	500	ug/L	100.1	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Calcium	4980	ug/L	5000	ug/L	99.7	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Chromium	503	ug/L	500	ug/L	100.6	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Cobalt	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Copper	497	ug/L	500	ug/L	99.5	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Iron	5100	ug/L	5000	ug/L	102	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Lead	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Magnesium	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Manganese	502	ug/L	500	ug/L	100.3	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Potassium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1

METALS
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Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	509	ug/L	500	ug/L	101.8	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Sodium	9950	ug/L	10000	ug/L	99.5	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Vanadium	508	ug/L	500	ug/L	101.6	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Zinc	498	ug/L	500	ug/L	99.6	90.0 – 110.0	P	11–JAN–10 21:31	011110A–1
	Antimony	507	ug/L	500	ug/L	101.3	90.0 – 110.0	P	14–JAN–10 17:01	011410–2
CCV08										
	Aluminum	4890	ug/L	5000	ug/L	97.8	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Barium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Cadmium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Calcium	5070	ug/L	5000	ug/L	101.4	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Chromium	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Cobalt	508	ug/L	500	ug/L	101.5	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Copper	499	ug/L	500	ug/L	99.9	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Iron	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Lead	505	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Magnesium	5250	ug/L	5000	ug/L	105	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Manganese	504	ug/L	500	ug/L	100.8	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Potassium	4950	ug/L	5000	ug/L	99	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Silver	512	ug/L	500	ug/L	102.3	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Sodium	10200	ug/L	10000	ug/L	101.5	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Vanadium	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Zinc	502	ug/L	500	ug/L	100.4	90.0 – 110.0	P	11–JAN–10 22:48	011110A–1
	Antimony	508	ug/L	500	ug/L	101.7	90.0 – 110.0	P	14–JAN–10 18:23	011410–2
CCV09										
	Aluminum	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Barium	505	ug/L	500	ug/L	100.9	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Cadmium	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Calcium	5020	ug/L	5000	ug/L	100.4	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Chromium	506	ug/L	500	ug/L	101.1	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Cobalt	507	ug/L	500	ug/L	101.4	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Copper	497	ug/L	500	ug/L	99.4	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Iron	5200	ug/L	5000	ug/L	104.1	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Lead	506	ug/L	500	ug/L	101.2	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Magnesium	5290	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Manganese	506	ug/L	500	ug/L	101.3	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Potassium	4920	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Silver	510	ug/L	500	ug/L	101.9	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Sodium	10300	ug/L	10000	ug/L	103.1	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Vanadium	510	ug/L	500	ug/L	102.1	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Zinc	501	ug/L	500	ug/L	100.2	90.0 – 110.0	P	11–JAN–10 23:59	011110A–1
	Antimony	511	ug/L	500	ug/L	102.2	90.0 – 110.0	P	14–JAN–10 19:40	011410–2
CCV10										
	Aluminum	5010	ug/L	5000	ug/L	100.2	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Barium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Cadmium	519	ug/L	500	ug/L	103.7	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Calcium	5080	ug/L	5000	ug/L	101.7	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Chromium	519	ug/L	500	ug/L	103.8	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Cobalt	520	ug/L	500	ug/L	104.1	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Copper	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Iron	5230	ug/L	5000	ug/L	104.6	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Lead	521	ug/L	500	ug/L	104.2	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Magnesium	5280	ug/L	5000	ug/L	105.7	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Manganese	520	ug/L	500	ug/L	104	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Potassium	5020	ug/L	5000	ug/L	100.5	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Silver	525	ug/L	500	ug/L	105	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Sodium	10200	ug/L	10000	ug/L	102.1	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Vanadium	524	ug/L	500	ug/L	104.8	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Zinc	514	ug/L	500	ug/L	102.8	90.0 – 110.0	P	12–JAN–10 01:01	011110A–1
	Antimony	527	ug/L	500	ug/L	105.4	90.0 – 110.0	P	14–JAN–10 20:50	011410–2

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV11										
	Aluminum	5050	ug/L	5000	ug/L	100.9	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Barium	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Cadmium	517	ug/L	500	ug/L	103.5	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Calcium	5050	ug/L	5000	ug/L	101	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Chromium	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Cobalt	520	ug/L	500	ug/L	104	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Copper	510	ug/L	500	ug/L	102	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Iron	5180	ug/L	5000	ug/L	103.7	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Lead	517	ug/L	500	ug/L	103.4	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Magnesium	5220	ug/L	5000	ug/L	104.4	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Manganese	515	ug/L	500	ug/L	103	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Silver	524	ug/L	500	ug/L	104.9	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Sodium	10300	ug/L	10000	ug/L	102.8	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Vanadium	524	ug/L	500	ug/L	104.7	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Zinc	512	ug/L	500	ug/L	102.4	90.0 – 110.0	P	12–JAN–10 02:12	011110A–1
	Antimony	527	ug/L	500	ug/L	105.4	90.0 – 110.0	P	14–JAN–10 22:00	011410–2
CCV12										
	Aluminum	5080	ug/L	5000	ug/L	101.5	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Barium	525	ug/L	500	ug/L	105.1	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Cadmium	526	ug/L	500	ug/L	105.2	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Calcium	5170	ug/L	5000	ug/L	103.3	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Chromium	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Cobalt	527	ug/L	500	ug/L	105.5	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Copper	518	ug/L	500	ug/L	103.6	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Iron	5300	ug/L	5000	ug/L	105.9	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Lead	527	ug/L	500	ug/L	105.4	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Magnesium	5410	ug/L	5000	ug/L	108.3	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Manganese	522	ug/L	500	ug/L	104.5	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Potassium	5080	ug/L	5000	ug/L	101.6	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Silver	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Sodium	10300	ug/L	10000	ug/L	102.7	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Vanadium	532	ug/L	500	ug/L	106.4	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Zinc	521	ug/L	500	ug/L	104.3	90.0 – 110.0	P	12–JAN–10 03:22	011110A–1
	Antimony	532	ug/L	500	ug/L	106.5	90.0 – 110.0	P	14–JAN–10 23:10	011410–2
CCV13										
	Antimony	529	ug/L	500	ug/L	105.9	90.0 – 110.0	P	15–JAN–10 00:13	011410–2

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.176	ug/L	.2	ug/L	88	70.0 – 130.0	AV	07–JAN–10 09:39	010710S1–7
	Nickel	2.28	ug/L	2	ug/L	113.9	70.0 – 130.0	MS	12–JAN–10 11:49	100111–3
	Selenium	5.41	ug/L	5	ug/L	108.3	70.0 – 130.0	MS	12–JAN–10 11:49	100111–3
	Beryllium	.528	ug/L	.5	ug/L	105.6	70.0 – 130.0	MS	12–JAN–10 11:49	100111–3
	Thallium	1.06	ug/L	1	ug/L	106.3	70.0 – 130.0	MS	13–JAN–10 21:24	100113–4
	Arsenic	5.57	ug/L	5	ug/L	111.5	70.0 – 130.0	MS	13–JAN–10 21:24	100113–4
	Uranium	.175	ug/L	.2	ug/L	87.5	70.0 – 130.0	MS	13–JAN–10 21:24	100113–4
PQL01										
	Aluminum	202	ug/L	200	ug/L	101	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Lead	10.6	ug/L	10	ug/L	106.1	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Manganese	10.5	ug/L	10	ug/L	104.9	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Silver	4.78	ug/L	5	ug/L	95.5	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Barium	5.02	ug/L	5	ug/L	100.4	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Calcium	209	ug/L	200	ug/L	104.7	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Zinc	10.5	ug/L	10	ug/L	104.8	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Vanadium	4.95	ug/L	5	ug/L	99	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Copper	9.9	ug/L	10	ug/L	99	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Cobalt	4.96	ug/L	5	ug/L	99.2	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Chromium	4.72	ug/L	5	ug/L	94.4	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Cadmium	5.07	ug/L	5	ug/L	101.5	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Sodium	291	ug/L	300	ug/L	97	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Potassium	159	ug/L	150	ug/L	106.1	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Magnesium	343	ug/L	300	ug/L	114.4	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Iron	116	ug/L	100	ug/L	116.4	70.0 – 130.0	P	11–JAN–10 15:52	011110A–1
	Antimony	9.49	ug/L	10	ug/L	94.9	70.0 – 130.0	P	14–JAN–10 10:46	011410–2
PQL02										
	Antimony	11.5	ug/L	10	ug/L	115	70.0 – 130.0	P	14–JAN–10 14:26	011410–2
PQL03										
	Antimony	11.7	ug/L	10	ug/L	117.1	70.0 – 130.0	P	14–JAN–10 15:52	011410–2

METALS
–2b–
CRDL Standard for AA & ICP

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source:

ICP CRDL Standard Source

Instrument ID: HG3,ICPMS6,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
PQL04	Antimony	10.2	ug/L	10	ug/L	102	70.0 – 130.0	P	14–JAN–10 17:08	011410–2

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1037

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	07–JAN–10 09:37	010710S1–7
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	11–JAN–10 15:45	011110A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 15:45	011110A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 15:45	011110A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	11–JAN–10 15:45	011110A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	11–JAN–10 15:45	011110A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	11–JAN–10 15:45	011110A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	11–JAN–10 15:45	011110A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	11–JAN–10 15:45	011110A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	11–JAN–10 15:45	011110A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	11–JAN–10 15:45	011110A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	11–JAN–10 15:45	011110A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	11–JAN–10 15:45	011110A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 15:45	011110A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	11–JAN–10 15:45	011110A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 15:45	011110A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	11–JAN–10 15:45	011110A–1
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	12–JAN–10 11:43	100111–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	12–JAN–10 11:43	100111–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	12–JAN–10 11:43	100111–3
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	13–JAN–10 21:20	100113–4
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	13–JAN–10 21:20	100113–4
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	13–JAN–10 21:20	100113–4
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	14–JAN–10 10:39	011410–2
CCB01										
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	07–JAN–10 09:42	010710S1–7
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	11–JAN–10 16:31	011110A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 16:31	011110A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 16:31	011110A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	11–JAN–10 16:31	011110A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	11–JAN–10 16:31	011110A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 16:31	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 16:31	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 16:31	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 16:31	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 16:31	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 16:31	011110A-1
	Potassium	128.97	+/-250	J	64.0	250	SOL	P	11-JAN-10 16:31	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 16:31	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-JAN-10 16:31	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 16:31	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 16:31	011110A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	12-JAN-10 12:13	100111-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	12-JAN-10 12:13	100111-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	12-JAN-10 12:13	100111-3
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	13-JAN-10 21:40	100113-4
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	13-JAN-10 21:40	100113-4
	Uranium	0.066	+/-.2	U	0.066	0.2	SOL	MS	13-JAN-10 21:40	100113-4
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 11:40	011410-2
CCB02										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	07-JAN-10 10:02	010710S1-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-JAN-10 16:45	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 16:45	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 16:45	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 16:45	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 16:45	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 16:45	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 16:45	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 16:45	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 16:45	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 16:45	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 16:45	011110A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Potassium	84.9	+/-250	J	64.0	250	SOL	P	11-JAN-10 16:45	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 16:45	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-JAN-10 16:45	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 16:45	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 16:45	011110A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	12-JAN-10 12:42	100111-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	12-JAN-10 12:42	100111-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	12-JAN-10 12:42	100111-3
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	13-JAN-10 22:01	100113-4
	Thallium	0.312	+/-1	J	0.3	1.0	SOL	MS	13-JAN-10 22:01	100113-4
	Uranium	0.066	+/-.2	U	0.066	0.2	SOL	MS	13-JAN-10 22:01	100113-4
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 12:01	011410-2
CCB03										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	07-JAN-10 10:22	010710S1-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-JAN-10 17:06	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 17:06	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 17:06	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 17:06	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 17:06	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 17:06	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 17:06	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 17:06	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 17:06	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 17:06	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 17:06	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-JAN-10 17:06	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 17:06	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-JAN-10 17:06	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 17:06	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 17:06	011110A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	12-JAN-10 13:42	100111-3

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	12–JAN–10 13:42	100111–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	12–JAN–10 13:42	100111–3
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	13–JAN–10 22:41	100113–4
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	13–JAN–10 22:41	100113–4
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	13–JAN–10 22:41	100113–4
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	14–JAN–10 13:03	011410–2
CCB04										
	Mercury	0.068	+/–.2	U	0.068	0.2	SOL	AV	07–JAN–10 10:43	010710S1–7
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	11–JAN–10 18:01	011110A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 18:01	011110A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 18:01	011110A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	11–JAN–10 18:01	011110A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	11–JAN–10 18:01	011110A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	11–JAN–10 18:01	011110A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	11–JAN–10 18:01	011110A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	11–JAN–10 18:01	011110A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	11–JAN–10 18:01	011110A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	11–JAN–10 18:01	011110A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	11–JAN–10 18:01	011110A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	11–JAN–10 18:01	011110A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 18:01	011110A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	11–JAN–10 18:01	011110A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	11–JAN–10 18:01	011110A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	11–JAN–10 18:01	011110A–1
	Beryllium	0.1	+/–.5	U	0.1	0.5	SOL	MS	12–JAN–10 14:41	100111–3
	Nickel	0.5	+/–2	U	0.5	2.0	SOL	MS	12–JAN–10 14:41	100111–3
	Selenium	2.5	+/–5	U	2.5	5.0	SOL	MS	12–JAN–10 14:41	100111–3
	Arsenic	1.0	+/–5	U	1.0	5.0	SOL	MS	13–JAN–10 23:18	100113–4
	Thallium	0.3	+/–1	U	0.3	1.0	SOL	MS	13–JAN–10 23:18	100113–4
	Uranium	0.066	+/–.2	U	0.066	0.2	SOL	MS	13–JAN–10 23:18	100113–4
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	14–JAN–10 14:33	011410–2

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
CCB05										
	Mercury	0.068	+/-.2	U	0.068	0.2	SOL	AV	07-JAN-10 11:03	010710S1-7
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-JAN-10 19:05	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 19:05	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 19:05	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 19:05	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 19:05	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 19:05	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 19:05	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 19:05	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 19:05	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 19:05	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 19:05	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-JAN-10 19:05	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 19:05	011110A-1
	Sodium	88.32	+/-250	J	70.0	250	SOL	P	11-JAN-10 19:05	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 19:05	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 19:05	011110A-1
	Beryllium	0.1	+/-.5	U	0.1	0.5	SOL	MS	12-JAN-10 15:22	100111-3
	Nickel	0.5	+/-2	U	0.5	2.0	SOL	MS	12-JAN-10 15:22	100111-3
	Selenium	2.5	+/-5	U	2.5	5.0	SOL	MS	12-JAN-10 15:22	100111-3
	Arsenic	1.0	+/-5	U	1.0	5.0	SOL	MS	13-JAN-10 23:50	100113-4
	Thallium	0.3	+/-1	U	0.3	1.0	SOL	MS	13-JAN-10 23:50	100113-4
	Uranium	0.066	+/-.2	U	0.066	0.2	SOL	MS	13-JAN-10 23:50	100113-4
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 15:11	011410-2
CCB06										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-JAN-10 20:21	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 20:21	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 20:21	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 20:21	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 20:21	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 20:21	011110A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 20:21	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 20:21	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 20:21	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 20:21	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 20:21	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-JAN-10 20:21	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 20:21	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-JAN-10 20:21	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 20:21	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 20:21	011110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 15:59	011410-2
CCB07										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-JAN-10 21:38	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 21:38	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 21:38	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 21:38	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 21:38	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 21:38	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 21:38	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 21:38	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 21:38	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 21:38	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 21:38	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-JAN-10 21:38	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 21:38	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-JAN-10 21:38	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 21:38	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 21:38	011110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 17:15	011410-2
CCB08										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	11-JAN-10 22:55	011110A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 22:55	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 22:55	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 22:55	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 22:55	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	11-JAN-10 22:55	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	11-JAN-10 22:55	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	11-JAN-10 22:55	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	11-JAN-10 22:55	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	11-JAN-10 22:55	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	11-JAN-10 22:55	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	11-JAN-10 22:55	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 22:55	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	11-JAN-10 22:55	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	11-JAN-10 22:55	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	11-JAN-10 22:55	011110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 18:30	011410-2
CCB09										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	12-JAN-10 00:06	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 00:06	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 00:06	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	12-JAN-10 00:06	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	12-JAN-10 00:06	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	12-JAN-10 00:06	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	12-JAN-10 00:06	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	12-JAN-10 00:06	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	12-JAN-10 00:06	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	12-JAN-10 00:06	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	12-JAN-10 00:06	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	12-JAN-10 00:06	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 00:06	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	12-JAN-10 00:06	011110A-1

Metals
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Initial and Continuing Calibration Blank Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 00:06	011110A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	12–JAN–10 00:06	011110A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	14–JAN–10 19:47	011410–2
CCB10										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	12–JAN–10 01:08	011110A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 01:08	011110A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 01:08	011110A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	12–JAN–10 01:08	011110A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	12–JAN–10 01:08	011110A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	12–JAN–10 01:08	011110A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	12–JAN–10 01:08	011110A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	12–JAN–10 01:08	011110A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	12–JAN–10 01:08	011110A–1
	Magnesium	85.0	+/–300	U	85.0	300	SOL	P	12–JAN–10 01:08	011110A–1
	Manganese	2.0	+/–10	U	2.0	10.0	SOL	P	12–JAN–10 01:08	011110A–1
	Potassium	64.0	+/–250	U	64.0	250	SOL	P	12–JAN–10 01:08	011110A–1
	Silver	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 01:08	011110A–1
	Sodium	70.0	+/–250	U	70.0	250	SOL	P	12–JAN–10 01:08	011110A–1
	Vanadium	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 01:08	011110A–1
	Zinc	3.3	+/–10	U	3.3	10.0	SOL	P	12–JAN–10 01:08	011110A–1
	Antimony	3.3	+/–10	U	3.3	10.0	SOL	P	14–JAN–10 20:57	011410–2
CCB11										
	Aluminum	68.0	+/–200	U	68.0	200	SOL	P	12–JAN–10 02:19	011110A–1
	Barium	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 02:19	011110A–1
	Cadmium	1.0	+/–5	U	1.0	5.0	SOL	P	12–JAN–10 02:19	011110A–1
	Calcium	80.0	+/–250	U	80.0	250	SOL	P	12–JAN–10 02:19	011110A–1
	Chromium	1.5	+/–5	U	1.5	5.0	SOL	P	12–JAN–10 02:19	011110A–1
	Cobalt	1.5	+/–5	U	1.5	5.0	SOL	P	12–JAN–10 02:19	011110A–1
	Copper	3.0	+/–10	U	3.0	10.0	SOL	P	12–JAN–10 02:19	011110A–1
	Iron	80.0	+/–250	U	80.0	250	SOL	P	12–JAN–10 02:19	011110A–1
	Lead	2.5	+/–10	U	2.5	10.0	SOL	P	12–JAN–10 02:19	011110A–1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	12-JAN-10 02:19	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	12-JAN-10 02:19	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	12-JAN-10 02:19	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 02:19	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	12-JAN-10 02:19	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 02:19	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	12-JAN-10 02:19	011110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 22:07	011410-2
CCB12										
	Aluminum	68.0	+/-200	U	68.0	200	SOL	P	12-JAN-10 03:29	011110A-1
	Barium	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 03:29	011110A-1
	Cadmium	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 03:29	011110A-1
	Calcium	80.0	+/-250	U	80.0	250	SOL	P	12-JAN-10 03:29	011110A-1
	Chromium	1.5	+/-5	U	1.5	5.0	SOL	P	12-JAN-10 03:29	011110A-1
	Cobalt	1.5	+/-5	U	1.5	5.0	SOL	P	12-JAN-10 03:29	011110A-1
	Copper	3.0	+/-10	U	3.0	10.0	SOL	P	12-JAN-10 03:29	011110A-1
	Iron	80.0	+/-250	U	80.0	250	SOL	P	12-JAN-10 03:29	011110A-1
	Lead	2.5	+/-10	U	2.5	10.0	SOL	P	12-JAN-10 03:29	011110A-1
	Magnesium	85.0	+/-300	U	85.0	300	SOL	P	12-JAN-10 03:29	011110A-1
	Manganese	2.0	+/-10	U	2.0	10.0	SOL	P	12-JAN-10 03:29	011110A-1
	Potassium	64.0	+/-250	U	64.0	250	SOL	P	12-JAN-10 03:29	011110A-1
	Silver	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 03:29	011110A-1
	Sodium	70.0	+/-250	U	70.0	250	SOL	P	12-JAN-10 03:29	011110A-1
	Vanadium	1.0	+/-5	U	1.0	5.0	SOL	P	12-JAN-10 03:29	011110A-1
	Zinc	3.3	+/-10	U	3.3	10.0	SOL	P	12-JAN-10 03:29	011110A-1
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	14-JAN-10 23:17	011410-2
CCB13										
	Antimony	3.3	+/-10	U	3.3	10.0	SOL	P	15-JAN-10 00:20	011410-2

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 10-1037
Contract: LANL01004
Matrix: SOIL

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1202004420								
	Beryllium	0.0199	mg/kg	+/-0.0994	U	MS	0.0199	0.0994
	Nickel	0.0994	mg/kg	+/-0.398	U	MS	0.0994	0.398
	Arsenic	0.199	mg/kg	+/-0.994	U	MS	0.199	0.994
	Uranium	0.0131	mg/kg	+/-0.0398	U	MS	0.0131	0.0398
	Thallium	0.0596	mg/kg	+/-0.199	U	MS	0.0596	0.199
	Selenium	0.497	mg/kg	+/-0.994	U	MS	0.497	0.994
1202004426								
	Sodium	6930	ug/Kg	+/-24800	U	P	6930	24800
	Cadmium	99	ug/Kg	+/-495	U	P	99	495
	Chromium	302	ug/Kg	+/-495	J	P	149	495
	Silver	99	ug/Kg	+/-495	U	P	99	495
	Potassium	6340	ug/Kg	+/-24800	U	P	6340	24800
	Manganese	198	ug/Kg	+/-990	U	P	198	990
	Magnesium	8420	ug/Kg	+/-29700	U	P	8420	29700
	Lead	866	ug/Kg	+/-990	J	P	248	990
	Iron	7920	ug/Kg	+/-24800	U	P	7920	24800
	Copper	297	ug/Kg	+/-990	U	P	297	990
	Cobalt	149	ug/Kg	+/-495	U	P	149	495
	Calcium	7920	ug/Kg	+/-24800	U	P	7920	24800
	Barium	99	ug/Kg	+/-495	U	P	99	495
	Vanadium	99	ug/Kg	+/-495	U	P	99	495
	Zinc	327	ug/Kg	+/-990	U	P	327	990
	Aluminum	6730	ug/Kg	+/-19800	U	P	6730	19800
1202006441								
	Mercury	3.7	ug/kg	+/-10.9	U	AV	3.7	10.9
1202014118								
	Antimony	330	ug/Kg	+/-1000	U	P	330	1000

METALS
-4-
Interference Check Sample

SDG No: 10-1037

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	514000	ug/L	500000	ug/L	103	80.0 - 120.0	11-JAN-10 15:59	011110A-1
	Barium	3.06	ug/L					11-JAN-10 15:59	011110A-1
	Cadmium	-0.409	ug/L					11-JAN-10 15:59	011110A-1
	Calcium	482000	ug/L	500000	ug/L	96.5	80.0 - 120.0	11-JAN-10 15:59	011110A-1
	Chromium	1.65	ug/L					11-JAN-10 15:59	011110A-1
	Cobalt	-1.58	ug/L					11-JAN-10 15:59	011110A-1
	Copper	4.62	ug/L					11-JAN-10 15:59	011110A-1
	Iron	189000	ug/L	200000	ug/L	94.5	80.0 - 120.0	11-JAN-10 15:59	011110A-1
	Lead	-0.0021	ug/L					11-JAN-10 15:59	011110A-1
	Magnesium	492000	ug/L	500000	ug/L	98.3	80.0 - 120.0	11-JAN-10 15:59	011110A-1
	Manganese	2.73	ug/L					11-JAN-10 15:59	011110A-1
	Potassium	-217.0	ug/L					11-JAN-10 15:59	011110A-1
	Silver	0.174	ug/L					11-JAN-10 15:59	011110A-1
	Sodium	8.11	ug/L					11-JAN-10 15:59	011110A-1
	Vanadium	-1.0	ug/L					11-JAN-10 15:59	011110A-1
	Zinc	7.89	ug/L					11-JAN-10 15:59	011110A-1
ICSAB01									
	Aluminum	509000	ug/L	500000	ug/L	102	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Barium	499	ug/L	500	ug/L	99.9	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Cadmium	470	ug/L	500	ug/L	94	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Calcium	476000	ug/L	500000	ug/L	95.1	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Chromium	485	ug/L	500	ug/L	97	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Cobalt	448	ug/L	500	ug/L	89.7	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Copper	558	ug/L	500	ug/L	112	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Iron	187000	ug/L	200000	ug/L	93.3	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Lead	466	ug/L	500	ug/L	93.2	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Magnesium	487000	ug/L	500000	ug/L	97.4	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Manganese	485	ug/L	500	ug/L	97.1	80.0 - 120.0	11-JAN-10 16:05	011110A-1
	Potassium	5310	ug/L	5000	ug/L	106	80.0 - 120.0	11-JAN-10 16:05	011110A-1

METALS
–4–
Interference Check Sample

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	275	ug/L	250	ug/L	110	80.0 – 120.0	11–JAN–10 16:05	011110A–1
	Sodium	5540	ug/L	5000	ug/L	111	80.0 – 120.0	11–JAN–10 16:05	011110A–1
	Vanadium	512	ug/L	500	ug/L	102	80.0 – 120.0	11–JAN–10 16:05	011110A–1
	Zinc	504	ug/L	500	ug/L	101	80.0 – 120.0	11–JAN–10 16:05	011110A–1

METALS
-4-
Interference Check Sample

SDG No: 10-1037

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	4.44	ug/L					14-JAN-10 10:53	011410-2
ICSAB01									
	Antimony	550	ug/L	500	ug/L	110	80.0 - 120.0	14-JAN-10 10:59	011410-2

METALS
-4-
Interference Check Sample

SDG No: 10-1037

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.061	ug/L					12-JAN-10 11:55	100111-3
	Nickel	3.05	ug/L					12-JAN-10 11:55	100111-3
	Selenium	-1.46	ug/L					12-JAN-10 11:55	100111-3
ICSAB01									
	Beryllium	18.6	ug/L	20	ug/L	93.1	80.0 - 120.0	12-JAN-10 12:01	100111-3
	Nickel	22.5	ug/L	22.7	ug/L	98.9	80.0 - 120.0	12-JAN-10 12:01	100111-3
	Selenium	19.4	ug/L	20	ug/L	96.8	80.0 - 120.0	12-JAN-10 12:01	100111-3

METALS
–4–
Interference Check Sample

SDG No: 10–1037

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS6

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Arsenic	–0.074	ug/L					13–JAN–10 21:28	100113–4
	Thallium	–0.001	ug/L					13–JAN–10 21:28	100113–4
	Uranium	–0.067	ug/L					13–JAN–10 21:28	100113–4
ICSAB01									
	Arsenic	19.6	ug/L	20	ug/L	98.1	80.0 – 120.0	13–JAN–10 21:32	100113–4
	Thallium	17.9	ug/L	20	ug/L	89.5	80.0 – 120.0	13–JAN–10 21:32	100113–4
	Uranium	20.9	ug/L	20	ug/L	104	80.0 – 120.0	13–JAN–10 21:32	100113–4

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1037 **Client ID** WST03-10-2148S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 243549002 **Spike ID:** 1202004423

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	9.38		0.864	J	8.34	102		MS
Beryllium	mg/kg	75-125	6.28		0.542		5.21	110		MS
Nickel	mg/kg	75-125	8.5		2.95		5.21	107		MS
Selenium	mg/kg	75-125	1.72		0.536	U	2.08	77.8		MS
Thallium	mg/kg	75-125	9.87		0.0643	U	10.4	94.2		MS
Uranium	mg/kg	75-125	6.26		0.532		5.21	110		MS

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1037 **Client ID** WST03-10-2148SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 243549002 **Spike ID:** 1202004425

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	mg/kg	75-125	8.5		0.864	J	8.5	89.9		MS
Beryllium	mg/kg	75-125	5.78		0.542		5.31	98.5		MS
Nickel	mg/kg	75-125	7.93		2.95		5.31	93.7		MS
Selenium	mg/kg	75-125	1.43		0.536	U	2.13	62.8	N	MS
Thallium	mg/kg	75-125	9.24		0.0643	U	10.6	86.4		MS
Uranium	mg/kg	75-125	5.92		0.532		5.31	101		MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1037 **Client ID** WST03-10-2148S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 243549002 **Spike ID:** 1202004429

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Iron	ug/Kg		11400000		8430000		528000	555	N/A	P
Lead	ug/Kg	75-125	60600		7570		52800	100		P
Magnesium	ug/Kg	75-125	1950000		750000		528000	227	N	P
Manganese	ug/Kg		330000		220000		52800	209	N/A	P
Potassium	ug/Kg	75-125	1500000		581000		528000	175	N	P
Silver	ug/Kg	75-125	52300		106	U	52800	98.8		P
Sodium	ug/Kg	75-125	743000		174000		528000	108		P
Vanadium	ug/Kg	75-125	63500		10700		52800	100		P
Zinc	ug/Kg	75-125	81400		26200		52800	105		P
Aluminum	ug/Kg		10400000		3890000		528000	1230	N/A	P
Antimony	ug/Kg	75-125	49100		333	U	53300	91.9		P
Barium	ug/Kg	75-125	94000		47200		52800	88.7		P
Cadmium	ug/Kg	75-125	49900		106	U	52800	94.4		P
Calcium	ug/Kg	75-125	1680000		816000		528000	164	N	P
Chromium	ug/Kg	75-125	70300		12200		52800	110		P
Cobalt	ug/Kg	75-125	51700		2510		52800	93.2		P
Copper	ug/Kg	75-125	58200		3480		52800	104		P

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1037 **Client ID** WST03-10-2148SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 92.8

Sample ID: 243549002 **Spike ID:** 1202004431

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/Kg		8640000		3890000		529000	897	N/A	P
Antimony	ug/Kg	75-125	48800		333	U	52500	92.7		P
Barium	ug/Kg	75-125	96500		47200		52900	93.2		P
Cadmium	ug/Kg	75-125	50900		106	U	52900	96.1		P
Calcium	ug/Kg	75-125	1430000		816000		529000	116		P
Chromium	ug/Kg	75-125	74100		12200		52900	117		P
Cobalt	ug/Kg	75-125	52100		2510		52900	93.7		P
Copper	ug/Kg	75-125	58400		3480		52900	104		P
Iron	ug/Kg		10200000		8430000		529000	337	N/A	P
Lead	ug/Kg	75-125	58700		7570		52900	96.6		P
Magnesium	ug/Kg	75-125	1670000		750000		529000	174	N	P
Manganese	ug/Kg		273000		220000		52900	101	N/A	P
Potassium	ug/Kg	75-125	1380000		581000		529000	150	N	P
Silver	ug/Kg	75-125	53100		106	U	52900	100		P
Sodium	ug/Kg	75-125	708000		174000		529000	101		P
Vanadium	ug/Kg	75-125	62100		10700		52900	97.2		P
Zinc	ug/Kg	75-125	79300		26200		52900	100		P

METALS
–5a–

Matrix Spike Summary

SDG NO. 10–1037 **Client ID** RE12–10–7288S

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 90.8

Sample ID: 243492001 **Spike ID:** 1202006444

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75–125	142		13.6		117	110		AV

METALS
-5a-

Matrix Spike Duplicate Summary

SDG NO. 10-1037 **Client ID** RE12-10-7288SD

Contract: LANL01004 **Level:** Low

Matrix: SOIL **% Solids:** 90.8

Sample ID: 243492001 **Spike ID:** 1202006445

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/kg	75-125	160		13.6		130	113		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** WST03–10–2148D

Sample ID: 243549002 **Duplicate ID:** 1202004422 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/–1.05	0.864	J	1.03	J	17.7		MS
Beryllium	mg/kg	+/–20%	0.542		0.717		27.7	*	MS
Nickel	mg/kg	+/–20%	2.95		3.73		23.3	*	MS
Selenium	mg/kg		0.536	U	0.523	U			MS
Thallium	mg/kg		0.0643	U	0.0718	J	200		MS
Uranium	mg/kg	+/–20%	0.532		0.582		8.93		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** WST03–10–2148SD

Sample ID: 1202004423 **Duplicate ID:** 1202004425 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	mg/kg	+/–20	9.38		8.5		9.85		MS
Beryllium	mg/kg	+/–20	6.28		5.78		8.41		MS
Nickel	mg/kg	+/–20	8.5		7.93		7		MS
Selenium	mg/kg	+/–20	1.72		1.43		18.2		MS
Thallium	mg/kg	+/–20	9.87		9.24		6.64		MS
Uranium	mg/kg	+/–20	6.26		5.92		5.61		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** WST03–10–2148D

Sample ID: 243549002 **Duplicate ID:** 1202004428 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20%	3890000		3860000		.997		P
Antimony	ug/Kg		333	U	356	U			P
Barium	ug/Kg	+/–20%	47200		42200		11.1		P
Cadmium	ug/Kg		106	U	108	U			P
Calcium	ug/Kg	+/–20%	816000		889000		8.57		P
Chromium	ug/Kg	+/–20%	12200		12500		2.15		P
Cobalt	ug/Kg	+/–538	2510		1550		47.4	*	P
Copper	ug/Kg	+/–1080	3480		3400		2.4		P
Iron	ug/Kg	+/–20%	8430000		8190000		2.88		P
Lead	ug/Kg	+/–20%	7570		6870		9.75		P
Magnesium	ug/Kg	+/–20%	750000		715000		4.68		P
Manganese	ug/Kg	+/–20%	220000		251000		13.1		P
Potassium	ug/Kg	+/–20%	581000		532000		8.93		P
Silver	ug/Kg		106	U	232	J	200		P
Sodium	ug/Kg	+/–20%	174000		172000		1.21		P
Vanadium	ug/Kg	+/–20%	10700		7980		29	*	P
Zinc	ug/Kg	+/–20%	26200		25800		1.24		P

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** WST03–10–2148SD

Sample ID: 1202004429 **Duplicate ID:** 1202004431 **Percent Solids for Dup:** 92.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/Kg	+/–20	10400000		8640000		18.5		P
Antimony	ug/Kg	+/–20	49100		48800		.705		P
Barium	ug/Kg	+/–20	94000		96500		2.58		P
Cadmium	ug/Kg	+/–20	49900		50900		2		P
Calcium	ug/Kg	+/–20	1680000		1430000		16.4		P
Chromium	ug/Kg	+/–20	70300		74100		5.36		P
Cobalt	ug/Kg	+/–20	51700		52100		.677		P
Copper	ug/Kg	+/–20	58200		58400		.439		P
Iron	ug/Kg	+/–20	11400000		10200000		10.6		P
Lead	ug/Kg	+/–20	60600		58700		3.17		P
Magnesium	ug/Kg	+/–20	1950000		1670000		15.4		P
Manganese	ug/Kg	+/–20	330000		273000		18.8		P
Potassium	ug/Kg	+/–20	1500000		1380000		8.81		P
Silver	ug/Kg	+/–20	52300		53100		1.62		P
Sodium	ug/Kg	+/–20	743000		708000		4.91		P
Vanadium	ug/Kg	+/–20	63500		62100		2.24		P
Zinc	ug/Kg	+/–20	81400		79300		2.6		P

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1037

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12-10-7288D

Sample ID: 243492001 **Duplicate ID:** 1202006442 **Percent Solids for Dup:** 90.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/-11.2	13.6		14.8		8.8		AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037

Contract: LANL01004 **Lab Code:** GEL

Matrix: SOLID **Level:** Low **Client ID:** RE12–10–7288SD

Sample ID: 1202006444 **Duplicate ID:** 1202006445 **Percent Solids for Dup:** 90.8

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/kg	+/–20	142		160		11.6		AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202004421								
	Beryllium	mg/kg	77.6	74.9		96.5	81.2-126.8	MS
	Nickel	mg/kg	134	144		107	83.3-121.4	MS
	Selenium	mg/kg	286	271		94.7	80.2-125.9	MS
	Thallium	mg/kg	121	120		98.9	78-123.2	MS
	Uranium	mg/kg	2.13	1.98		92.8	61.9-130.7	MS
	Arsenic	mg/kg	104	108		104	83-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202004427								
	Aluminum	ug/Kg	10500000	8580000		81.7	56-144	P
	Barium	ug/Kg	198000	194000		97.7	80-120	P
	Cadmium	ug/Kg	60700	56100		92.4	81-120	P
	Calcium	ug/Kg	9870000	9470000		96	83-117	P
	Chromium	ug/Kg	236000	224000		95.1	80-120	P
	Cobalt	ug/Kg	91200	86900		95.2	81-120	P
	Copper	ug/Kg	174000	181000		104	81-118	P
	Iron	ug/Kg	18000000	18700000		104	51-149	P
	Lead	ug/Kg	86000	83200		96.7	79-121	P
	Magnesium	ug/Kg	4000000	3810000		95.3	79-122	P
	Manganese	ug/Kg	558000	524000		93.9	81-119	P
	Potassium	ug/Kg	4300000	3970000		92.3	74-127	P
	Silver	ug/Kg	30100	31700		105	66-134	P
	Sodium	ug/Kg	1020000	1040000		102	74-127	P
	Vanadium	ug/Kg	115000	119000		104	79-121	P
	Zinc	ug/Kg	594000	598000		101	80-121	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202006446								
	Mercury	ug/kg	5150	5570		108	71.6-128.3	AV

METALS
–7–
Laboratory Control Sample Summary

SDG NO. 10–1037

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** ERA

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202014119								
	Antimony	ug/Kg	173000	174000		100	71–130	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1037 **Client ID** WST03-10-2148L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 243549002 **Serial Dilution ID:** 1202004424

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Arsenic	4.03	J	5	U	100			MS
Beryllium	2.53		2.99		18.2			MS
Nickel	13.8		14.9		7.61			MS
Selenium	2.5	U	12.5	U				MS
Thallium	.3	U	2.91	J				MS
Uranium	2.48		2.28		8.27			MS

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 10–1037 **Client ID** WST03–10–2148L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 243549002 **Serial Dilution ID:** 1202004430

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	36700		38700		5.31		10	P
Antimony	3.3	U	16.5	U				P
Barium	444		465		4.73		10	P
Cadmium	1	U	5	U				P
Calcium	7680		8350		8.72		10	P
Chromium	115		123		6.96		10	P
Cobalt	23.7		24.7	J	4.22			P
Copper	32.7		33.2	J	1.38			P
Iron	79300		87500		10.3	E	10	P
Lead	71.3		78.5		10.1			P
Magnesium	7060		7600		7.65		10	P
Manganese	2070		2200		6.04		10	P
Potassium	5470		5900		7.86		10	P
Silver	1	U	5	U				P
Sodium	1640		1710		4.27			P
Vanadium	101		103		1.49		10	P
Zinc	246		258		4.88		10	P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1037 **Client ID** RE12-10-7288L

Contract: LANL01004

Matrix: SOLID **Level:** Low

Sample ID: 243492001 **Serial Dilution ID:** 1202006443

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.209		.34	U	100			AV

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 10–1037 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 936807							
1202004426	MB for batch 936807	MB	S	29–DEC–09	.505g	50mL	
1202004427	LCS for batch 936807	LCS	S	29–DEC–09	.503g	50mL	
1202004429	WST03–10–2148S	MS	S	29–DEC–09	.51g	50mL	
1202004431	WST03–10–2148SD	MSD	S	29–DEC–09	.509g	50mL	
1202004428	WST03–10–2148D	DUP	S	29–DEC–09	.501g	50mL	
243492001	RE12–10–7288	SAMPLE	S	29–DEC–09	.525g	50mL	
243492002	RE12–10–7290	SAMPLE	S	29–DEC–09	.5g	50mL	
243492003	RE12–10–7289	SAMPLE	S	29–DEC–09	.521g	50mL	
243492004	RE12–10–7291	SAMPLE	S	29–DEC–09	.501g	50mL	
243492005	RE12–10–7292	SAMPLE	S	29–DEC–09	.503g	50mL	
243492006	RE12–10–7293	SAMPLE	S	29–DEC–09	.516g	50mL	
243492007	RE12–10–7296	SAMPLE	S	29–DEC–09	.503g	50mL	
Batch Number 941049							
1202014118	MB for batch 941049	MB	S	13–JAN–10	.5g	50mL	
1202014119	LCS for batch 941049	LCS	S	13–JAN–10	.51g	50mL	
1202004429	WST03–10–2148S	MS	S	13–JAN–10	.505g	50mL	
1202004431	WST03–10–2148SD	MSD	S	13–JAN–10	.513g	50mL	
1202004428	WST03–10–2148D	DUP	S	13–JAN–10	.5g	50mL	
243492001	RE12–10–7288	SAMPLE	S	13–JAN–10	.525g	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1037 **Method Type:** P

Contract: **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
243492002	RE12-10-7290	SAMPLE	S	13-JAN-10	.516g	50mL	
243492003	RE12-10-7289	SAMPLE	S	13-JAN-10	.542g	50mL	
243492004	RE12-10-7291	SAMPLE	S	13-JAN-10	.52g	50mL	
243492005	RE12-10-7292	SAMPLE	S	13-JAN-10	.52g	50mL	
243492006	RE12-10-7293	SAMPLE	S	13-JAN-10	.546g	50mL	
243492007	RE12-10-7296	SAMPLE	S	13-JAN-10	.509g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 10–1037 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 936804							
1202004420	MB for batch 936804	MB	S	29–DEC–09	.503g	50mL	
1202004421	LCS for batch 936804	LCS	S	29–DEC–09	.501g	50mL	
1202004423	WST03–10–2148S	MS	S	29–DEC–09	.517g	50mL	
1202004425	WST03–10–2148SD	MSD	S	29–DEC–09	.507g	50mL	
1202004422	WST03–10–2148D	DUP	S	29–DEC–09	.515g	50mL	
243492001	RE12–10–7288	SAMPLE	S	29–DEC–09	.509g	50mL	
243492002	RE12–10–7290	SAMPLE	S	29–DEC–09	.5g	50mL	
243492003	RE12–10–7289	SAMPLE	S	29–DEC–09	.507g	50mL	
243492004	RE12–10–7291	SAMPLE	S	29–DEC–09	.5g	50mL	
243492005	RE12–10–7292	SAMPLE	S	29–DEC–09	.516g	50mL	
243492006	RE12–10–7293	SAMPLE	S	29–DEC–09	.507g	50mL	
243492007	RE12–10–7296	SAMPLE	S	29–DEC–09	.509g	50mL	

METALS
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SAMPLE PREPARATION SUMMARY

SDG No: 10-1037 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 937634							
1202006441	MB for batch 937634	MB	S	06-JAN-10	.551g	30mL	
1202006446	LCS for batch 937634	LCS	S	06-JAN-10	.201g	30mL	
1202006444	RE12-10-7288S	MS	S	06-JAN-10	.564g	30mL	
1202006445	RE12-10-7288SD	MSD	S	06-JAN-10	.509g	30mL	
1202006442	RE12-10-7288D	DUP	S	06-JAN-10	.591g	30mL	
243492001	RE12-10-7288	SAMPLE	S	06-JAN-10	.509g	30mL	
243492002	RE12-10-7290	SAMPLE	S	06-JAN-10	.535g	30mL	
243492003	RE12-10-7289	SAMPLE	S	06-JAN-10	.541g	30mL	
243492004	RE12-10-7291	SAMPLE	S	06-JAN-10	.533g	30mL	
243492005	RE12-10-7292	SAMPLE	S	06-JAN-10	.517g	30mL	
243492006	RE12-10-7293	SAMPLE	S	06-JAN-10	.58g	30mL	
243492007	RE12-10-7296	SAMPLE	S	06-JAN-10	.561g	30mL	

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 12-JAN-10 **End Date:** 12-JAN-10

Client Sdg: 10-1037
Method MS
Data File: 100111-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	11:19					X											X		X						
S10	1	11:25					X											X		X						
S100	1	11:31					X											X		X						
ICV01	1	11:37					X											X		X						
ICB01	1	11:43					X											X		X						
CRDL01	1	11:49					X											X		X						
ICSA01	1	11:55					X											X		X						
ICSAB01	1	12:01					X											X		X						
CCV01	1	12:07					X											X		X						
CCB01	1	12:13					X											X		X						
1202004420	2	12:18					X											X		X						
ZZZZZZ	20	12:24																								
1202004421	40	12:30					X											X		X						
CCV02	1	12:36					X											X		X						
CCB02	1	12:42					X											X		X						
ZZZZZZ	2	12:48																								
ZZZZZZ	2	12:54																								
ZZZZZZ	2	13:00																								
ZZZZZZ	2	13:06																								
ZZZZZZ	2	13:12																								
ZZZZZZ	2	13:18																								
ZZZZZZ	2	13:24																								
243492001	2	13:30					X											X		X						
CCV03	1	13:36					X											X		X						
CCB03	1	13:42					X											X		X						
243492002	2	13:47					X											X		X						
243492003	2	13:53					X											X		X						
243492004	2	13:59					X											X		X						
243492005	2	14:05					X											X		X						
243492006	2	14:11					X											X		X						
243492007	2	14:17					X											X		X						
ZZZZZZ	2	14:23																								
ZZZZZZ	2	14:29																								
CCV04	1	14:35					X											X		X						
CCB04	1	14:41					X											X		X						
ZZZZZZ	2	14:47																								
1202004422	2	14:53					X											X		X						
1202004423	2	14:58					X											X		X						
1202004425	2	15:04					X											X		X						
1202004424	10	15:10					X											X		X						

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
CCV05	1	15:16					X										X		X						
CCB05	1	15:22					X										X		X						

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS6
Start Date: 13-JAN-10 **End Date:** 13-JAN-10

Client Sdg: 10-1037
Method MS
Data File: 100113-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	21:04			X																		X	X		
S10	1	21:08			X																		X	X		
S100	1	21:12			X																		X	X		
ICV01	1	21:16			X																		X	X		
ICB01	1	21:20			X																		X	X		
CRDL01	1	21:24			X																		X	X		
ICSA01	1	21:28			X																		X	X		
ICSAB01	1	21:32			X																		X	X		
CCV01	1	21:36			X																		X	X		
CCB01	1	21:40			X																		X	X		
1202004420	2	21:44			X																		X	X		
ZZZZZZ	20	21:49																								
1202004421	40	21:53			X																		X	X		
CCV02	1	21:57			X																		X	X		
CCB02	1	22:01			X																		X	X		
ZZZZZZ	2	22:05																								
ZZZZZZ	2	22:09																								
ZZZZZZ	2	22:13																								
ZZZZZZ	2	22:17																								
ZZZZZZ	2	22:21																								
ZZZZZZ	2	22:25																								
ZZZZZZ	2	22:29																								
243492001	2	22:33			X																		X	X		
CCV03	1	22:37			X																		X	X		
CCB03	1	22:41			X																		X	X		
243492002	2	22:45			X																		X	X		
243492003	2	22:50			X																		X	X		
243492004	2	22:54			X																		X	X		
243492005	2	22:58			X																		X	X		
243492006	2	23:02			X																		X	X		
243492007	2	23:06			X																		X	X		
ZZZZZZ	2	23:10																								
CCV04	1	23:14			X																		X	X		
CCB04	1	23:18			X																		X	X		
ZZZZZZ	2	23:22																								
ZZZZZZ	2	23:26																								
1202004422	2	23:30			X																		X	X		
1202004423	2	23:34			X																		X	X		
1202004425	2	23:38			X																		X	X		
1202004424	10	23:42			X																		X	X		

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																							
CCV05	1	23:46			X																	X	X		
CCB05	1	23:50			X																	X	X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 11-JAN-10 **End Date:** 12-JAN-10

Client Sdg: 10-1037
Method P
Data File: 011110A-1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	15:06	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S0.1	1	15:13				X		X		X	X	X		X		X			X		X				X	X
S0.5	1	15:19	X			X		X	X	X	X	X		X	X	X			X		X				X	X
SCAL	1	15:26	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
S10	1	15:33	X						X				X		X							X				
ICV01	1	15:38	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICB01	1	15:45	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
PQL01	1	15:52	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSA01	1	15:59	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ICSAB01	1	16:05	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR01	1	16:11	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR02	1	16:17	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV01	1	16:24	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB01	1	16:31	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV02	1	16:38	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB02	1	16:45	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
LR03	1	16:52	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV03	1	16:59	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB03	1	17:06	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	17:13																								
ZZZZZZ	1	17:19																								
ZZZZZZ	1	17:26																								
ZZZZZZ	1	17:33																								
ZZZZZZ	1	17:40																								
ZZZZZZ	5	17:48																								
CCV04	1	17:54	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB04	1	18:01	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	18:08																								
ZZZZZZ	1	18:15																								
ZZZZZZ	1	18:22																								
ZZZZZZ	1	18:29																								
ZZZZZZ	1	18:36																								
ZZZZZZ	1	18:43																								
ZZZZZZ	1	18:51																								
CCV05	1	18:58	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB05	1	19:05	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	19:11																								
ZZZZZZ	1	19:18																								
ZZZZZZ	1	19:25																								
ZZZZZZ	1	19:32																								

Metals
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Analysis Run Log

Samp No.	D/F	Run Time																							
ZZZZZZ	1	19:39																							
ZZZZZZ	1	19:46																							
ZZZZZZ	1	19:53																							
ZZZZZZ	1	20:00																							
ZZZZZZ	1	20:07																							
CCV06	1	20:14	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB06	1	20:21	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	5	20:28																							
ZZZZZZ	1	20:35																							
ZZZZZZ	1	20:42																							
ZZZZZZ	1	20:49																							
ZZZZZZ	1	20:56																							
ZZZZZZ	1	21:03																							
ZZZZZZ	1	21:10																							
ZZZZZZ	1	21:17																							
ZZZZZZ	1	21:24																							
CCV07	1	21:31	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB07	1	21:38	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	21:45																							
ZZZZZZ	1	21:52																							
ZZZZZZ	1	21:58																							
ZZZZZZ	1	22:05																							
ZZZZZZ	1	22:12																							
ZZZZZZ	1	22:20																							
ZZZZZZ	5	22:27																							
ZZZZZZ	1	22:34																							
ZZZZZZ	1	22:41																							
CCV08	1	22:48	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB08	1	22:55	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	23:02																							
ZZZZZZ	1	23:09																							
ZZZZZZ	1	23:16																							
ZZZZZZ	1	23:23																							
ZZZZZZ	1	23:30																							
ZZZZZZ	1	23:37																							
ZZZZZZ	1	23:44																							
ZZZZZZ	1	23:51																							
CCV09	1	23:59	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB09	1	00:06	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202004426	1	00:13	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
1202004427	1	00:19	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	00:26																								
ZZZZZZ	1	00:33																								
ZZZZZZ	1	00:40																								
ZZZZZZ	1	00:47																								
ZZZZZZ	1	00:54																								
CCV10	1	01:01	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB10	1	01:08	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	01:15																								
ZZZZZZ	1	01:22																								
243492001	1	01:29	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
243492002	1	01:37	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
243492003	1	01:44	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
243492004	1	01:51	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
243492005	1	01:58	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
243492006	1	02:05	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV11	1	02:12	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB11	1	02:19	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
243492007	1	02:26	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
ZZZZZZ	1	02:33																								
ZZZZZZ	1	02:40																								
ZZZZZZ	1	02:47																								
1202004428	1	02:54	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202004429	1	03:01	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202004431	1	03:08	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
1202004430	5	03:15	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCV12	1	03:22	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X
CCB12	1	03:29	X			X		X	X	X	X	X	X	X	X	X			X		X	X			X	X

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 14-JAN-10 **End Date:** 15-JAN-10

Client Sdg: 10-1037
Method P
Data File: 011410-2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	10:00		X																						
S0.1	1	10:07		X																						
S0.5	1	10:13		X																						
SCAL	1	10:20		X																						
S10	1	10:27																								
ICV01	1	10:32		X																						
ICB01	1	10:39		X																						
PQL01	1	10:46		X																						
ICSA01	1	10:53		X																						
ICSAB01	1	10:59		X																						
LR01	1	11:05		X																						
LR02	1	11:11		X																						
ZZZZZZ	1	11:18																								
ZZZZZZ	1	11:25																								
CCV01	1	11:33		X																						
CCB01	1	11:40		X																						
LR03	1	11:47		X																						
CCV02	1	11:54		X																						
CCB02	1	12:01		X																						
ZZZZZZ	1	12:07																								
ZZZZZZ	1	12:14																								
ZZZZZZ	1	12:21																								
ZZZZZZ	1	12:28																								
ZZZZZZ	1	12:35																								
ZZZZZZ	1	12:42																								
ZZZZZZ	5	12:49																								
CCV03	1	12:56		X																						
CCB03	1	13:03		X																						
ZZZZZZ	1	13:15																								
ZZZZZZ	1	13:22																								
ZZZZZZ	1	13:28																								
ZZZZZZ	1	13:35																								
ZZZZZZ	1	13:42																								
ZZZZZZ	1	13:49																								
ZZZZZZ	5	13:56																								
ZZZZZZ	1	14:03																								
CCV04	1	14:19		X																						
PQL02	1	14:26		X																						
CCB04	1	14:33		X																						
CCV05	1	15:04		X																						

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time																							
CCB05	1	15:11		X																					
ZZZZZZ	1	15:18																							
ZZZZZZ	1	15:25																							
ZZZZZZ	1	15:32																							
ZZZZZZ	1	15:38																							
CCV06	1	15:45		X																					
PQL03	1	15:52		X																					
CCB06	1	15:59		X																					
ZZZZZZ	1	16:06																							
ZZZZZZ	1	16:13																							
ZZZZZZ	1	16:20																							
ZZZZZZ	1	16:27																							
ZZZZZZ	1	16:34																							
ZZZZZZ	1	16:40																							
ZZZZZZ	1	16:47																							
ZZZZZZ	5	16:54																							
CCV07	1	17:01		X																					
PQL04	1	17:08		X																					
CCB07	1	17:15		X																					
ZZZZZZ	1	17:21																							
ZZZZZZ	1	17:28																							
ZZZZZZ	1	17:35																							
ZZZZZZ	1	17:42																							
ZZZZZZ	1	17:49																							
ZZZZZZ	1	17:56																							
ZZZZZZ	5	18:03																							
ZZZZZZ	1	18:10																							
ZZZZZZ	1	18:16																							
CCV08	1	18:23		X																					
CCB08	1	18:30		X																					
ZZZZZZ	1	18:36																							
ZZZZZZ	1	18:43																							
ZZZZZZ	1	18:51																							
ZZZZZZ	1	18:58																							
ZZZZZZ	1	19:05																							
ZZZZZZ	1	19:12																							
ZZZZZZ	1	19:19																							
ZZZZZZ	1	19:26																							
ZZZZZZ	1	19:33																							
CCV09	1	19:40		X																					

Metals
–14–
Analysis Run Log

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
CCB09	1	19:47		X																						
ZZZZZZ	1	19:54																								
ZZZZZZ	1	20:01																								
ZZZZZZ	1	20:08																								
ZZZZZZ	1	20:15																								
ZZZZZZ	1	20:22																								
ZZZZZZ	1	20:29																								
ZZZZZZ	1	20:36																								
ZZZZZZ	1	20:44																								
CCV10	1	20:50		X																						
CCB10	1	20:57		X																						
1202014118	1	21:04		X																						
1202014119	1	21:11		X																						
ZZZZZZ	1	21:17																								
ZZZZZZ	1	21:24																								
ZZZZZZ	1	21:31																								
ZZZZZZ	1	21:38																								
ZZZZZZ	1	21:45																								
ZZZZZZ	1	21:53																								
CCV11	1	22:00		X																						
CCB11	1	22:07		X																						
ZZZZZZ	1	22:13																								
243492001	1	22:20		X																						
243492002	1	22:27		X																						
243492003	1	22:34		X																						
243492004	1	22:41		X																						
243492005	1	22:49		X																						
243492006	1	22:56		X																						
243492007	1	23:03		X																						
CCV12	1	23:10		X																						
CCB12	1	23:17		X																						
ZZZZZZ	1	23:24																								
ZZZZZZ	1	23:31																								
ZZZZZZ	1	23:38																								
1202004428	1	23:45		X																						
1202004429	1	23:52		X																						
1202004431	1	23:59		X																						
1202004430	5	00:06		X																						
CCV13	1	00:13		X																						
CCB13	1	00:20		X																						

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: HG3
Start Date: 07–JAN–10 **End Date:** 07–JAN–10

Client Sdg: 10–1037
Method AV
Data File: 010710S1–7

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:26															X									
S0.2	1	09:27															X									
S0.5	1	09:29															X									
S2.0	1	09:31															X									
S5.0	1	09:32															X									
S10.0	1	09:34															X									
ICV01	1	09:36															X									
ICB01	1	09:37															X									
CRDL01	1	09:39															X									
CCV01	1	09:41															X									
CCB01	1	09:42															X									
ZZZZZZ	1	09:44																								
ZZZZZZ	1	09:46																								
ZZZZZZ	1	09:47																								
ZZZZZZ	1	09:49																								
ZZZZZZ	1	09:51																								
ZZZZZZ	1	09:52																								
ZZZZZZ	5	09:54																								
ZZZZZZ	1	09:56																								
ZZZZZZ	1	09:57																								
ZZZZZZ	1	09:59																								
CCV02	1	10:01															X									
CCB02	1	10:02															X									
ZZZZZZ	10	10:04																								
ZZZZZZ	1	10:06																								
ZZZZZZ	1	10:07																								
ZZZZZZ	1	10:09																								
ZZZZZZ	1	10:11																								
ZZZZZZ	5	10:12																								
ZZZZZZ	1	10:14																								
ZZZZZZ	1	10:16																								
1202006441	1	10:17															X									
1202006446	10	10:19															X									
CCV03	1	10:21															X									
CCB03	1	10:22															X									
243492001	1	10:24															X									
1202006442	1	10:26															X									
1202006444	1	10:27															X									
1202006445	1	10:29															X									
1202006443	5	10:31															X									

Metals
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Analysis Run Log

Samp No.	D/F	Run Time															X									
243492002	1	10:33															X									
243492003	1	10:34															X									
243492004	1	10:36															X									
243492005	1	10:38															X									
243492006	1	10:39															X									
CCV04	1	10:41															X									
CCB04	1	10:43															X									
243492007	1	10:44															X									
ZZZZZZ	1	10:46																								
ZZZZZZ	10	10:48																								
ZZZZZZ	1	10:49																								
ZZZZZZ	1	10:51																								
ZZZZZZ	1	10:53																								
ZZZZZZ	1	10:54																								
ZZZZZZ	5	10:56																								
ZZZZZZ	1	10:58																								
ZZZZZZ	1	10:59																								
CCV05	1	11:01															X									
CCB05	1	11:03															X									

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1037

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum		15.0	50
	Antimony		0.5	3
	Arsenic		1.0	5
	Barium		0.5	2
	Beryllium		0.1	.5
	Cadmium		0.1	1
	Calcium		33.0	100
	Chromium		1.0	3
	Cobalt		0.3	1
	Copper		0.33	1
	Iron		25.0	100
	Lead		0.5	2
	Magnesium		7.5	25
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		2.5	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.066	.2
	Vanadium		2.0	10
	Zinc		2.0	10

METALS
–10–
Instrument Detection Limits

SDG NO. 10–1037

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 15–JUN–09

MERCURY	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Mercury		0.068	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1037

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
SOLID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.3	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	80.0	250
	Chromium	267.716	1.5	5
	Cobalt	228.616	1.5	5
	Copper	324.752	3.0	10
	Iron	238.204	80.0	250
	Lead	220.353	2.5	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	64.0	250
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	70.0	250
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
–11–
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10–1037
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01–NOV–09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02738	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	–0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	–0.22121	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	–0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	–0.13648	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	–0.05571	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	–0.02739	0.00000	0.00000	0.00000	0.00000
Tin	189.927	–0.00058	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.5549	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.67113	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	2.54031	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.78023
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	160.41
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.19810

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 10-1037
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01635	0.00000	0.00000	0.00000	-22.2146
Arsenic	188.979	-0.21271	0.00000	0.00000	0.00000	1.34645
Barium	233.527	-0.03709	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.13266	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.09998	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.01788	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05101	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09069	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.09972	0.00000	0.01862	0.00000	0.00000
Molybdenum	202.031	-0.07094	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.03176	0.00000	0.01823	12.4291	-3.60863
Selenium	196.026	-3.00009	0.00000	0.00000	0.00000	-3.17982
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31825	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-5.85948	0.00000
Tin	189.927	-0.01337	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12581	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.15211	0.00000	-0.02256	0.00000	-14.2921
Zinc	213.857	0.09548	0.00000	0.03423	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.44040	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 10-1037
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-17.4077
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	3.10491
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.73145	0.00000	-2.31857	0.00000
Arsenic	188.979	-8.38419	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-1.96555	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.76281	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.92851	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-7.67419	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
–12–
Linear Ranges

SDG NO. 10–1037

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS6

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Aluminum	1	50000	ug/L	01–NOV–09
Antimony	1000	250	ug/L	01–NOV–09
Arsenic	1000	1000	ug/L	01–NOV–09
Barium	1000	1000	ug/L	01–NOV–09
Beryllium	1000	1000	ug/L	01–NOV–09
Cadmium	1000	1000	ug/L	01–NOV–09
Calcium	500	50000	ug/L	01–NOV–09
Chromium	1000	1000	ug/L	01–NOV–09
Cobalt	1000	1000	ug/L	01–NOV–09
Copper	1000	1000	ug/L	01–NOV–09
Iron	500	50000	ug/L	01–NOV–09
Lead	1000	5000	ug/L	01–NOV–09
Magnesium	1	50000	ug/L	01–NOV–09
Manganese	1000	1000	ug/L	01–NOV–09
Nickel	1000	1000	ug/L	01–NOV–09
Potassium	1	50000	ug/L	01–NOV–09
Selenium	1000	500	ug/L	01–NOV–09
Silver	1000	250	ug/L	01–NOV–09
Sodium	1	50000	ug/L	01–NOV–09
Thallium	1000	500	ug/L	01–NOV–09
Uranium	1000	5000	ug/L	01–NOV–09
Vanadium	1000	100	ug/L	01–NOV–09
Zinc	1000	2500	ug/L	01–NOV–09

METALS
-12-
Linear Ranges

SDG NO. 10-1037

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-NOV-09
Antimony	20	10000	ug/L	01-NOV-09
Arsenic	20	10000	ug/L	01-NOV-09
Barium	20	15000	ug/L	01-NOV-09
Beryllium	20	3000	ug/L	01-NOV-09
Cadmium	20	10000	ug/L	01-NOV-09
Calcium	20	500000	ug/L	01-NOV-09
Chromium	20	25000	ug/L	01-NOV-09
Cobalt	20	10000	ug/L	01-NOV-09
Copper	20	20000	ug/L	01-NOV-09
Iron	20	500000	ug/L	01-NOV-09
Lead	20	25000	ug/L	01-NOV-09
Magnesium	20	500000	ug/L	01-NOV-09
Manganese	20	10000	ug/L	01-NOV-09
Nickel	20	10000	ug/L	01-NOV-09
Potassium	20	300000	ug/L	01-NOV-09
Selenium	20	10000	ug/L	01-NOV-09
Silver	20	1000	ug/L	01-NOV-09
Sodium	20	500000	ug/L	01-NOV-09
Thallium	20	10000	ug/L	01-NOV-09
Uranium	20	15000	ug/L	01-NOV-09
Vanadium	20	10000	ug/L	01-NOV-09
Zinc	20	15000	ug/L	01-NOV-09

Raw Data

Analysis Begun

Start Time: 1/11/2010 15:06:14 Plasma On Time: 1/11/2010 06:15:31
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601 Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\011110.sif
Batch ID:
Results Data Set: 011110A
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 1/11/2010 14:49:13
IEC File: 011110.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 8
Sample ID: S0 Date Collected: 1/11/2010 15:06:16
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: S0

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	5078.5	5078.5	101	%	15:08:08
1	Y RADIAL	5435.8	5435.8	100.1	%	15:08:08
1	Al 396.153Radial†	-7.1	-7.0	[0.00]	ug/L	15:08:08

1	Ca 317.933Radial†	21.6	21.4	[0.00] ug/L	15:08:28
1	Fe 238.204 Radial†	8.3	8.2	[0.00] ug/L	15:08:28
1	K 766.490 Radial†	2604.4	2582.2	[0.00] ug/L	15:08:08
1	Mg 279.077 IEC†	-1.2	-1.2	[0.00] ug/L	15:08:28
1	Na 589.592 Radial†	-1261.5	-1250.7	[0.00] ug/L	15:08:08
1	Sr 421.552†	-42.5	-42.2	[0.00] ug/L	15:08:08
1	Sc 361.383	853575.6	853575.6	100.14 %	15:09:25
1	Y 371.029	723166.7	723166.7	100.07 %	15:09:25
1	Ag 328.068†	394.2	393.7	[0.00] ug/L	15:09:25
1	As 188.979†	-21.8	-21.8	[0.00] ug/L	15:09:45
1	B 249.677†	-619.1	-618.3	[0.00] ug/L	15:09:45
1	Ba 233.527†	-8.3	-8.3	[0.00] ug/L	15:09:45
1	Be 313.107†	-4622.0	-4615.7	[0.00] ug/L	15:09:25
1	Cd 226.502†	-216.8	-216.5	[0.00] ug/L	15:09:45
1	Co 228.616†	-73.5	-73.4	[0.00] ug/L	15:09:45
1	Cr 267.716†	79.7	79.6	[0.00] ug/L	15:09:45
1	Cu 324.752†	6433.7	6424.8	[0.00] ug/L	15:09:25
1	Mn 257.610†	428.4	427.8	[0.00] ug/L	15:09:45
1	Mo 202.031†	21.2	21.1	[0.00] ug/L	15:09:45
1	Ni 231.604†	67.3	67.2	[0.00] ug/L	15:09:45
1	P 214.914†	236.7	236.4	[0.00] ug/L	15:09:45
1	Pb 220.353†	-70.4	-70.3	[0.00] ug/L	15:09:45
1	S 181.975 Axial†	43.2	43.1	[0.00] ug/L	15:09:45
1	Sb 206.836†	24.2	24.2	[0.00] ug/L	15:09:45
1	Se 196.026†	-31.0	-31.0	[0.00] ug/L	15:09:45
1	Si 251.611†	564.6	563.8	[0.00] ug/L	15:09:45
1	Sn 189.927†	12.1	12.0	[0.00] ug/L	15:09:45
1	Ti 334.940†	-1400.5	-1398.6	[0.00] ug/L	15:09:25
1	Tl 190.801†	-32.9	-32.8	[0.00] ug/L	15:09:45
1	U 409.014†	-2104.8	-2101.9	[0.00] ug/L	15:09:25
1	V 292.402†	-1333.9	-1332.0	[0.00] ug/L	15:09:25
1	Zn 213.857†	621.9	621.0	[0.00] ug/L	15:09:45
1	SiO2†	583.8	583.0	[0.00] ug/L	15:10:41
2	Sc Radial	4968.4	4968.4	98.7 %	15:08:33
2	Y RADIAL	5382.3	5382.3	99.13 %	15:08:33
2	Al 396.153Radial†	-8.9	-9.0	[0.00] ug/L	15:08:33
2	Ca 317.933Radial†	20.3	20.5	[0.00] ug/L	15:08:53
2	Fe 238.204 Radial†	8.7	8.8	[0.00] ug/L	15:08:53
2	K 766.490 Radial†	2613.0	2648.2	[0.00] ug/L	15:08:33
2	Mg 279.077 IEC†	5.2	5.2	[0.00] ug/L	15:08:53
2	Na 589.592 Radial†	-1304.4	-1322.0	[0.00] ug/L	15:08:33
2	Sr 421.552†	-17.3	-17.5	[0.00] ug/L	15:08:33
2	Sc 361.383	852244.3	852244.3	99.982 %	15:09:50
2	Y 371.029	722709.0	722709.0	100.01 %	15:09:50
2	Ag 328.068†	314.2	314.3	[0.00] ug/L	15:09:50
2	As 188.979†	-24.8	-24.8	[0.00] ug/L	15:10:10
2	B 249.677†	-645.8	-645.9	[0.00] ug/L	15:10:10
2	Ba 233.527†	-16.3	-16.3	[0.00] ug/L	15:10:10
2	Be 313.107†	-4532.1	-4532.9	[0.00] ug/L	15:09:50
2	Cd 226.502†	-209.4	-209.5	[0.00] ug/L	15:10:10
2	Co 228.616†	-74.6	-74.6	[0.00] ug/L	15:10:10
2	Cr 267.716†	98.0	98.0	[0.00] ug/L	15:10:10
2	Cu 324.752†	6405.3	6406.5	[0.00] ug/L	15:09:50
2	Mn 257.610†	452.6	452.6	[0.00] ug/L	15:10:10
2	Mo 202.031†	28.6	28.6	[0.00] ug/L	15:10:10
2	Ni 231.604†	70.7	70.7	[0.00] ug/L	15:10:10
2	P 214.914†	232.8	232.8	[0.00] ug/L	15:10:10
2	Pb 220.353†	-68.5	-68.5	[0.00] ug/L	15:10:10
2	S 181.975 Axial†	38.4	38.4	[0.00] ug/L	15:10:10
2	Sb 206.836†	31.7	31.7	[0.00] ug/L	15:10:10
2	Se 196.026†	-33.9	-33.9	[0.00] ug/L	15:10:10
2	Si 251.611†	536.5	536.6	[0.00] ug/L	15:10:10
2	Sn 189.927†	9.3	9.3	[0.00] ug/L	15:10:10
2	Ti 334.940†	-1340.5	-1340.7	[0.00] ug/L	15:09:50
2	Tl 190.801†	-38.1	-38.1	[0.00] ug/L	15:10:10
2	U 409.014†	-2081.0	-2081.4	[0.00] ug/L	15:09:50
2	V 292.402†	-1291.8	-1292.0	[0.00] ug/L	15:09:50
2	Zn 213.857†	614.2	614.3	[0.00] ug/L	15:10:10
2	SiO2†	567.0	567.1	[0.00] ug/L	15:10:46
3	Sc Radial	5058.9	5058.9	100 %	15:08:58
3	Y RADIAL	5470.3	5470.3	100.8 %	15:08:58

3	Al 396.153Radial†	14.1	14.1	[0.00] ug/L	15:08:58
3	Ca 317.933Radial†	17.5	17.4	[0.00] ug/L	15:09:18
3	Fe 238.204 Radial†	9.7	9.6	[0.00] ug/L	15:09:18
3	K 766.490 Radial†	2552.0	2540.1	[0.00] ug/L	15:08:58
3	Mg 279.077 IEC†	1.7	1.7	[0.00] ug/L	15:09:18
3	Na 589.592 Radial†	-1274.6	-1268.7	[0.00] ug/L	15:08:58
3	Sr 421.552†	1.2	1.2	[0.00] ug/L	15:08:58
3	Sc 361.383	851374.2	851374.2	99.880 %	15:10:15
3	Y 371.029	722128.0	722128.0	99.925 %	15:10:15
3	Ag 328.068†	365.6	366.0	[0.00] ug/L	15:10:15
3	As 188.979†	-24.2	-24.3	[0.00] ug/L	15:10:35
3	B 249.677†	-630.6	-631.3	[0.00] ug/L	15:10:35
3	Ba 233.527†	-9.6	-9.6	[0.00] ug/L	15:10:35
3	Be 313.107†	-4602.0	-4607.5	[0.00] ug/L	15:10:15
3	Cd 226.502†	-186.1	-186.3	[0.00] ug/L	15:10:35
3	Co 228.616†	-75.9	-76.0	[0.00] ug/L	15:10:35
3	Cr 267.716†	72.0	72.1	[0.00] ug/L	15:10:35
3	Cu 324.752†	6397.6	6405.3	[0.00] ug/L	15:10:15
3	Mn 257.610†	453.6	454.2	[0.00] ug/L	15:10:35
3	Mo 202.031†	21.4	21.4	[0.00] ug/L	15:10:35
3	Ni 231.604†	65.9	66.0	[0.00] ug/L	15:10:35
3	P 214.914†	220.2	220.4	[0.00] ug/L	15:10:35
3	Pb 220.353†	-51.3	-51.3	[0.00] ug/L	15:10:35
3	S 181.975 Axial†	47.5	47.5	[0.00] ug/L	15:10:35
3	Sb 206.836†	27.8	27.9	[0.00] ug/L	15:10:35
3	Se 196.026†	-31.1	-31.1	[0.00] ug/L	15:10:35
3	Si 251.611†	550.3	551.0	[0.00] ug/L	15:10:35
3	Sn 189.927†	1.6	1.6	[0.00] ug/L	15:10:35
3	Ti 334.940†	-1382.6	-1384.2	[0.00] ug/L	15:10:15
3	Tl 190.801†	-27.6	-27.7	[0.00] ug/L	15:10:35
3	U 409.014†	-1849.4	-1851.6	[0.00] ug/L	15:10:15
3	V 292.402†	-1303.5	-1305.1	[0.00] ug/L	15:10:15
3	Zn 213.857†	624.7	625.4	[0.00] ug/L	15:10:35
3	SiO2†	564.2	564.9	[0.00] ug/L	15:10:51

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	852398.0	1108.71	0.13%	100.00	%
Sc Radial	5035.3	58.75	1.17%	100	%
Y 371.029	722667.9	520.58	0.07%	100.00	%
Y RADIAL	5429.4	44.32	0.82%	100.0	%
Ag 328.068†	358.0	40.31	11.26%	[0.00]	ug/L
Al 396.153Radial†	-0.7	12.78	>999.9%	[0.00]	ug/L
As 188.979†	-23.6	1.58	6.71%	[0.00]	ug/L
B 249.677†	-631.8	13.81	2.19%	[0.00]	ug/L
Ba 233.527†	-11.4	4.27	37.44%	[0.00]	ug/L
Be 313.107†	-4585.4	45.60	0.99%	[0.00]	ug/L
Ca 317.933Radial†	19.8	2.07	10.48%	[0.00]	ug/L
Cd 226.502†	-204.1	15.84	7.76%	[0.00]	ug/L
Co 228.616†	-74.7	1.33	1.79%	[0.00]	ug/L
Cr 267.716†	83.3	13.36	16.05%	[0.00]	ug/L
Cu 324.752†	6412.2	10.95	0.17%	[0.00]	ug/L
Fe 238.204 Radial†	8.9	0.72	8.07%	[0.00]	ug/L
K 766.490 Radial†	2590.2	54.49	2.10%	[0.00]	ug/L
Mg 279.077 IEC†	1.9	3.20	167.84%	[0.00]	ug/L
Mn 257.610†	444.9	14.79	3.32%	[0.00]	ug/L
Mo 202.031†	23.7	4.26	17.95%	[0.00]	ug/L
Na 589.592 Radial†	-1280.5	37.06	2.89%	[0.00]	ug/L
Ni 231.604†	68.0	2.43	3.58%	[0.00]	ug/L
P 214.914†	229.9	8.38	3.65%	[0.00]	ug/L
Pb 220.353†	-63.4	10.47	16.52%	[0.00]	ug/L
S 181.975 Axial†	43.0	4.57	10.63%	[0.00]	ug/L
Sb 206.836†	27.9	3.75	13.44%	[0.00]	ug/L
Se 196.026†	-32.0	1.65	5.16%	[0.00]	ug/L
Si 251.611†	550.5	13.62	2.47%	[0.00]	ug/L
Sn 189.927†	7.7	5.41	70.56%	[0.00]	ug/L
Sr 421.552†	-19.5	21.77	111.63%	[0.00]	ug/L
Ti 334.940†	-1374.5	30.15	2.19%	[0.00]	ug/L
Tl 190.801†	-32.9	5.22	15.89%	[0.00]	ug/L

U 409.014†	-2011.6	138.95	6.91%	[0.00] ug/L
V 292.402†	-1309.7	20.42	1.56%	[0.00] ug/L
Zn 213.857†	620.2	5.60	0.90%	[0.00] ug/L
SiO2†	571.7	9.89	1.73%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 1/11/2010 15:13:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	5243.2	5243.2	104	%	15:14:59
1	Y RADIAL	5645.1	5645.1	104.0	%	15:14:59
1	K 766.490 Radial†	7958.3	5052.6	[1000]	ug/L	15:14:54
1	Sr 421.552†	15487.3	14892.7	[100]	ug/L	15:14:59
1	Sc 361.383	845537.2	845537.2	99.195	%	15:15:26
1	Y 371.029	712913.9	712913.9	98.650	%	15:15:26
1	Ag 328.068†	22404.9	22228.7	[100]	ug/L	15:15:26
1	As 188.979†	211.9	237.2	[100]	ug/L	15:15:46
1	B 249.677†	3739.8	4402.0	[100]	ug/L	15:15:26
1	Ba 233.527†	13104.0	13221.7	[100]	ug/L	15:15:26
1	Be 313.107†	263804.1	270530.0	[100]	ug/L	15:15:26
1	Cd 226.502†	9050.9	9328.5	[100]	ug/L	15:15:26
1	Co 228.616†	4811.3	4925.0	[100]	ug/L	15:15:46
1	Cr 267.716†	9220.9	9212.4	[100]	ug/L	15:15:26
1	Cu 324.752†	40147.8	34061.4	[100]	ug/L	15:15:26
1	Mn 257.610†	94290.9	94611.1	[100]	ug/L	15:15:26
1	Mo 202.031†	1452.1	1440.2	[100]	ug/L	15:15:46
1	Ni 231.604†	4065.7	4030.8	[100]	ug/L	15:15:46
1	P 214.914†	1044.2	822.9	[500]	ug/L	15:15:46
1	Pb 220.353†	767.6	837.2	[100]	ug/L	15:15:46
1	S 181.975 Axial†	184.4	142.9	[200]	ug/L	15:15:46
1	Sb 206.836†	314.8	289.4	[100]	ug/L	15:15:46
1	Se 196.026†	126.2	159.2	[100]	ug/L	15:15:46
1	Si 251.611†	16243.9	15825.3	[500]	ug/L	15:15:26
1	Sn 189.927†	570.7	567.7	[100]	ug/L	15:15:46
1	Ti 334.940†	61446.1	63319.2	[100]	ug/L	15:15:26
1	Tl 190.801†	296.9	332.2	[100]	ug/L	15:15:46
1	U 409.014†	1614.3	3639.0	[100]	ug/L	15:15:26
1	V 292.402†	13401.7	14820.2	[100]	ug/L	15:15:26
1	Zn 213.857†	11462.0	10934.7	[100]	ug/L	15:15:26
1	SiO2†	16191.9	15751.6	[1069.5]	ug/L	15:16:42
2	Sc Radial	5112.2	5112.2	102	%	15:15:09
2	Y RADIAL	5479.8	5479.8	100.9	%	15:15:09
2	K 766.490 Radial†	8010.3	5299.7	[1000]	ug/L	15:15:04
2	Sr 421.552†	15649.1	15433.2	[100]	ug/L	15:15:09
2	Sc 361.383	847214.4	847214.4	99.392	%	15:15:51
2	Y 371.029	714501.8	714501.8	98.870	%	15:15:51
2	Ag 328.068†	22517.5	22297.3	[100]	ug/L	15:15:51
2	As 188.979†	209.8	234.7	[100]	ug/L	15:16:11
2	B 249.677†	3743.0	4397.7	[100]	ug/L	15:15:51
2	Ba 233.527†	13157.6	13249.5	[100]	ug/L	15:15:51
2	Be 313.107†	264189.7	270391.5	[100]	ug/L	15:15:51
2	Cd 226.502†	9051.7	9311.2	[100]	ug/L	15:15:51
2	Co 228.616†	4816.9	4921.0	[100]	ug/L	15:16:11
2	Cr 267.716†	9245.5	9218.8	[100]	ug/L	15:15:51
2	Cu 324.752†	40344.7	34179.3	[100]	ug/L	15:15:51
2	Mn 257.610†	94292.9	94425.0	[100]	ug/L	15:15:51
2	Mo 202.031†	1447.2	1432.4	[100]	ug/L	15:16:11
2	Ni 231.604†	4054.5	4011.3	[100]	ug/L	15:16:11
2	P 214.914†	1042.0	818.5	[500]	ug/L	15:16:11
2	Pb 220.353†	764.4	832.4	[100]	ug/L	15:16:11
2	S 181.975 Axial†	186.1	144.2	[200]	ug/L	15:16:11
2	Sb 206.836†	311.6	285.5	[100]	ug/L	15:16:11
2	Se 196.026†	132.2	165.0	[100]	ug/L	15:16:11
2	Si 251.611†	16303.3	15852.6	[500]	ug/L	15:15:51
2	Sn 189.927†	570.5	566.4	[100]	ug/L	15:16:11
2	Ti 334.940†	61535.5	63286.5	[100]	ug/L	15:15:51
2	Tl 190.801†	298.8	333.5	[100]	ug/L	15:16:11
2	U 409.014†	1553.2	3574.4	[100]	ug/L	15:15:51

2	V 292.402†	13469.4	14861.5	[100] ug/L	15:15:51
2	Zn 213.857†	11447.6	10897.4	[100] ug/L	15:15:51
2	SiO2†	16377.9	15906.4	[1069.5] ug/L	15:16:47
3	Sc Radial	5061.1	5061.1	101 %	15:15:19
3	Y RADIAL	5441.4	5441.4	100.2 %	15:15:19
3	K 766.490 Radial†	8046.2	5415.0	[1000] ug/L	15:15:14
3	Sr 421.552†	15488.2	15428.7	[100] ug/L	15:15:19
3	Sc 361.383	845493.3	845493.3	99.190 %	15:16:17
3	Y 371.029	714409.7	714409.7	98.857 %	15:16:17
3	Ag 328.068†	22151.1	21974.0	[100] ug/L	15:16:17
3	As 188.979†	209.1	234.4	[100] ug/L	15:16:37
3	B 249.677†	3689.4	4351.4	[100] ug/L	15:16:17
3	Ba 233.527†	13021.0	13138.8	[100] ug/L	15:16:17
3	Be 313.107†	260785.0	267500.1	[100] ug/L	15:16:17
3	Cd 226.502†	8950.7	9227.9	[100] ug/L	15:16:17
3	Co 228.616†	4819.9	4934.0	[100] ug/L	15:16:37
3	Cr 267.716†	9117.0	9108.2	[100] ug/L	15:16:17
3	Cu 324.752†	39795.5	33708.3	[100] ug/L	15:16:17
3	Mn 257.610†	93083.9	93399.2	[100] ug/L	15:16:17
3	Mo 202.031†	1447.2	1435.3	[100] ug/L	15:16:37
3	Ni 231.604†	4084.9	4050.3	[100] ug/L	15:16:37
3	P 214.914†	1047.1	825.8	[500] ug/L	15:16:37
3	Pb 220.353†	794.2	864.0	[100] ug/L	15:16:37
3	S 181.975 Axial†	187.0	145.5	[200] ug/L	15:16:37
3	Sb 206.836†	308.9	283.5	[100] ug/L	15:16:37
3	Se 196.026†	124.3	157.3	[100] ug/L	15:16:37
3	Si 251.611†	16035.6	15616.1	[500] ug/L	15:16:17
3	Sn 189.927†	570.5	567.5	[100] ug/L	15:16:37
3	Ti 334.940†	60707.1	62577.4	[100] ug/L	15:16:17
3	Tl 190.801†	301.9	337.2	[100] ug/L	15:16:37
3	U 409.014†	1766.5	3792.6	[100] ug/L	15:16:17
3	V 292.402†	13290.2	14708.4	[100] ug/L	15:16:17
3	Zn 213.857†	11272.7	10744.5	[100] ug/L	15:16:17
3	SiO2†	16213.8	15774.5	[1069.5] ug/L	15:16:52

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	846081.6	981.27	0.12%	99.259	%
Sc Radial	5138.8	93.93	1.83%	102	%
Y 371.029	713941.8	891.40	0.12%	98.793	%
Y RADIAL	5522.1	108.23	1.96%	101.7	%
Ag 328.068†	22166.7	170.33	0.77%	[100]	ug/L
As 188.979†	235.5	1.53	0.65%	[100]	ug/L
B 249.677†	4383.7	28.07	0.64%	[100]	ug/L
Ba 233.527†	13203.3	57.62	0.44%	[100]	ug/L
Be 313.107†	269473.9	1710.73	0.63%	[100]	ug/L
Cd 226.502†	9289.2	53.79	0.58%	[100]	ug/L
Co 228.616†	4926.7	6.64	0.13%	[100]	ug/L
Cr 267.716†	9179.8	62.12	0.68%	[100]	ug/L
Cu 324.752†	33983.0	245.13	0.72%	[100]	ug/L
K 766.490 Radial†	5255.8	185.15	3.52%	[1000]	ug/L
Mn 257.610†	94145.1	652.63	0.69%	[100]	ug/L
Mo 202.031†	1435.9	3.97	0.28%	[100]	ug/L
Ni 231.604†	4030.8	19.51	0.48%	[100]	ug/L
P 214.914†	822.4	3.69	0.45%	[500]	ug/L
Pb 220.353†	844.6	17.03	2.02%	[100]	ug/L
S 181.975 Axial†	144.2	1.30	0.90%	[200]	ug/L
Sb 206.836†	286.1	3.00	1.05%	[100]	ug/L
Se 196.026†	160.5	4.03	2.51%	[100]	ug/L
Si 251.611†	15764.7	129.35	0.82%	[500]	ug/L
Sn 189.927†	567.2	0.71	0.12%	[100]	ug/L
Sr 421.552†	15251.5	310.76	2.04%	[100]	ug/L
Ti 334.940†	63061.0	419.17	0.66%	[100]	ug/L
Tl 190.801†	334.3	2.60	0.78%	[100]	ug/L
U 409.014†	3668.6	112.08	3.05%	[100]	ug/L
V 292.402†	14796.7	79.21	0.54%	[100]	ug/L
Zn 213.857†	10858.9	100.82	0.93%	[100]	ug/L
SiO2†	15810.8	83.57	0.53%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 1/11/2010 15:19:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4947.4	4947.4	98.3	%	15:20:56
1	Y RADIAL	5332.9	5332.9	98.22	%	15:20:56
1	Al 396.153Radial†	6169.6	6279.9	[5000]	ug/L	15:20:56
1	Ca 317.933Radial†	3073.1	3107.9	[5000]	ug/L	15:21:16
1	K 766.490 Radial†	28495.3	26411.6	[5000]	ug/L	15:20:56
1	Mg 279.077 IEC†	153.2	154.0	[5000]	ug/L	15:21:16
1	Sr 421.552†	72590.6	73900.2	[500]	ug/L	15:20:56
1	Sc 361.383	845959.4	845959.4	99.245	%	15:22:13
1	Y 371.029	704574.1	704574.1	97.496	%	15:22:13
1	Ag 328.068†	109304.6	109778.5	[500]	ug/L	15:22:18
1	As 188.979†	1133.6	1165.9	[500]	ug/L	15:22:38
1	B 249.677†	21532.1	22327.8	[500]	ug/L	15:22:18
1	Ba 233.527†	63524.4	64019.3	[500]	ug/L	15:22:18
1	Be 313.107†	1282691.0	1297038.9	[500]	ug/L	15:22:13
1	Cd 226.502†	44542.3	45085.4	[500]	ug/L	15:22:18
1	Co 228.616†	24275.9	24535.4	[500]	ug/L	15:22:18
1	Cr 267.716†	44493.6	44749.0	[500]	ug/L	15:22:18
1	Cu 324.752†	171233.9	166125.0	[500]	ug/L	15:22:18
1	Mn 257.610†	441107.2	444019.6	[500]	ug/L	15:22:13
1	Mo 202.031†	7141.6	7172.2	[500]	ug/L	15:22:38
1	Ni 231.604†	20051.1	20135.7	[500]	ug/L	15:22:18
1	P 214.914†	4289.0	4091.7	[2500]	ug/L	15:22:38
1	Pb 220.353†	4017.0	4110.9	[500]	ug/L	15:22:38
1	S 181.975 Axial†	756.8	719.6	[1000]	ug/L	15:22:38
1	Sb 206.836†	1495.2	1478.6	[500]	ug/L	15:22:38
1	Se 196.026†	743.5	781.2	[500]	ug/L	15:22:38
1	Si 251.611†	79663.0	79718.8	[2500]	ug/L	15:22:18
1	Sn 189.927†	2851.9	2865.9	[500]	ug/L	15:22:38
1	Ti 334.940†	303997.7	307685.9	[500]	ug/L	15:22:18
1	Tl 190.801†	1584.4	1629.3	[500]	ug/L	15:22:38
1	U 409.014†	15168.3	17295.4	[500]	ug/L	15:22:18
1	V 292.402†	71188.8	73040.4	[500]	ug/L	15:22:18
1	Zn 213.857†	53175.8	52960.3	[500]	ug/L	15:22:18
1	SiO2†	78555.7	78581.9	[5347.5]	ug/L	15:23:46
2	Sc Radial	4915.6	4915.6	97.6	%	15:21:21
2	Y RADIAL	5252.9	5252.9	96.75	%	15:21:21
2	Al 396.153Radial†	6150.5	6300.9	[5000]	ug/L	15:21:21
2	Ca 317.933Radial†	3080.9	3136.1	[5000]	ug/L	15:21:41
2	K 766.490 Radial†	28478.4	26581.6	[5000]	ug/L	15:21:21
2	Mg 279.077 IEC†	155.6	157.5	[5000]	ug/L	15:21:41
2	Sr 421.552†	72234.7	74012.7	[500]	ug/L	15:21:21
2	Sc 361.383	844486.1	844486.1	99.072	%	15:22:44
2	Y 371.029	704049.9	704049.9	97.424	%	15:22:44
2	Ag 328.068†	109991.6	110664.1	[500]	ug/L	15:22:49
2	As 188.979†	1109.8	1143.8	[500]	ug/L	15:23:09
2	B 249.677†	21612.8	22447.2	[500]	ug/L	15:22:49
2	Ba 233.527†	63964.4	64575.0	[500]	ug/L	15:22:49
2	Be 313.107†	1307265.4	1324098.4	[500]	ug/L	15:22:44
2	Cd 226.502†	44958.3	45583.6	[500]	ug/L	15:22:49
2	Co 228.616†	24453.8	24757.6	[500]	ug/L	15:22:49
2	Cr 267.716†	44830.8	45167.6	[500]	ug/L	15:22:49
2	Cu 324.752†	172172.7	167373.5	[500]	ug/L	15:22:49
2	Mn 257.610†	449086.2	452848.8	[500]	ug/L	15:22:44
2	Mo 202.031†	7069.3	7111.8	[500]	ug/L	15:23:09
2	Ni 231.604†	20231.9	20353.5	[500]	ug/L	15:22:49
2	P 214.914†	4232.0	4041.7	[2500]	ug/L	15:23:09
2	Pb 220.353†	3962.1	4062.6	[500]	ug/L	15:23:09
2	S 181.975 Axial†	747.6	711.6	[1000]	ug/L	15:23:09
2	Sb 206.836†	1483.9	1469.9	[500]	ug/L	15:23:09

2	Se 196.026†	737.9	776.8	[500] ug/L	15:23:09
2	Si 251.611†	80223.3	80424.5	[2500] ug/L	15:22:49
2	Sn 189.927†	2827.8	2846.6	[500] ug/L	15:23:09
2	Ti 334.940†	305730.8	309969.7	[500] ug/L	15:22:49
2	Tl 190.801†	1570.4	1618.0	[500] ug/L	15:23:09
2	U 409.014†	15243.5	17398.0	[500] ug/L	15:22:49
2	V 292.402†	71765.1	73747.1	[500] ug/L	15:22:49
2	Zn 213.857†	53614.1	53496.1	[500] ug/L	15:22:49
2	SiO2†	78964.2	79132.3	[5347.5] ug/L	15:23:51
3	Sc Radial	4989.2	4989.2	99.1 %	15:21:46
3	Y RADIAL	5321.5	5321.5	98.01 %	15:21:46
3	Al 396.153Radial†	6212.5	6270.6	[5000] ug/L	15:21:46
3	Ca 317.933Radial†	3013.5	3021.6	[5000] ug/L	15:22:06
3	K 766.490 Radial†	28728.7	26404.2	[5000] ug/L	15:21:46
3	Mg 279.077 IEC†	154.9	154.5	[5000] ug/L	15:22:06
3	Sr 421.552†	72818.3	73511.1	[500] ug/L	15:21:46
3	Sc 361.383	851201.0	851201.0	99.860 %	15:23:15
3	Y 371.029	708627.2	708627.2	98.057 %	15:23:15
3	Ag 328.068†	109131.6	108927.1	[500] ug/L	15:23:20
3	As 188.979†	1112.6	1137.8	[500] ug/L	15:23:40
3	B 249.677†	21585.1	22247.3	[500] ug/L	15:23:20
3	Ba 233.527†	63372.4	63472.9	[500] ug/L	15:23:20
3	Be 313.107†	1297867.8	1304278.4	[500] ug/L	15:23:15
3	Cd 226.502†	44539.8	44806.5	[500] ug/L	15:23:20
3	Co 228.616†	24287.3	24396.1	[500] ug/L	15:23:20
3	Cr 267.716†	44423.6	44402.8	[500] ug/L	15:23:20
3	Cu 324.752†	170756.3	164584.3	[500] ug/L	15:23:20
3	Mn 257.610†	446804.6	446988.0	[500] ug/L	15:23:15
3	Mo 202.031†	7101.1	7087.4	[500] ug/L	15:23:40
3	Ni 231.604†	20021.1	19981.2	[500] ug/L	15:23:20
3	P 214.914†	4263.6	4039.7	[2500] ug/L	15:23:40
3	Pb 220.353†	3986.8	4055.8	[500] ug/L	15:23:40
3	S 181.975 Axial†	742.0	700.0	[1000] ug/L	15:23:40
3	Sb 206.836†	1490.0	1464.2	[500] ug/L	15:23:40
3	Se 196.026†	727.7	760.7	[500] ug/L	15:23:40
3	Si 251.611†	79709.5	79271.1	[2500] ug/L	15:23:20
3	Sn 189.927†	2843.9	2840.2	[500] ug/L	15:23:40
3	Ti 334.940†	303580.5	305381.9	[500] ug/L	15:23:20
3	Tl 190.801†	1582.4	1617.5	[500] ug/L	15:23:40
3	U 409.014†	14959.5	16992.1	[500] ug/L	15:23:20
3	V 292.402†	71100.6	72510.3	[500] ug/L	15:23:20
3	Zn 213.857†	53189.5	52644.1	[500] ug/L	15:23:20
3	SiO2†	80285.2	79826.4	[5347.5] ug/L	15:23:56

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	847215.5	3529.26	0.42%	99.392	%
Sc Radial	4950.7	36.89	0.75%	98.3	%
Y 371.029	705750.4	2505.10	0.35%	97.659	%
Y RADIAL	5302.5	43.29	0.82%	97.66	%
Ag 328.068†	109789.9	868.57	0.79%	[500]	ug/L
Al 396.153Radial†	6283.8	15.52	0.25%	[5000]	ug/L
As 188.979†	1149.1	14.79	1.29%	[500]	ug/L
B 249.677†	22340.8	100.54	0.45%	[500]	ug/L
Ba 233.527†	64022.4	551.06	0.86%	[500]	ug/L
Be 313.107†	1308471.9	14008.70	1.07%	[500]	ug/L
Ca 317.933Radial†	3088.5	59.66	1.93%	[5000]	ug/L
Cd 226.502†	45158.5	393.66	0.87%	[500]	ug/L
Co 228.616†	24563.0	182.33	0.74%	[500]	ug/L
Cr 267.716†	44773.1	382.95	0.86%	[500]	ug/L
Cu 324.752†	166027.6	1397.18	0.84%	[500]	ug/L
K 766.490 Radial†	26465.8	100.35	0.38%	[5000]	ug/L
Mg 279.077 IEC†	155.3	1.89	1.22%	[5000]	ug/L
Mn 257.610†	447952.2	4492.87	1.00%	[500]	ug/L
Mo 202.031†	7123.8	43.67	0.61%	[500]	ug/L
Ni 231.604†	20156.8	187.02	0.93%	[500]	ug/L
P 214.914†	4057.7	29.48	0.73%	[2500]	ug/L
Pb 220.353†	4076.4	30.05	0.74%	[500]	ug/L
S 181.975 Axial†	710.4	9.83	1.38%	[1000]	ug/L

Sb 206.836†	1470.9	7.27	0.49%	[500]	ug/L
Se 196.026†	772.9	10.74	1.39%	[500]	ug/L
Si 251.611†	79804.8	581.46	0.73%	[2500]	ug/L
Sn 189.927†	2850.9	13.39	0.47%	[500]	ug/L
Sr 421.552†	73808.0	263.22	0.36%	[500]	ug/L
Ti 334.940†	307679.2	2293.91	0.75%	[500]	ug/L
Tl 190.801†	1621.6	6.70	0.41%	[500]	ug/L
U 409.014†	17228.5	211.03	1.22%	[500]	ug/L
V 292.402†	73099.3	620.51	0.85%	[500]	ug/L
Zn 213.857†	53033.5	430.73	0.81%	[500]	ug/L
SiO2†	79180.2	623.61	0.79%	[5347.5]	ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 1/11/2010 15:26:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Rep#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4991.6	4991.6	99.1	%	15:27:59
1	Y RADIAL	5328.6	5328.6	98.14	%	15:27:59
1	Al 396.153Radial†	12660.1	12771.6	[10000]	ug/L	15:27:59
1	Ca 317.933Radial†	6320.0	6355.6	[10000]	ug/L	15:27:59
1	Fe 238.204 Radial†	1191.2	1192.7	[10000]	ug/L	15:28:19
1	K 766.490 Radial†	56635.2	54541.3	[10000]	ug/L	15:27:59
1	Mg 279.077 IEC†	311.3	312.1	[10000]	ug/L	15:28:19
1	Na 589.592 Radial†	32605.3	34171.4	[10000]	ug/L	15:27:59
1	Sr 421.552†	153973.9	155342.4	[1000]	ug/L	15:27:59
1	Sc 361.383	853558.2	853558.2	100.14	%	15:29:18
1	Y 371.029	708914.2	708914.2	98.097	%	15:29:18
1	Ag 328.068†	216775.3	216122.6	[1000]	ug/L	15:29:18
1	As 188.979†	2299.9	2320.4	[1000]	ug/L	15:29:38
1	B 249.677†	44323.4	44895.0	[1000]	ug/L	15:29:18
1	Ba 233.527†	128248.6	128085.7	[1000]	ug/L	15:29:18
1	Be 313.107†	2619791.8	2620816.1	[1000]	ug/L	15:29:18
1	Cd 226.502†	89888.6	89970.5	[1000]	ug/L	15:29:18
1	Co 228.616†	48773.3	48781.7	[1000]	ug/L	15:29:18
1	Cr 267.716†	89442.2	89237.4	[1000]	ug/L	15:29:18
1	Cu 324.752†	341095.7	334219.8	[1000]	ug/L	15:29:18
1	Mn 257.610†	904877.2	903202.3	[1000]	ug/L	15:29:18
1	Mo 202.031†	14130.5	14087.5	[1000]	ug/L	15:29:38
1	Ni 231.604†	40183.6	40061.1	[1000]	ug/L	15:29:18
1	P 214.914†	8404.6	8163.3	[5000]	ug/L	15:29:38
1	Pb 220.353†	8100.8	8153.2	[1000]	ug/L	15:29:38
1	S 181.975 Axial†	1452.9	1407.9	[2000]	ug/L	15:29:38
1	Sb 206.836†	2946.6	2914.7	[1000]	ug/L	15:29:38
1	Se 196.026†	1515.4	1545.4	[1000]	ug/L	15:29:38
1	Si 251.611†	157018.3	156254.4	[5000]	ug/L	15:29:18
1	Sn 189.927†	5642.6	5627.3	[1000]	ug/L	15:29:38
1	Ti 334.940†	620768.4	621299.2	[1000]	ug/L	15:29:18
1	Tl 190.801†	3227.0	3255.4	[1000]	ug/L	15:29:38
1	U 409.014†	31729.0	33697.5	[1000]	ug/L	15:29:18
1	V 292.402†	145175.5	146287.8	[1000]	ug/L	15:29:18
1	Zn 213.857†	106205.1	105440.5	[1000]	ug/L	15:29:18
1	SiO2†	157949.1	157162.7	[10695]	ug/L	15:30:39
2	Sc Radial	4736.3	4736.3	94.1	%	15:28:24
2	Y RADIAL	5085.9	5085.9	93.67	%	15:28:24
2	Al 396.153Radial†	12468.6	13256.4	[10000]	ug/L	15:28:24
2	Ca 317.933Radial†	6199.0	6570.6	[10000]	ug/L	15:28:24
2	Fe 238.204 Radial†	1184.0	1249.9	[10000]	ug/L	15:28:44
2	K 766.490 Radial†	55376.3	56282.3	[10000]	ug/L	15:28:24
2	Mg 279.077 IEC†	313.7	331.6	[10000]	ug/L	15:28:44
2	Na 589.592 Radial†	31980.7	35280.2	[10000]	ug/L	15:28:24
2	Sr 421.552†	150876.6	160421.5	[1000]	ug/L	15:28:24
2	Sc 361.383	856770.6	856770.6	100.51	%	15:29:46
2	Y 371.029	713390.2	713390.2	98.716	%	15:29:46
2	Ag 328.068†	217597.7	216129.2	[1000]	ug/L	15:29:46
2	As 188.979†	2277.6	2289.6	[1000]	ug/L	15:30:06
2	B 249.677†	44372.2	44777.6	[1000]	ug/L	15:29:46
2	Ba 233.527†	128252.4	127609.2	[1000]	ug/L	15:29:46
2	Be 313.107†	2630936.8	2622095.0	[1000]	ug/L	15:29:46
2	Cd 226.502†	90039.5	89784.1	[1000]	ug/L	15:29:46
2	Co 228.616†	48826.6	48652.1	[1000]	ug/L	15:29:46
2	Cr 267.716†	89756.8	89215.5	[1000]	ug/L	15:29:46
2	Cu 324.752†	342472.0	334312.0	[1000]	ug/L	15:29:46
2	Mn 257.610†	905292.8	900227.7	[1000]	ug/L	15:29:46
2	Mo 202.031†	14136.2	14040.3	[1000]	ug/L	15:30:06
2	Ni 231.604†	40315.0	40041.3	[1000]	ug/L	15:29:46

2	P 214.914†	8424.5	8151.6	[5000] ug/L	15:30:06
2	Pb 220.353†	8088.8	8110.8	[1000] ug/L	15:30:06
2	S 181.975 Axial†	1450.9	1400.5	[2000] ug/L	15:30:06
2	Sb 206.836†	2931.6	2888.7	[1000] ug/L	15:30:06
2	Se 196.026†	1521.6	1545.8	[1000] ug/L	15:30:06
2	Si 251.611†	157269.3	155916.2	[5000] ug/L	15:29:46
2	Sn 189.927†	5628.2	5591.8	[1000] ug/L	15:30:06
2	Ti 334.940†	622229.7	620428.6	[1000] ug/L	15:29:46
2	Tl 190.801†	3223.5	3239.9	[1000] ug/L	15:30:06
2	U 409.014†	31853.1	33702.1	[1000] ug/L	15:29:46
2	V 292.402†	145673.8	146240.0	[1000] ug/L	15:29:46
2	Zn 213.857†	106459.8	105296.2	[1000] ug/L	15:29:46
2	SiO2†	157350.0	155975.2	[10695] ug/L	15:30:44
3	Sc Radial	5063.8	5063.8	101 %	15:28:49
3	Y RADIAL	5371.0	5371.0	98.92 %	15:28:49
3	Al 396.153Radial†	12735.9	12664.9	[10000] ug/L	15:28:49
3	Ca 317.933Radial†	6335.3	6279.9	[10000] ug/L	15:28:49
3	Fe 238.204 Radial†	1169.2	1153.7	[10000] ug/L	15:29:09
3	K 766.490 Radial†	56959.1	54048.2	[10000] ug/L	15:28:49
3	Mg 279.077 IEC†	305.4	301.7	[10000] ug/L	15:29:09
3	Na 589.592 Radial†	32787.3	33883.0	[10000] ug/L	15:28:49
3	Sr 421.552†	155040.2	154186.5	[1000] ug/L	15:28:49
3	Sc 361.383	848587.0	848587.0	99.553 %	15:30:14
3	Y 371.029	705534.4	705534.4	97.629 %	15:30:14
3	Ag 328.068†	216529.3	217143.7	[1000] ug/L	15:30:14
3	As 188.979†	2285.4	2319.2	[1000] ug/L	15:30:34
3	B 249.677†	44227.4	45057.9	[1000] ug/L	15:30:14
3	Ba 233.527†	127929.5	128515.5	[1000] ug/L	15:30:14
3	Be 313.107†	2617713.7	2634055.2	[1000] ug/L	15:30:14
3	Cd 226.502†	89763.7	90371.0	[1000] ug/L	15:30:14
3	Co 228.616†	48665.0	48958.3	[1000] ug/L	15:30:14
3	Cr 267.716†	89514.0	89832.7	[1000] ug/L	15:30:14
3	Cu 324.752†	341213.1	336333.3	[1000] ug/L	15:30:14
3	Mn 257.610†	902472.6	906080.8	[1000] ug/L	15:30:14
3	Mo 202.031†	14199.9	14240.0	[1000] ug/L	15:30:34
3	Ni 231.604†	40146.9	40259.3	[1000] ug/L	15:30:14
3	P 214.914†	8453.8	8261.9	[5000] ug/L	15:30:34
3	Pb 220.353†	8136.4	8236.3	[1000] ug/L	15:30:34
3	S 181.975 Axial†	1461.3	1424.9	[2000] ug/L	15:30:34
3	Sb 206.836†	2945.8	2931.1	[1000] ug/L	15:30:34
3	Se 196.026†	1527.9	1566.8	[1000] ug/L	15:30:34
3	Si 251.611†	156676.0	156829.2	[5000] ug/L	15:30:14
3	Sn 189.927†	5652.9	5670.7	[1000] ug/L	15:30:34
3	Ti 334.940†	619875.3	624033.7	[1000] ug/L	15:30:14
3	Tl 190.801†	3235.2	3282.6	[1000] ug/L	15:30:34
3	U 409.014†	31640.7	33794.4	[1000] ug/L	15:30:14
3	V 292.402†	145180.3	147142.0	[1000] ug/L	15:30:14
3	Zn 213.857†	106254.1	106111.0	[1000] ug/L	15:30:14
3	SiO2†	155719.3	155847.0	[10695] ug/L	15:30:50

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	852972.0	4123.17	0.48%	100.07	%
Sc Radial	4930.6	172.08	3.49%	97.9	%
Y 371.029	709279.6	3940.67	0.56%	98.147	%
Y RADIAL	5261.9	153.82	2.92%	96.91	%
Ag 328.068†	216465.2	587.67	0.27%	[1000]	ug/L
Al 396.153Radial†	12897.6	315.27	2.44%	[10000]	ug/L
As 188.979†	2309.7	17.47	0.76%	[1000]	ug/L
B 249.677†	44910.1	140.76	0.31%	[1000]	ug/L
Ba 233.527†	128070.1	453.32	0.35%	[1000]	ug/L
Be 313.107†	2625655.5	7302.44	0.28%	[1000]	ug/L
Ca 317.933Radial†	6402.0	150.81	2.36%	[10000]	ug/L
Cd 226.502†	90041.9	299.87	0.33%	[1000]	ug/L
Co 228.616†	48797.3	153.69	0.31%	[1000]	ug/L
Cr 267.716†	89428.5	350.22	0.39%	[1000]	ug/L
Cu 324.752†	334955.0	1194.48	0.36%	[1000]	ug/L
Fe 238.204 Radial†	1198.8	48.37	4.04%	[10000]	ug/L
K 766.490 Radial†	54957.3	1173.72	2.14%	[10000]	ug/L

Mg 279.077 IEC†	315.2	15.17	4.81%	[10000]	ug/L
Mn 257.610†	903170.3	2926.65	0.32%	[1000]	ug/L
Mo 202.031†	14122.6	104.35	0.74%	[1000]	ug/L
Na 589.592 Radial†	34444.9	737.64	2.14%	[10000]	ug/L
Ni 231.604†	40120.5	120.56	0.30%	[1000]	ug/L
P 214.914†	8192.3	60.61	0.74%	[5000]	ug/L
Pb 220.353†	8166.8	63.83	0.78%	[1000]	ug/L
S 181.975 Axial†	1411.1	12.50	0.89%	[2000]	ug/L
Sb 206.836†	2911.5	21.35	0.73%	[1000]	ug/L
Se 196.026†	1552.7	12.21	0.79%	[1000]	ug/L
Si 251.611†	156333.3	461.59	0.30%	[5000]	ug/L
Sn 189.927†	5629.9	39.50	0.70%	[1000]	ug/L
Sr 421.552†	156650.1	3316.87	2.12%	[1000]	ug/L
Ti 334.940†	621920.5	1881.15	0.30%	[1000]	ug/L
Tl 190.801†	3259.3	21.61	0.66%	[1000]	ug/L
U 409.014†	33731.3	54.70	0.16%	[1000]	ug/L
V 292.402†	146556.6	507.53	0.35%	[1000]	ug/L
Zn 213.857†	105615.9	434.83	0.41%	[1000]	ug/L
SiO2†	156328.3	725.47	0.46%	[10695]	ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 1/11/2010 15:33:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4878.1	4878.1	96.9	%	15:35:14
1	Y RADIAL	5191.4	5191.4	95.62	%	15:35:14
1	Al 396.153Radial†	63564.9	65614.4	[50000]	ug/L	15:34:54
1	Ca 317.933Radial†	30640.8	31608.6	[50000]	ug/L	15:34:54
1	Fe 238.204 Radial†	2222.4	2285.2	[20000]	ug/L	15:35:14
1	Mg 279.077 IEC†	1446.9	1491.6	[50000]	ug/L	15:35:14
1	Na 589.592 Radial†	63708.9	67042.8	[20000]	ug/L	15:34:54
1	Sc 361.383	828781.4	828781.4	97.229	%	15:36:11
1	Y 371.029	685978.7	685978.7	94.923	%	15:36:11
2	Sc Radial	4868.6	4868.6	96.7	%	15:35:39
2	Y RADIAL	5182.0	5182.0	95.44	%	15:35:39
2	Al 396.153Radial†	62506.8	64647.7	[50000]	ug/L	15:35:19
2	Ca 317.933Radial†	30109.2	31120.4	[50000]	ug/L	15:35:19
2	Fe 238.204 Radial†	2222.3	2289.5	[20000]	ug/L	15:35:39
2	Mg 279.077 IEC†	1450.4	1498.2	[50000]	ug/L	15:35:39
2	Na 589.592 Radial†	62672.0	66098.4	[20000]	ug/L	15:35:19
2	Sc 361.383	832642.6	832642.6	97.682	%	15:36:16
2	Y 371.029	689630.1	689630.1	95.428	%	15:36:16
3	Sc Radial	4821.9	4821.9	95.8	%	15:36:04
3	Y RADIAL	5146.9	5146.9	94.80	%	15:36:04
3	Al 396.153Radial†	61540.7	64265.6	[50000]	ug/L	15:35:44
3	Ca 317.933Radial†	29642.4	30934.8	[50000]	ug/L	15:35:44
3	Fe 238.204 Radial†	2204.8	2293.6	[20000]	ug/L	15:36:04
3	Mg 279.077 IEC†	1427.2	1488.4	[50000]	ug/L	15:36:04
3	Na 589.592 Radial†	61672.1	65682.5	[20000]	ug/L	15:35:44
3	Sc 361.383	833640.6	833640.6	97.799	%	15:36:22
3	Y 371.029	690643.4	690643.4	95.569	%	15:36:22

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	831688.2	2566.33	0.31%	97.570	%
Sc Radial	4856.2	30.10	0.62%	96.4	%
Y 371.029	688750.7	2453.51	0.36%	95.307	%
Y RADIAL	5173.5	23.45	0.45%	95.29	%
Al 396.153Radial†	64842.6	695.21	1.07%	[50000]	ug/L
Ca 317.933Radial†	31221.3	348.06	1.11%	[50000]	ug/L
Fe 238.204 Radial†	2289.4	4.19	0.18%	[20000]	ug/L
Mg 279.077 IEC†	1492.7	4.98	0.33%	[50000]	ug/L
Na 589.592 Radial†	66274.6	697.04	1.05%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	217.1	0.00000	0.999982	
Al 396.153Radial	3	Lin Thru 0	0.0	1.296	0.00000	0.999995	
As 188.979	3	Lin Thru 0	0.0	2.308	0.00000	0.999996	
B 249.677	3	Lin Thru 0	0.0	44.86	0.00000	0.999996	
Ba 233.527	3	Lin Thru 0	0.0	128.1	0.00000	0.999996	
Be 313.107	3	Lin Thru 0	0.0	2624	0.00000	0.999996	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.6250	0.00000	0.999988	
Cd 226.502	3	Lin Thru 0	0.0	90.12	0.00000	0.999995	
Co 228.616	3	Lin Thru 0	0.0	48.87	0.00000	0.999996	
Cr 267.716	3	Lin Thru 0	0.0	89.47	0.00000	0.999997	
Cu 324.752	3	Lin Thru 0	0.0	334.4	0.00000	0.999993	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1156	0.00000	0.999825	
K 766.490 Radial	3	Lin Thru 0	0.0	5.454	0.00000	0.999885	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0299	0.00000	0.999937
Mn 257.610	3	Lin Thru 0	0.0	902.0	0.00000	0.999987
Mo 202.031	3	Lin Thru 0	0.0	14.15	0.00000	0.999993
Na 589.592 Radia	2	Lin Thru 0	0.0	3.340	0.00000	0.999877
Ni 231.604	3	Lin Thru 0	0.0	40.16	0.00000	0.999998
P 214.914	3	Lin Thru 0	0.0	1.635	0.00000	0.999993
Pb 220.353	3	Lin Thru 0	0.0	8.166	0.00000	0.999995
S 181.975 Axial	3	Lin Thru 0	0.0	0.7066	0.00000	0.999995
Sb 206.836	3	Lin Thru 0	0.0	2.917	0.00000	0.999990
Se 196.026	3	Lin Thru 0	0.0	1.552	0.00000	0.999994
Si 251.611	3	Lin Thru 0	0.0	31.40	0.00000	0.999965
Sn 189.927	3	Lin Thru 0	0.0	5.645	0.00000	0.999987
Sr 421.552	3	Lin Thru 0	0.0	154.8	0.00000	0.999729
Ti 334.940	3	Lin Thru 0	0.0	620.7	0.00000	0.999990
Tl 190.801	3	Lin Thru 0	0.0	3.257	0.00000	0.999995
U 409.014	3	Lin Thru 0	0.0	33.90	0.00000	0.999937
V 292.402	3	Lin Thru 0	0.0	146.5	0.00000	0.999999
Zn 213.857	3	Lin Thru 0	0.0	105.7	0.00000	0.999996
SiO2	3	Lin Thru 0	0.0	14.66	0.00000	0.999986

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 1/11/2010 15:38:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5131.5	5131.5	102	%			15:40:26
1	Y RADIAL	5471.6	5471.6	100.8	%			15:40:26
1	Al 396.153Radial†	6248.8	6132.3	4705.2	ug/L	4705.2	ppb	15:40:26
1	Ca 317.933Radial†	2971.0	2895.6	4633.2	ug/L	4633.2	ppb	15:40:46
1	Fe 238.204 Radial†	561.3	541.9	4703.9	ug/L	4703.9	ppb	15:40:46
1	K 766.490 Radial†	15549.6	12668.0	2309.3	ug/L	2309.3	ppb	15:40:26
1	Mg 279.077 IEC†	151.4	146.6	4900.0	ug/L	4900.0	ppb	15:40:46
1	Na 589.592 Radial†	6369.4	7530.5	2254.7	ug/L	2254.7	ppb	15:40:26
1	Sr 421.552†	75677.1	74278.0	479.72	ug/L	479.72	ppb	15:40:26
1	Sc 361.383	854284.7	854284.7	100.22	%			15:41:43
1	Y 371.029	716450.9	716450.9	99.140	%			15:41:43
1	Ag 328.068†	55272.7	54792.6	255.27	ug/L	255.27	ppb	15:41:43
1	As 188.979†	1051.6	1072.9	466.86	ug/L	466.86	ppb	15:42:03
1	B 249.677†	21779.4	22363.2	496.68	ug/L	496.68	ppb	15:41:43
1	Ba 233.527†	63648.1	63519.0	497.13	ug/L	497.13	ppb	15:41:43
1	Be 313.107†	668692.5	671801.0	257.08	ug/L	257.08	ppb	15:41:43
1	Cd 226.502†	43550.6	43658.5	484.37	ug/L	484.37	ppb	15:41:43
1	Co 228.616†	23970.1	23991.9	491.30	ug/L	491.30	ppb	15:42:03
1	Cr 267.716†	42651.6	42474.1	475.47	ug/L	475.47	ppb	15:41:43
1	Cu 324.752†	171273.9	164483.5	491.83	ug/L	491.83	ppb	15:41:43
1	Mn 257.610†	453042.6	451597.2	500.97	ug/L	500.97	ppb	15:41:43
1	Mo 202.031†	7574.9	7534.4	532.87	ug/L	532.87	ppb	15:42:03
1	Ni 231.604†	19737.9	19626.4	488.40	ug/L	488.40	ppb	15:42:03
1	P 214.914†	4248.6	4009.3	2346.6	ug/L	2346.6	ppb	15:42:03
1	Pb 220.353†	3961.8	4016.4	493.52	ug/L	493.52	ppb	15:42:03
1	S 181.975 Axial†	1763.5	1716.6	2428.5	ug/L	2428.5	ppb	15:42:03
1	Sb 206.836†	1468.6	1437.4	511.46	ug/L	511.46	ppb	15:42:03
1	Se 196.026†	3858.8	3882.2	2518.7	ug/L	2518.7	ppb	15:42:03
1	Si 251.611†	147035.3	146160.2	4648.4	ug/L	4648.4	ppb	15:41:43
1	Sn 189.927†	3018.0	3003.7	532.88	ug/L	532.88	ppb	15:42:03
1	Ti 334.940†	301910.2	302618.0	487.29	ug/L	487.29	ppb	15:41:43
1	Tl 190.801†	1659.9	1689.1	521.27	ug/L	521.27	ppb	15:42:03
1	U 409.014†	14510.6	16490.2	484.86	ug/L	484.86	ppb	15:41:43
1	V 292.402†	71245.3	72397.7	501.73	ug/L	501.73	ppb	15:41:43
1	Zn 213.857†	53239.2	52501.4	492.33	ug/L	492.33	ppb	15:41:43
1	SiO2†	146051.2	145157.0	9889.8	ug/L	9889.8	ppb	15:43:01
2	Sc Radial	4910.6	4910.6	97.5	%			15:40:51
2	Y RADIAL	5267.0	5267.0	97.01	%			15:40:51
2	Al 396.153Radial†	6145.3	6302.1	4835.9	ug/L	4835.9	ppb	15:40:51
2	Ca 317.933Radial†	2989.4	3045.6	4873.2	ug/L	4873.2	ppb	15:41:11
2	Fe 238.204 Radial†	563.2	568.7	4936.2	ug/L	4936.2	ppb	15:41:11
2	K 766.490 Radial†	15451.2	13253.5	2416.5	ug/L	2416.5	ppb	15:40:51
2	Mg 279.077 IEC†	155.9	157.9	5277.3	ug/L	5277.3	ppb	15:41:11
2	Na 589.592 Radial†	6286.5	7726.6	2313.4	ug/L	2313.4	ppb	15:40:51
2	Sr 421.552†	75331.0	77263.9	499.00	ug/L	499.00	ppb	15:40:51
2	Sc 361.383	845183.0	845183.0	99.154	%			15:42:09
2	Y 371.029	707487.5	707487.5	97.899	%			15:42:09
2	Ag 328.068†	55142.7	55255.5	257.48	ug/L	257.48	ppb	15:42:09
2	As 188.979†	1047.5	1080.0	469.98	ug/L	469.98	ppb	15:42:29
2	B 249.677†	21710.0	22527.2	500.29	ug/L	500.29	ppb	15:42:09
2	Ba 233.527†	63434.9	63987.8	500.80	ug/L	500.80	ppb	15:42:09
2	Be 313.107†	664512.9	674771.0	258.22	ug/L	258.22	ppb	15:42:09
2	Cd 226.502†	43551.7	44127.6	489.56	ug/L	489.56	ppb	15:42:09
2	Co 228.616†	23990.6	24270.1	496.99	ug/L	496.99	ppb	15:42:29
2	Cr 267.716†	42601.0	42881.4	480.03	ug/L	480.03	ppb	15:42:09
2	Cu 324.752†	170507.0	165550.4	495.03	ug/L	495.03	ppb	15:42:09
2	Mn 257.610†	451993.5	455407.1	505.20	ug/L	505.20	ppb	15:42:09
2	Mo 202.031†	7556.1	7596.9	537.30	ug/L	537.30	ppb	15:42:29
2	Ni 231.604†	19743.9	19844.5	493.83	ug/L	493.83	ppb	15:42:29

2	P 214.914†	4250.6	4057.0	2375.0 ug/L	2375.0 ppb	15:42:29
2	Pb 220.353†	3961.9	4059.1	498.76 ug/L	498.76 ppb	15:42:29
2	S 181.975 Axial†	1772.3	1744.5	2467.8 ug/L	2467.8 ppb	15:42:29
2	Sb 206.836†	1463.0	1447.6	515.12 ug/L	515.12 ppb	15:42:29
2	Se 196.026†	3853.6	3918.5	2542.9 ug/L	2542.9 ppb	15:42:29
2	Si 251.611†	146609.1	147310.2	4685.0 ug/L	4685.0 ppb	15:42:09
2	Sn 189.927†	3020.8	3039.0	539.17 ug/L	539.17 ppb	15:42:29
2	Ti 334.940†	300787.7	304729.9	490.69 ug/L	490.69 ppb	15:42:09
2	Tl 190.801†	1666.8	1713.9	528.90 ug/L	528.90 ppb	15:42:29
2	U 409.014†	14533.5	16669.2	490.10 ug/L	490.10 ppb	15:42:09
2	V 292.402†	70947.9	72863.2	504.95 ug/L	504.95 ppb	15:42:09
2	Zn 213.857†	53089.4	52922.4	496.25 ug/L	496.25 ppb	15:42:09
2	SiO2†	148214.6	148908.2	10146 ug/L	10146 ppb	15:43:06
3	Sc Radial	4926.9	4926.9	97.8 %		15:41:16
3	Y RADIAL	5294.5	5294.5	97.51 %		15:41:16
3	Al 396.153Radial†	6239.9	6377.8	4894.5 ug/L	4894.5 ppb	15:41:16
3	Ca 317.933Radial†	2993.0	3039.1	4862.8 ug/L	4862.8 ppb	15:41:36
3	Fe 238.204 Radial†	565.3	568.9	4938.0 ug/L	4938.0 ppb	15:41:36
3	K 766.490 Radial†	15428.2	13177.5	2402.6 ug/L	2402.6 ppb	15:41:16
3	Mg 279.077 IEC†	151.7	153.1	5116.5 ug/L	5116.5 ppb	15:41:36
3	Na 589.592 Radial†	6269.0	7687.4	2301.7 ug/L	2301.7 ppb	15:41:16
3	Sr 421.552†	75643.4	77327.0	499.41 ug/L	499.41 ppb	15:41:16
3	Sc 361.383	847906.9	847906.9	99.473 %		15:42:35
3	Y 371.029	709674.4	709674.4	98.202 %		15:42:35
3	Ag 328.068†	55242.3	55176.9	257.11 ug/L	257.11 ppb	15:42:35
3	As 188.979†	1055.7	1085.0	472.12 ug/L	472.12 ppb	15:42:55
3	B 249.677†	21722.1	22469.0	499.00 ug/L	499.00 ppb	15:42:35
3	Ba 233.527†	63420.9	63768.2	499.09 ug/L	499.09 ppb	15:42:35
3	Be 313.107†	664984.9	673092.5	257.58 ug/L	257.58 ppb	15:42:35
3	Cd 226.502†	43466.3	43900.6	487.04 ug/L	487.04 ppb	15:42:35
3	Co 228.616†	23912.7	24114.1	493.79 ug/L	493.79 ppb	15:42:55
3	Cr 267.716†	42637.0	42779.6	478.90 ug/L	478.90 ppb	15:42:35
3	Cu 324.752†	170928.9	165422.1	494.64 ug/L	494.64 ppb	15:42:35
3	Mn 257.610†	452358.0	454309.2	503.99 ug/L	503.99 ppb	15:42:35
3	Mo 202.031†	7539.0	7555.2	534.36 ug/L	534.36 ppb	15:42:55
3	Ni 231.604†	19632.7	19668.7	489.46 ug/L	489.46 ppb	15:42:55
3	P 214.914†	4233.5	4026.0	2356.0 ug/L	2356.0 ppb	15:42:55
3	Pb 220.353†	3930.9	4015.1	493.38 ug/L	493.38 ppb	15:42:55
3	S 181.975 Axial†	1780.9	1747.4	2471.9 ug/L	2471.9 ppb	15:42:55
3	Sb 206.836†	1458.8	1438.6	511.86 ug/L	511.86 ppb	15:42:55
3	Se 196.026†	3836.9	3889.2	2524.0 ug/L	2524.0 ppb	15:42:55
3	Si 251.611†	146961.9	147189.8	4681.2 ug/L	4681.2 ppb	15:42:35
3	Sn 189.927†	2986.9	2995.0	531.38 ug/L	531.38 ppb	15:42:55
3	Ti 334.940†	301442.1	304413.3	490.19 ug/L	490.19 ppb	15:42:35
3	Tl 190.801†	1662.1	1703.7	525.78 ug/L	525.78 ppb	15:42:55
3	U 409.014†	14584.1	16673.0	490.22 ug/L	490.22 ppb	15:42:35
3	V 292.402†	70996.2	72682.0	503.67 ug/L	503.67 ppb	15:42:35
3	Zn 213.857†	53081.7	52742.6	494.58 ug/L	494.58 ppb	15:42:35
3	SiO2†	146987.9	147194.8	10029 ug/L	10029 ppb	15:43:11

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	849124.9	99.616	%	0.5480				0.55%
Sc Radial	4989.7	99.1	%	2.44				2.47%
Y 371.029	711204.2	98.414	%	0.6467				0.66%
Y RADIAL	5344.4	98.43	%	2.046				2.08%
Ag 328.068†	55075.0	256.62	ug/L	1.185	256.62	ppb	1.185	0.46%
QC value within limits for Ag 328.068 Recovery = 102.65%								
Al 396.153Radial†	6270.7	4811.9	ug/L	96.94	4811.9	ppb	96.94	2.01%
QC value within limits for Al 396.153Radial Recovery = 96.24%								
As 188.979†	1079.3	469.65	ug/L	2.649	469.65	ppb	2.649	0.56%
QC value within limits for As 188.979 Recovery = 93.93%								
B 249.677†	22453.1	498.66	ug/L	1.833	498.66	ppb	1.833	0.37%
QC value within limits for B 249.677 Recovery = 99.73%								
Ba 233.527†	63758.3	499.01	ug/L	1.839	499.01	ppb	1.839	0.37%
QC value within limits for Ba 233.527 Recovery = 99.80%								
Be 313.107†	673221.5	257.63	ug/L	0.571	257.63	ppb	0.571	0.22%
QC value within limits for Be 313.107 Recovery = 103.05%								
Ca 317.933Radial†	2993.4	4789.7	ug/L	135.68	4789.7	ppb	135.68	2.83%

QC value within limits for Ca 317.933Radial Recovery = 95.79%

Cd 226.502†	43895.6	486.99 ug/L	2.593	486.99 ppb	2.593	0.53%
QC value within limits for Cd 226.502 Recovery = 97.40%						
Co 228.616†	24125.3	494.03 ug/L	2.855	494.03 ppb	2.855	0.58%
QC value within limits for Co 228.616 Recovery = 98.81%						
Cr 267.716†	42711.7	478.13 ug/L	2,373	478.13 ppb	2.373	0.50%
QC value within limits for Cr 267.716 Recovery = 95.63%						
Cu 324.752†	165152.0	493.83 ug/L	1.747	493.83 ppb	1.747	0.35%
QC value within limits for Cu 324.752 Recovery = 98.77%						
Fe 238.204 Radial†	559.8	4859.4 ug/L	134.62	4859.4 ppb	134.62	2.77%
QC value within limits for Fe 238.204 Radial Recovery = 97.19%						
K 766.490 Radial†	13033.0	2376.1 ug/L	58.28	2376.1 ppb	58.28	2.45%
QC value within limits for K 766.490 Radial Recovery = 95.04%						
Mg 279.077 IEC†	152.6	5098.0 ug/L	189.35	5098.0 ppb	189.35	3.71%
QC value within limits for Mg 279.077 IEC Recovery = 101.96%						
Mn 257.610†	453771.2	503.39 ug/L	2.181	503.39 ppb	2.181	0.43%
QC value within limits for Mn 257.610 Recovery = 100.68%						
Mo 202.031†	7562.2	534.84 ug/L	2.257	534.84 ppb	2.257	0.42%
QC value within limits for Mo 202.031 Recovery = 106.97%						
Na 589.592 Radial†	7648.2	2289.9 ug/L	31.07	2289.9 ppb	31.07	1.36%
QC value within limits for Na 589.592 Radial Recovery = 91.60%						
Ni 231.604†	19713.2	490.56 ug/L	2.879	490.56 ppb	2.879	0.59%
QC value within limits for Ni 231.604 Recovery = 98.11%						
P 214.914†	4030.8	2359.2 ug/L	14.46	2359.2 ppb	14.46	0.61%
QC value within limits for P 214.914 Recovery = 94.37%						
Pb 220.353†	4030.2	495.22 ug/L	3.068	495.22 ppb	3.068	0.62%
QC value within limits for Pb 220.353 Recovery = 99.04%						
S 181.975 Axial†	1736.2	2456.1 ug/L	23.98	2456.1 ppb	23.98	0.98%
QC value within limits for S 181.975 Axial Recovery = 98.24%						
Sb 206.836†	1441.2	512.81 ug/L	2.011	512.81 ppb	2.011	0.39%
QC value within limits for Sb 206.836 Recovery = 102.56%						
Se 196.026†	3896.7	2528.5 ug/L	12.70	2528.5 ppb	12.70	0.50%
QC value within limits for Se 196.026 Recovery = 101.14%						
Si 251.611†	146886.7	4671.5 ug/L	20.11	4671.5 ppb	20.11	0.43%
QC value within limits for Si 251.611 Recovery = 93.43%						
Sn 189.927†	3012.6	534.48 ug/L	4.133	534.48 ppb	4.133	0.77%
QC value within limits for Sn 189.927 Recovery = 106.90%						
Sr 421.552†	76289.6	492.71 ug/L	11.253	492.71 ppb	11.253	2.28%
QC value within limits for Sr 421.552 Recovery = 98.54%						
Ti 334.940†	303920.4	489.39 ug/L	1.833	489.39 ppb	1.833	0.37%
QC value within limits for Ti 334.940 Recovery = 97.88%						
Tl 190.801†	1702.2	525.32 ug/L	3.836	525.32 ppb	3.836	0.73%
QC value within limits for Tl 190.801 Recovery = 105.06%						
U 409.014†	16610.8	488.39 ug/L	3.060	488.39 ppb	3.060	0.63%
QC value within limits for U 409.014 Recovery = 97.68%						
V 292.402†	72647.6	503.45 ug/L	1.621	503.45 ppb	1.621	0.32%
QC value within limits for V 292.402 Recovery = 100.69%						
Zn 213.857†	52722.1	494.39 ug/L	1.967	494.39 ppb	1.967	0.40%
QC value within limits for Zn 213.857 Recovery = 98.88%						
SiO2†	147086.7	10021 ug/L	128.1	10021 ppb	128.1	1.28%
QC value within limits for SiO2 Recovery = 93.70%						

All analyte(s) passed QC.

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 1/11/2010 15:45:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5012.3	5012.3	99.5	%			15:47:15
1	Y RADIAL	5401.5	5401.5	99.49	%			15:47:15
1	Al 396.153Radial†	-18.5	-17.9	-13.801	ug/L	-13.801	ppb	15:47:15
1	Ca 317.933Radial†	14.3	-5.4	-8.6742	ug/L	-8.6742	ppb	15:47:35
1	Fe 238.204 Radial†	8.8	-0.0	-0.3309	ug/L	-0.3309	ppb	15:47:35
1	K 766.490 Radial†	2514.4	-64.3	-11.763	ug/L	-11.763	ppb	15:47:15
1	Mg 279.077 IEC†	0.7	-1.2	-41.240	ug/L	-41.240	ppb	15:47:35
1	Na 589.592 Radial†	-1330.5	-56.2	-16.826	ug/L	-16.826	ppb	15:47:15
1	Sr 421.552†	7.3	26.8	0.1731	ug/L	0.1731	ppb	15:47:15
1	Sc 361.383	860881.3	860881.3	101.00	%			15:48:32
1	Y 371.029	730069.0	730069.0	101.02	%			15:48:32
1	Ag 328.068†	307.3	-53.7	-0.2488	ug/L	-0.2488	ppb	15:48:37
1	As 188.979†	-15.0	8.7	3.7893	ug/L	3.7893	ppb	15:48:57
1	B 249.677†	-477.6	159.0	3.5441	ug/L	3.5441	ppb	15:48:57
1	Ba 233.527†	-5.4	6.0	0.0472	ug/L	0.0472	ppb	15:48:57
1	Be 313.107†	-4520.9	109.1	0.0415	ug/L	0.0415	ppb	15:48:37
1	Cd 226.502†	-216.3	-10.0	-0.1106	ug/L	-0.1106	ppb	15:48:57
1	Co 228.616†	-68.2	7.2	0.1444	ug/L	0.1444	ppb	15:48:57
1	Cr 267.716†	76.2	-7.8	-0.0883	ug/L	-0.0883	ppb	15:48:57
1	Cu 324.752†	6381.6	-93.5	-0.2806	ug/L	-0.2806	ppb	15:48:37
1	Mn 257.610†	420.3	-28.7	-0.0302	ug/L	-0.0302	ppb	15:48:57
1	Mo 202.031†	12.2	-11.6	-0.8207	ug/L	-0.8207	ppb	15:48:57
1	Ni 231.604†	89.2	20.3	0.5064	ug/L	0.5064	ppb	15:48:57
1	P 214.914†	220.2	-11.8	-7.1766	ug/L	-7.1766	ppb	15:48:57
1	Pb 220.353†	-66.2	-2.1	-0.2669	ug/L	-0.2669	ppb	15:48:57
1	S 181.975 Axial†	48.4	4.9	6.9158	ug/L	6.9158	ppb	15:48:57
1	Sb 206.836†	40.3	11.9	4.0820	ug/L	4.0820	ppb	15:48:57
1	Se 196.026†	-23.8	8.5	5.4449	ug/L	5.4449	ppb	15:48:57
1	Si 251.611†	525.5	-30.2	-0.9507	ug/L	-0.9507	ppb	15:48:57
1	Sn 189.927†	9.1	1.4	0.2404	ug/L	0.2404	ppb	15:48:57
1	Ti 334.940†	-1410.9	-22.5	-0.0347	ug/L	-0.0347	ppb	15:48:37
1	Tl 190.801†	-34.8	-1.6	-0.4960	ug/L	-0.4960	ppb	15:48:57
1	U 409.014†	-1963.9	67.1	1.9784	ug/L	1.9784	ppb	15:48:32
1	V 292.402†	-1313.5	9.2	0.0535	ug/L	0.0535	ppb	15:48:37
1	Zn 213.857†	612.4	-13.9	-0.1345	ug/L	-0.1345	ppb	15:48:57
1	SiO2†	539.9	-37.1	-2.5110	ug/L	-2.5110	ppb	15:50:03
2	Sc Radial	5026.4	5026.4	99.8	%			15:47:40
2	Y RADIAL	5421.1	5421.1	99.85	%			15:47:40
2	Al 396.153Radial†	-32.0	-31.4	-24.228	ug/L	-24.228	ppb	15:47:40
2	Ca 317.933Radial†	24.0	4.2	6.7766	ug/L	6.7766	ppb	15:48:00
2	Fe 238.204 Radial†	8.8	-0.1	-0.9622	ug/L	-0.9622	ppb	15:48:00
2	K 766.490 Radial†	2560.4	-25.2	-4.6285	ug/L	-4.6285	ppb	15:47:40
2	Mg 279.077 IEC†	0.9	-1.0	-32.020	ug/L	-32.020	ppb	15:48:00
2	Na 589.592 Radial†	-1298.3	-20.1	-6.0150	ug/L	-6.0150	ppb	15:47:40
2	Sr 421.552†	6.9	26.5	0.1709	ug/L	0.1709	ppb	15:47:40
2	Sc 361.383	871702.6	871702.6	102.26	%			15:49:02
2	Y 371.029	737843.8	737843.8	102.10	%			15:49:02
2	Ag 328.068†	330.1	-35.2	-0.1664	ug/L	-0.1664	ppb	15:49:07
2	As 188.979†	-20.9	3.2	1.3860	ug/L	1.3860	ppb	15:49:28
2	B 249.677†	-477.7	164.7	3.6709	ug/L	3.6709	ppb	15:49:28
2	Ba 233.527†	-14.1	-2.4	-0.0187	ug/L	-0.0187	ppb	15:49:28
2	Be 313.107†	-4633.4	54.6	0.0211	ug/L	0.0211	ppb	15:49:07
2	Cd 226.502†	-213.1	-4.3	-0.0464	ug/L	-0.0464	ppb	15:49:28
2	Co 228.616†	-66.1	10.0	0.2050	ug/L	0.2050	ppb	15:49:28
2	Cr 267.716†	89.3	4.0	0.0433	ug/L	0.0433	ppb	15:49:28
2	Cu 324.752†	6462.1	-93.2	-0.2819	ug/L	-0.2819	ppb	15:49:07
2	Mn 257.610†	452.5	-2.4	-0.0014	ug/L	-0.0014	ppb	15:49:28
2	Mo 202.031†	24.8	0.5	0.0384	ug/L	0.0384	ppb	15:49:28
2	Ni 231.604†	51.6	-17.5	-0.4349	ug/L	-0.4349	ppb	15:49:28

2	P 214.914†	209.8	-24.7	-15.078 ug/L	-15.078 ppb	15:49:28
2	Pb 220.353†	-63.2	1.5	0.1811 ug/L	0.1811 ppb	15:49:28
2	S 181.975 Axial†	43.8	-0.2	-0.2084 ug/L	-0.2084 ppb	15:49:28
2	Sb 206.836†	49.6	20.5	7.0387 ug/L	7.0387 ppb	15:49:28
2	Se 196.026†	-31.7	1.0	0.6611 ug/L	0.6611 ppb	15:49:28
2	Si 251.611†	538.3	-24.1	-0.7684 ug/L	-0.7684 ppb	15:49:28
2	Sn 189.927†	6.1	-1.7	-0.2989 ug/L	-0.2989 ppb	15:49:28
2	Ti 334.940†	-1328.7	75.3	0.1222 ug/L	0.1222 ppb	15:49:07
2	Tl 190.801†	-39.1	-5.4	-1.6562 ug/L	-1.6562 ppb	15:49:28
2	U 409.014†	-1867.4	185.6	5.4738 ug/L	5.4738 ppb	15:49:02
2	V 292.402†	-1321.6	17.4	0.1290 ug/L	0.1290 ppb	15:49:07
2	Zn 213.857†	629.1	-5.1	-0.0446 ug/L	-0.0446 ppb	15:49:28
2	SiO2†	557.1	-26.9	-1.8357 ug/L	-1.8357 ppb	15:50:08
3	Sc Radial	5086.8	5086.8	101 %		15:48:06
3	Y RADIAL	5459.8	5459.8	100.6 %		15:48:06
3	Al 396.153Radial†	5.7	6.3	4.8594 ug/L	4.8594 ppb	15:48:06
3	Ca 317.933Radial†	16.8	-3.2	-5.0566 ug/L	-5.0566 ppb	15:48:26
3	Fe 238.204 Radial†	9.5	0.5	4.4449 ug/L	4.4449 ppb	15:48:26
3	K 766.490 Radial†	2570.3	-45.9	-8.4024 ug/L	-8.4024 ppb	15:48:06
3	Mg 279.077 IEC†	0.6	-1.3	-44.641 ug/L	-44.641 ppb	15:48:26
3	Na 589.592 Radial†	-1346.6	-52.5	-15.723 ug/L	-15.723 ppb	15:48:06
3	Sr 421.552†	-5.4	14.1	0.0913 ug/L	0.0913 ppb	15:48:06
3	Sc 361.383	858140.5	858140.5	100.67 %		15:49:33
3	Y 371.029	727477.4	727477.4	100.67 %		15:49:33
3	Ag 328.068†	415.2	54.5	0.2481 ug/L	0.2481 ppb	15:49:38
3	As 188.979†	-20.0	3.7	1.6152 ug/L	1.6152 ppb	15:49:58
3	B 249.677†	-492.4	142.8	3.1820 ug/L	3.1820 ppb	15:49:58
3	Ba 233.527†	0.4	11.8	0.0911 ug/L	0.0911 ppb	15:49:58
3	Be 313.107†	-4611.3	4.9	0.0018 ug/L	0.0018 ppb	15:49:38
3	Cd 226.502†	-202.6	2.8	0.0316 ug/L	0.0316 ppb	15:49:58
3	Co 228.616†	-73.5	1.6	0.0332 ug/L	0.0332 ppb	15:49:58
3	Cr 267.716†	83.5	-0.3	-0.0056 ug/L	-0.0056 ppb	15:49:58
3	Cu 324.752†	6483.5	27.9	0.0823 ug/L	0.0823 ppb	15:49:38
3	Mn 257.610†	433.0	-14.7	-0.0140 ug/L	-0.0140 ppb	15:49:58
3	Mo 202.031†	21.3	-2.6	-0.1819 ug/L	-0.1819 ppb	15:49:58
3	Ni 231.604†	69.9	1.5	0.0363 ug/L	0.0363 ppb	15:49:58
3	P 214.914†	233.2	1.8	1.0622 ug/L	1.0622 ppb	15:49:58
3	Pb 220.353†	-57.3	6.4	0.7884 ug/L	0.7884 ppb	15:49:58
3	S 181.975 Axial†	43.6	0.3	0.4175 ug/L	0.4175 ppb	15:49:58
3	Sb 206.836†	27.8	-0.3	-0.0892 ug/L	-0.0892 ppb	15:49:58
3	Se 196.026†	-29.2	3.0	1.9237 ug/L	1.9237 ppb	15:49:58
3	Si 251.611†	553.1	-1.0	-0.0305 ug/L	-0.0305 ppb	15:49:58
3	Sn 189.927†	11.3	3.6	0.6343 ug/L	0.6343 ppb	15:49:58
3	Ti 334.940†	-1395.2	-11.4	-0.0163 ug/L	-0.0163 ppb	15:49:38
3	Tl 190.801†	-27.8	5.2	1.5966 ug/L	1.5966 ppb	15:49:58
3	U 409.014†	-1948.4	76.2	2.2480 ug/L	2.2480 ppb	15:49:33
3	V 292.402†	-1418.3	-99.1	-0.6765 ug/L	-0.6765 ppb	15:49:38
3	Zn 213.857†	610.9	-13.4	-0.1277 ug/L	-0.1277 ppb	15:49:58
3	SiO2†	517.4	-57.7	-3.9333 ug/L	-3.9333 ppb	15:50:13

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	863574.8	101.31	%	0.841				0.83%
Sc Radial	5041.9	100	%	0.8				0.78%
Y 371.029	731796.7	101.26	%	0.747				0.74%
Y RADIAL	5427.5	99.96	%	0.546				0.55%
Ag 328.068†	-11.5	-0.0557	ug/L	0.26628	-0.0557	ppb	0.26628	477.91%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-14.4	-11.057	ug/L	14.7368	-11.057	ppb	14.7368	133.29%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.2	2.2635	ug/L	1.32637	2.2635	ppb	1.32637	58.60%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	155.5	3.4657	ug/L	0.25373	3.4657	ppb	0.25373	7.32%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.1	0.0399	ug/L	0.05524	0.0399	ppb	0.05524	138.56%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	56.2	0.0215	ug/L	0.01982	0.0215	ppb	0.01982	92.33%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.4	-2.3180	ug/L	8.08125	-2.3180	ppb	8.08125	348.63%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	-3.8	-0.0418 ug/L	0.07123	-0.0418 ppb	0.07123	170.43%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	6.3	0.1275 ug/L	0.08713	0.1275 ppb	0.08713	68.33%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-1.4	-0.0169 ug/L	0.06653	-0.0169 ppb	0.06653	393.98%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-52.9	-0.1600 ug/L	0.20991	-0.1600 ppb	0.20991	131.16%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.1	1.0506 ug/L	2.95646	1.0506 ppb	2.95646	281.40%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-45.1	-8.2647 ug/L	3.56936	-8.2647 ppb	3.56936	43.19%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-1.2	-39.301 ug/L	6.5303	-39.301 ppb	6.5303	16.62%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-15.3	-0.0152 ug/L	0.01441	-0.0152 ppb	0.01441	94.82%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-4.5	-0.3214 ug/L	0.44625	-0.3214 ppb	0.44625	138.84%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-42.9	-12.854 ug/L	5.9488	-12.854 ppb	5.9488	46.28%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	1.4	0.0360 ug/L	0.47065	0.0360 ppb	0.47065	>999.9%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-11.6	-7.0640 ug/L	8.07047	-7.0640 ppb	8.07047	114.25%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	1.9	0.2342 ug/L	0.52966	0.2342 ppb	0.52966	226.16%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	1.7	2.3750 ug/L	3.94493	2.3750 ppb	3.94493	166.10%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	10.7	3.6772 ug/L	3.58112	3.6772 ppb	3.58112	97.39%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	4.2	2.6766 ug/L	2.47915	2.6766 ppb	2.47915	92.62%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-18.4	-0.5832 ug/L	0.48727	-0.5832 ppb	0.48727	83.55%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.1	0.1919 ug/L	0.46846	0.1919 ppb	0.46846	244.09%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	22.5	0.1451 ug/L	0.04658	0.1451 ppb	0.04658	32.10%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	13.8	0.0237 ug/L	0.08580	0.0237 ppb	0.08580	361.38%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-0.6	-0.1852 ug/L	1.64853	-0.1852 ppb	1.64853	890.01%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	109.6	3.2334 ug/L	1.94496	3.2334 ppb	1.94496	60.15%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-24.2	-0.1647 ug/L	0.44484	-0.1647 ppb	0.44484	270.15%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-10.8	-0.1022 ug/L	0.05003	-0.1022 ppb	0.05003	48.93%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-40.6	-2.7600 ug/L	1.07077	-2.7600 ppb	1.07077	38.80%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/11/2010 15:52:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5037.9	5037.9	100	%			15:54:18
1	Y RADIAL	5420.4	5420.4	99.83	%			15:54:18
1	Al 396.153Radial†	270.6	271.2	208.73	ug/L	208.73	ppb	15:54:18
1	Ca 317.933Radial†	149.7	129.9	207.82	ug/L	207.82	ppb	15:54:38
1	Fe 238.204 Radial†	23.6	14.7	127.71	ug/L	127.71	ppb	15:54:38
1	K 766.490 Radial†	3467.8	875.9	160.16	ug/L	160.16	ppb	15:54:18
1	Mg 279.077 IEC†	10.3	8.4	280.15	ug/L	280.15	ppb	15:54:38
1	Na 589.592 Radial†	-294.0	986.6	295.40	ug/L	295.40	ppb	15:54:18
1	Sr 421.552†	762.3	781.4	5.0453	ug/L	5.0453	ppb	15:54:18
1	Sc 361.383	860505.2	860505.2	100.95	%			15:55:34
1	Y 371.029	727613.9	727613.9	100.68	%			15:55:34
1	Ag 328.068†	1346.5	975.9	4.5059	ug/L	4.5059	ppb	15:55:39
1	As 188.979†	46.2	69.4	30.083	ug/L	30.083	ppb	15:55:59
1	B 249.677†	1593.6	2210.4	49.251	ug/L	49.251	ppb	15:55:39
1	Ba 233.527†	649.9	655.2	5.1295	ug/L	5.1295	ppb	15:55:59
1	Be 313.107†	8502.7	13007.9	4.9679	ug/L	4.9679	ppb	15:55:39
1	Cd 226.502†	243.6	445.4	4.9433	ug/L	4.9433	ppb	15:55:59
1	Co 228.616†	169.2	242.3	4.9701	ug/L	4.9701	ppb	15:55:59
1	Cr 267.716†	508.0	419.9	4.6825	ug/L	4.6825	ppb	15:55:59
1	Cu 324.752†	9837.7	3332.8	9.9426	ug/L	9.9426	ppb	15:55:39
1	Mn 257.610†	10001.8	9462.7	10.493	ug/L	10.493	ppb	15:55:39
1	Mo 202.031†	158.5	133.3	9.4306	ug/L	9.4306	ppb	15:55:59
1	Ni 231.604†	273.7	203.2	5.0568	ug/L	5.0568	ppb	15:55:59
1	P 214.914†	464.8	230.6	138.85	ug/L	138.85	ppb	15:55:59
1	Pb 220.353†	35.5	98.5	12.116	ug/L	12.116	ppb	15:55:59
1	S 181.975 Axial†	113.5	69.4	98.233	ug/L	98.233	ppb	15:55:59
1	Sb 206.836†	69.7	41.2	14.430	ug/L	14.430	ppb	15:55:59
1	Se 196.026†	13.1	45.0	29.445	ug/L	29.445	ppb	15:55:59
1	Si 251.611†	3647.5	3062.7	97.427	ug/L	97.427	ppb	15:55:39
1	Sn 189.927†	59.5	51.3	9.1131	ug/L	9.1131	ppb	15:55:59
1	Ti 334.940†	1779.2	3137.0	5.0291	ug/L	5.0291	ppb	15:55:39
1	Tl 190.801†	41.1	73.6	22.656	ug/L	22.656	ppb	15:55:59
1	U 409.014†	-169.6	1843.6	54.360	ug/L	54.360	ppb	15:55:34
1	V 292.402†	-641.0	674.8	4.8289	ug/L	4.8289	ppb	15:55:39
1	Zn 213.857†	1770.6	1133.7	10.665	ug/L	10.665	ppb	15:55:59
1	SiO2†	3695.3	3088.8	210.50	ug/L	210.50	ppb	15:57:05
2	Sc Radial	5010.4	5010.4	99.5	%			15:54:43
2	Y RADIAL	5391.1	5391.1	99.29	%			15:54:43
2	Al 396.153Radial†	259.0	261.0	200.90	ug/L	200.90	ppb	15:54:43
2	Ca 317.933Radial†	150.5	131.4	210.28	ug/L	210.28	ppb	15:55:03
2	Fe 238.204 Radial†	21.3	12.5	108.37	ug/L	108.37	ppb	15:55:03
2	K 766.490 Radial†	3431.6	858.5	156.97	ug/L	156.97	ppb	15:54:43
2	Mg 279.077 IEC†	12.2	10.3	344.37	ug/L	344.37	ppb	15:55:03
2	Na 589.592 Radial†	-298.5	980.4	293.56	ug/L	293.56	ppb	15:54:43
2	Sr 421.552†	763.2	786.5	5.0782	ug/L	5.0782	ppb	15:54:43
2	Sc 361.383	863273.7	863273.7	101.28	%			15:56:05
2	Y 371.029	729826.7	729826.7	100.99	%			15:56:05
2	Ag 328.068†	1491.5	1114.7	5.1419	ug/L	5.1419	ppb	15:56:10
2	As 188.979†	56.4	79.3	34.378	ug/L	34.378	ppb	15:56:30
2	B 249.677†	1532.7	2145.2	47.799	ug/L	47.799	ppb	15:56:10
2	Ba 233.527†	620.8	624.4	4.8885	ug/L	4.8885	ppb	15:56:30
2	Be 313.107†	8381.0	12860.8	4.9117	ug/L	4.9117	ppb	15:56:10
2	Cd 226.502†	267.7	468.4	5.1999	ug/L	5.1999	ppb	15:56:30
2	Co 228.616†	163.5	236.1	4.8445	ug/L	4.8445	ppb	15:56:30
2	Cr 267.716†	516.7	426.9	4.7615	ug/L	4.7615	ppb	15:56:30
2	Cu 324.752†	9777.8	3242.4	9.6727	ug/L	9.6727	ppb	15:56:10
2	Mn 257.610†	9961.1	9390.7	10.409	ug/L	10.409	ppb	15:56:10
2	Mo 202.031†	156.4	130.7	9.2479	ug/L	9.2479	ppb	15:56:30
2	Ni 231.604†	271.2	199.9	4.9735	ug/L	4.9735	ppb	15:56:30

2	P 214.914†	468.9	233.1	140.45 ug/L	140.45 ppb	15:56:30
2	Pb 220.353†	16.5	79.6	9.8040 ug/L	9.8040 ppb	15:56:30
2	S 181.975 Axial†	119.7	75.2	106.39 ug/L	106.39 ppb	15:56:30
2	Sb 206.836†	60.1	31.4	11.079 ug/L	11.079 ppb	15:56:30
2	Se 196.026†	16.9	48.7	31.777 ug/L	31.777 ppb	15:56:30
2	Si 251.611†	3636.4	3040.2	96.710 ug/L	96.710 ppb	15:56:10
2	Sn 189.927†	61.3	52.9	9.4050 ug/L	9.4050 ppb	15:56:30
2	Ti 334.940†	1760.6	3113.0	4.9865 ug/L	4.9865 ppb	15:56:10
2	Tl 190.801†	30.4	62.9	19.373 ug/L	19.373 ppb	15:56:30
2	U 409.014†	-258.3	1756.6	51.795 ug/L	51.795 ppb	15:56:05
2	V 292.402†	-620.8	696.8	4.9757 ug/L	4.9757 ppb	15:56:10
2	Zn 213.857†	1739.9	1097.8	10.327 ug/L	10.327 ppb	15:56:30
2	SiO2†	3663.0	3045.2	207.53 ug/L	207.53 ppb	15:57:11
3	Sc Radial	5096.0	5096.0	101 %		15:55:08
3	Y RADIAL	5494.9	5494.9	101.2 %		15:55:08
3	Al 396.153Radial†	257.4	255.0	196.26 ug/L	196.26 ppb	15:55:08
3	Ca 317.933Radial†	152.7	131.1	209.81 ug/L	209.81 ppb	15:55:28
3	Fe 238.204 Radial†	22.2	13.0	113.08 ug/L	113.08 ppb	15:55:28
3	K 766.490 Radial†	3509.4	877.4	160.45 ug/L	160.45 ppb	15:55:08
3	Mg 279.077 IEC†	14.2	12.1	405.35 ug/L	405.35 ppb	15:55:28
3	Na 589.592 Radial†	-336.1	948.3	283.95 ug/L	283.95 ppb	15:55:08
3	Sr 421.552†	768.2	778.5	5.0269 ug/L	5.0269 ppb	15:55:08
3	Sc 361.383	861164.6	861164.6	101.03 %		15:56:35
3	Y 371.029	729112.0	729112.0	100.89 %		15:56:35
3	Ag 328.068†	1387.3	1015.2	4.6835 ug/L	4.6835 ppb	15:56:40
3	As 188.979†	55.4	78.5	34.035 ug/L	34.035 ppb	15:57:00
3	B 249.677†	1643.5	2258.6	50.326 ug/L	50.326 ppb	15:56:40
3	Ba 233.527†	638.2	643.1	5.0353 ug/L	5.0353 ppb	15:57:00
3	Be 313.107†	8712.2	13208.9	5.0449 ug/L	5.0449 ppb	15:56:40
3	Cd 226.502†	255.5	457.0	5.0738 ug/L	5.0738 ppb	15:57:00
3	Co 228.616†	173.7	246.6	5.0596 ug/L	5.0596 ppb	15:57:00
3	Cr 267.716†	511.3	422.8	4.7150 ug/L	4.7150 ppb	15:57:00
3	Cu 324.752†	9895.0	3382.0	10.089 ug/L	10.089 ppb	15:56:40
3	Mn 257.610†	10072.8	9525.3	10.556 ug/L	10.556 ppb	15:56:40
3	Mo 202.031†	159.5	134.1	9.4889 ug/L	9.4889 ppb	15:57:00
3	Ni 231.604†	292.7	221.7	5.5183 ug/L	5.5183 ppb	15:57:00
3	P 214.914†	450.5	216.0	129.93 ug/L	129.93 ppb	15:57:00
3	Pb 220.353†	17.4	80.6	9.9220 ug/L	9.9220 ppb	15:57:00
3	S 181.975 Axial†	118.2	74.0	104.74 ug/L	104.74 ppb	15:57:00
3	Sb 206.836†	72.2	43.5	15.276 ug/L	15.276 ppb	15:57:00
3	Se 196.026†	25.2	56.9	37.088 ug/L	37.088 ppb	15:57:00
3	Si 251.611†	3690.4	3102.4	98.690 ug/L	98.690 ppb	15:56:40
3	Sn 189.927†	68.4	60.0	10.666 ug/L	10.666 ppb	15:57:00
3	Ti 334.940†	1925.1	3280.0	5.2497 ug/L	5.2497 ppb	15:56:40
3	Tl 190.801†	34.6	67.1	20.660 ug/L	20.660 ppb	15:57:00
3	U 409.014†	-183.2	1830.3	53.970 ug/L	53.970 ppb	15:56:35
3	V 292.402†	-609.9	706.0	5.0467 ug/L	5.0467 ppb	15:56:40
3	Zn 213.857†	1748.9	1110.8	10.447 ug/L	10.447 ppb	15:57:00
3	SiO2†	3709.4	3099.9	211.25 ug/L	211.25 ppb	15:57:16

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	861647.8	101.09	%	0.170				0.17%
Sc Radial	5048.1	100	%	0.9				0.87%
Y 371.029	728850.9	100.86	%	0.156				0.15%
Y RADIAL	5435.5	100.1	%	0.99				0.98%
Ag 328.068†	1035.3	4.7771	ug/L	0.32813	4.7771	ppb	0.32813	6.87%
QC value within limits for Ag 328.068 Recovery = 95.54%								
Al 396.153Radial†	262.4	201.97	ug/L	6.304	201.97	ppb	6.304	3.12%
QC value within limits for Al 396.153Radial Recovery = 100.98%								
As 188.979†	75.7	32.832	ug/L	2.3868	32.832	ppb	2.3868	7.27%
QC value within limits for As 188.979 Recovery = 109.44%								
B 249.677†	2204.7	49.125	ug/L	1.2678	49.125	ppb	1.2678	2.58%
QC value within limits for B 249.677 Recovery = 98.25%								
Ba 233.527†	640.9	5.0178	ug/L	0.12144	5.0178	ppb	0.12144	2.42%
QC value within limits for Ba 233.527 Recovery = 100.36%								
Be 313.107†	13025.9	4.9748	ug/L	0.06689	4.9748	ppb	0.06689	1.34%
QC value within limits for Be 313.107 Recovery = 99.50%								
Ca 317.933Radial†	130.8	209.31	ug/L	1.306	209.31	ppb	1.306	0.62%

QC value within limits for Ca 317.933Radial Recovery = 104.65%

Cd 226.502†	457.0	5.0723 ug/L	0.12828	5.0723 ppb	0.12828	2.53%
QC value within limits for Cd 226.502 Recovery = 101.45%						
Co 228.616†	241.7	4.9581 ug/L	0.10803	4.9581 ppb	0.10803	2.18%
QC value within limits for Co 228.616 Recovery = 99.16%						
Cr 267.716†	423.2	4.7197 ug/L	0.03971	4.7197 ppb	0.03971	0.84%
QC value within limits for Cr 267.716 Recovery = 94.39%						
Cu 324.752†	3319.1	9.9015 ug/L	0.21130	9.9015 ppb	0.21130	2.13%
QC value within limits for Cu 324.752 Recovery = 99.02%						
Fe 238.204 Radial†	13.4	116.39 ug/L	10.087	116.39 ppb	10.087	8.67%
QC value within limits for Fe 238.204 Radial Recovery = 116.39%						
K 766.490 Radial†	870.6	159.20 ug/L	1.930	159.20 ppb	1.930	1.21%
QC value within limits for K 766.490 Radial Recovery = 106.13%						
Mg 279.077 IEC†	10.3	343.29 ug/L	62.606	343.29 ppb	62.606	18.24%
QC value within limits for Mg 279.077 IEC Recovery = 114.43%						
Mn 257.610†	9459.6	10.486 ug/L	0.0739	10.486 ppb	0.0739	0.70%
QC value within limits for Mn 257.610 Recovery = 104.86%						
Mo 202.031†	132.7	9.3891 ug/L	0.12572	9.3891 ppb	0.12572	1.34%
QC value within limits for Mo 202.031 Recovery = 93.89%						
Na 589.592 Radial†	971.8	290.97 ug/L	6.150	290.97 ppb	6.150	2.11%
QC value within limits for Na 589.592 Radial Recovery = 96.99%						
Ni 231.604†	208.3	5.1829 ug/L	0.29347	5.1829 ppb	0.29347	5.66%
QC value within limits for Ni 231.604 Recovery = 103.66%						
P 214.914†	226.6	136.41 ug/L	5.672	136.41 ppb	5.672	4.16%
QC value within limits for P 214.914 Recovery = 90.94%						
Pb 220.353†	86.2	10.614 ug/L	1.3021	10.614 ppb	1.3021	12.27%
QC value within limits for Pb 220.353 Recovery = 106.14%						
S 181.975 Axial†	72.9	103.12 ug/L	4.313	103.12 ppb	4.313	4.18%
QC value within limits for S 181.975 Axial Recovery = 103.12%						
Sb 206.836†	38.7	13.595 ug/L	2.2199	13.595 ppb	2.2199	16.33%
QC value greater than the upper limit for Sb 206.836 Recovery = 135.95%						
Se 196.026†	50.2	32.770 ug/L	3.9170	32.770 ppb	3.9170	11.95%
QC value within limits for Se 196.026 Recovery = 109.23%						
Si 251.611†	3068.4	97.609 ug/L	1.0021	97.609 ppb	1.0021	1.03%
QC value within limits for Si 251.611 Recovery = 97.61%						
Sn 189.927†	54.7	9.7281 ug/L	0.82548	9.7281 ppb	0.82548	8.49%
QC value within limits for Sn 189.927 Recovery = 97.28%						
Sr 421.552†	782.1	5.0501 ug/L	0.02599	5.0501 ppb	0.02599	0.51%
QC value within limits for Sr 421.552 Recovery = 101.00%						
Ti 334.940†	3176.7	5.0884 ug/L	0.14130	5.0884 ppb	0.14130	2.78%
QC value within limits for Ti 334.940 Recovery = 101.77%						
Tl 190.801†	67.9	20.896 ug/L	1.6541	20.896 ppb	1.6541	7.92%
QC value within limits for Tl 190.801 Recovery = 104.48%						
U 409.014†	1810.1	53.375 ug/L	1.3821	53.375 ppb	1.3821	2.59%
QC value within limits for U 409.014 Recovery = 106.75%						
V 292.402†	692.5	4.9505 ug/L	0.11108	4.9505 ppb	0.11108	2.24%
QC value within limits for V 292.402 Recovery = 99.01%						
Zn 213.857†	1114.1	10.480 ug/L	0.1711	10.480 ppb	0.1711	1.63%
QC value within limits for Zn 213.857 Recovery = 104.80%						
SiO2†	3078.0	209.76 ug/L	1.971	209.76 ppb	1.971	0.94%
QC value within limits for SiO2 Recovery = 98.48%						

QC Failed. Continue with analysis.

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 1/11/2010 15:59:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4554.2	4554.2	90.4	%			16:01:25
1	Y RADIAL	4880.1	4880.1	89.88	%			16:01:25
1	Al 396.153Radial†	588273.1	650416.6	501790	ug/L	501790	ppb	16:01:20
1	Ca 317.933Radial†	266503.8	294636.4	471450	ug/L	471450	ppb	16:01:20
1	Fe 238.204 Radial†	19366.6	21403.5	185230	ug/L	185230	ppb	16:01:25
1	K 766.490 Radial†	1955.5	-428.1	-236.05	ug/L	-236.05	ppb	16:01:20
1	Mg 279.077 IEC†	13060.3	14438.0	482210	ug/L	482210	ppb	16:01:25
1	Na 589.592 Radial†	-1089.1	76.3	22.843	ug/L	22.843	ppb	16:01:25
1	Sr 421.552†	532.5	608.3	0.4087	ug/L	0.4087	ppb	16:01:25
1	Sc 361.383	713940.1	713940.1	83.757	%			16:01:52
1	Y 371.029	590028.4	590028.4	81.646	%			16:01:52
1	Ag 328.068†	-9732.7	-11978.2	-1.5459	ug/L	-1.5459	ppb	16:01:52
1	As 188.979†	-99.1	-94.7	-4.6533	ug/L	-4.6533	ppb	16:02:12
1	B 249.677†	290.9	979.1	3.0617	ug/L	3.0617	ppb	16:01:52
1	Ba 233.527†	-441.1	-515.2	2.7787	ug/L	2.7787	ppb	16:02:12
1	Be 313.107†	-4427.5	-700.8	-0.3201	ug/L	-0.3201	ppb	16:01:52
1	Cd 226.502†	1281.6	1734.3	0.1201	ug/L	0.1201	ppb	16:02:12
1	Co 228.616†	-24.7	45.2	-1.7518	ug/L	-1.7518	ppb	16:02:12
1	Cr 267.716†	-113.7	-219.0	1.1722	ug/L	1.1722	ppb	16:02:12
1	Cu 324.752†	3876.8	-1783.6	4.4537	ug/L	4.4537	ppb	16:01:52
1	Mn 257.610†	1798.9	1702.9	2.8489	ug/L	2.8489	ppb	16:01:52
1	Mo 202.031†	-203.7	-266.9	-0.5853	ug/L	-0.5853	ppb	16:02:12
1	Ni 231.604†	186.0	154.1	3.8375	ug/L	3.8375	ppb	16:02:12
1	P 214.914†	194.2	2.0	-22.430	ug/L	-22.430	ppb	16:02:12
1	Pb 220.353†	-739.6	-819.7	-2.6514	ug/L	-2.6514	ppb	16:02:12
1	S 181.975 Axial†	83.2	56.3	-14.356	ug/L	-14.356	ppb	16:02:12
1	Sb 206.836†	78.9	66.3	7.7109	ug/L	7.7109	ppb	16:02:12
1	Se 196.026†	-829.4	-958.3	-0.6276	ug/L	-0.6276	ppb	16:02:12
1	Si 251.611†	584.3	147.1	4.9185	ug/L	4.9185	ppb	16:02:12
1	Sn 189.927†	-363.0	-441.0	-7.6066	ug/L	-7.6066	ppb	16:02:12
1	Ti 334.940†	-13311.2	-14518.2	-9.4664	ug/L	-9.4664	ppb	16:01:52
1	Tl 190.801†	-92.5	-77.6	-24.029	ug/L	-24.029	ppb	16:02:12
1	U 409.014†	-806.7	1048.4	9.8177	ug/L	9.8177	ppb	16:01:52
1	V 292.402†	1193.8	2735.1	-0.5070	ug/L	-0.5070	ppb	16:02:12
1	Zn 213.857†	2889.7	2829.8	8.7795	ug/L	8.7795	ppb	16:02:12
1	SiO2†	582.1	123.3	8.9247	ug/L	8.9247	ppb	16:03:09
2	Sc Radial	4313.1	4313.1	85.7	%			16:01:35
2	Y RADIAL	4611.6	4611.6	84.94	%			16:01:35
2	Al 396.153Radial†	593425.0	692788.0	534480	ug/L	534480	ppb	16:01:30
2	Ca 317.933Radial†	268523.4	313464.8	501570	ug/L	501570	ppb	16:01:30
2	Fe 238.204 Radial†	19406.2	22646.7	195990	ug/L	195990	ppb	16:01:35
2	K 766.490 Radial†	1950.8	-312.8	-224.98	ug/L	-224.98	ppb	16:01:30
2	Mg 279.077 IEC†	13084.6	15273.5	510110	ug/L	510110	ppb	16:01:35
2	Na 589.592 Radial†	-1067.0	34.7	10.403	ug/L	10.403	ppb	16:01:35
2	Sr 421.552†	533.6	642.4	0.4040	ug/L	0.4040	ppb	16:01:35
2	Sc 361.383	737937.7	737937.7	86.572	%			16:02:18
2	Y 371.029	608079.9	608079.9	84.144	%			16:02:18
2	Ag 328.068†	-9892.3	-11784.6	2.4125	ug/L	2.4125	ppb	16:02:18
2	As 188.979†	-78.0	-66.5	9.6873	ug/L	9.6873	ppb	16:02:38
2	B 249.677†	338.9	1023.3	2.9566	ug/L	2.9566	ppb	16:02:18
2	Ba 233.527†	-429.0	-484.2	3.4139	ug/L	3.4139	ppb	16:02:38
2	Be 313.107†	-4496.9	-609.1	-0.2857	ug/L	-0.2857	ppb	16:02:18
2	Cd 226.502†	1277.3	1679.5	-1.5978	ug/L	-1.5978	ppb	16:02:38
2	Co 228.616†	-4.6	69.3	-1.4096	ug/L	-1.4096	ppb	16:02:38
2	Cr 267.716†	-75.1	-170.0	1.9249	ug/L	1.9249	ppb	16:02:38
2	Cu 324.752†	3960.7	-1837.1	4.8577	ug/L	4.8577	ppb	16:02:18
2	Mn 257.610†	1638.0	1447.2	2.6255	ug/L	2.6255	ppb	16:02:18
2	Mo 202.031†	-196.8	-251.0	1.6332	ug/L	1.6332	ppb	16:02:38
2	Ni 231.604†	182.7	143.0	3.5611	ug/L	3.5611	ppb	16:02:38

2	P 214.914†	149.2	-57.6	-59.270 ug/L	-59.270 ppb	16:02:38
2	Pb 220.353†	-766.6	-822.2	3.5310 ug/L	3.5310 ppb	16:02:38
2	S 181.975 Axial†	77.6	46.6	-34.230 ug/L	-34.230 ppb	16:02:38
2	Sb 206.836†	81.2	65.8	6.7812 ug/L	6.7812 ppb	16:02:38
2	Se 196.026†	-833.9	-931.2	52.847 ug/L	52.847 ppb	16:02:38
2	Si 251.611†	566.0	103.3	3.5085 ug/L	3.5085 ppb	16:02:38
2	Sn 189.927†	-349.6	-411.4	2.1266 ug/L	2.1266 ppb	16:02:38
2	Ti 334.940†	-13871.4	-14648.4	-8.5522 ug/L	-8.5522 ppb	16:02:18
2	Tl 190.801†	-88.7	-69.6	-21.566 ug/L	-21.566 ppb	16:02:38
2	U 409.014†	-550.7	1375.6	18.240 ug/L	18.240 ppb	16:02:18
2	V 292.402†	1235.3	2736.6	-1.5657 ug/L	-1.5657 ppb	16:02:38
2	Zn 213.857†	2899.2	2728.7	6.7812 ug/L	6.7812 ppb	16:02:38
2	SiO2†	581.9	100.4	7.3361 ug/L	7.3361 ppb	16:03:14
3	Sc Radial	4458.8	4458.8	88.6 %		16:01:46
3	Y RADIAL	4803.8	4803.8	88.48 %		16:01:46
3	Al 396.153Radial†	578946.6	653797.4	504400 ug/L	504400 ppb	16:01:41
3	Ca 317.933Radial†	262181.2	296058.0	473720 ug/L	473720 ppb	16:01:41
3	Fe 238.204 Radial†	19015.6	21465.1	185760 ug/L	185760 ppb	16:01:46
3	K 766.490 Radial†	2134.1	-180.1	-191.31 ug/L	-191.31 ppb	16:01:41
3	Mg 279.077 IEC†	12793.9	14446.1	482470 ug/L	482470 ppb	16:01:46
3	Na 589.592 Radial†	-1160.2	-29.7	-8.9041 ug/L	-8.9041 ppb	16:01:46
3	Sr 421.552†	507.6	592.7	0.2912 ug/L	0.2912 ppb	16:01:46
3	Sc 361.383	734225.6	734225.6	86.136 %		16:02:43
3	Y 371.029	605159.6	605159.6	83.740 %		16:02:43
3	Ag 328.068†	-9811.2	-11748.3	-0.3445 ug/L	-0.3445 ppb	16:02:43
3	As 188.979†	-59.0	-44.9	17.049 ug/L	17.049 ppb	16:03:03
3	B 249.677†	274.8	950.8	2.3769 ug/L	2.3769 ppb	16:02:43
3	Ba 233.527†	-432.5	-490.7	2.9891 ug/L	2.9891 ppb	16:03:03
3	Be 313.107†	-4458.8	-591.0	-0.2778 ug/L	-0.2778 ppb	16:02:43
3	Cd 226.502†	1332.5	1751.1	0.2507 ug/L	0.2507 ppb	16:03:03
3	Co 228.616†	-17.0	54.9	-1.5635 ug/L	-1.5635 ppb	16:03:03
3	Cr 267.716†	-65.1	-158.8	1.8559 ug/L	1.8559 ppb	16:03:03
3	Cu 324.752†	4004.3	-1763.4	4.5436 ug/L	4.5436 ppb	16:02:43
3	Mn 257.610†	1713.0	1543.9	2.7211 ug/L	2.7211 ppb	16:02:43
3	Mo 202.031†	-224.2	-284.0	-1.7335 ug/L	-1.7335 ppb	16:03:03
3	Ni 231.604†	181.0	142.1	3.5382 ug/L	3.5382 ppb	16:03:03
3	P 214.914†	146.4	-59.9	-60.032 ug/L	-60.032 ppb	16:03:03
3	Pb 220.353†	-752.0	-809.7	-0.8858 ug/L	-0.8858 ppb	16:03:03
3	S 181.975 Axial†	75.4	44.5	-31.507 ug/L	-31.507 ppb	16:03:03
3	Sb 206.836†	51.1	31.4	-4.2766 ug/L	-4.2766 ppb	16:03:03
3	Se 196.026†	-823.4	-923.9	23.370 ug/L	23.370 ppb	16:03:03
3	Si 251.611†	591.3	136.0	4.5784 ug/L	4.5784 ppb	16:03:03
3	Sn 189.927†	-357.4	-422.6	-4.0082 ug/L	-4.0082 ppb	16:03:03
3	Ti 334.940†	-13567.2	-14376.3	-9.0016 ug/L	-9.0016 ppb	16:02:43
3	Tl 190.801†	-92.5	-74.5	-23.072 ug/L	-23.072 ppb	16:03:03
3	U 409.014†	-897.2	970.0	7.4415 ug/L	7.4415 ppb	16:02:43
3	V 292.402†	1185.5	2686.0	-0.9411 ug/L	-0.9411 ppb	16:03:03
3	Zn 213.857†	2915.0	2763.9	8.1058 ug/L	8.1058 ppb	16:03:03
3	SiO2†	561.2	79.9	5.9978 ug/L	5.9978 ppb	16:03:19

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	728701.1	85.488	%	1.5154				1.77%
Sc Radial	4442.1	88.2	%	2.41				2.73%
Y 371.029	601089.3	83.176	%	1.3408				1.61%
Y RADIAL	4765.2	87.77	%	2.548				2.90%
Ag 328.068†	-11837.0	0.1741	ug/L	2.02949	0.1741	ppb	2.02949	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	665667.3	513550	ug/L	18166.9	513550	ppb	18166.9	3.54%
QC value within limits for Al 396.153Radial Recovery = 102.71%								
As 188.979†	-68.7	7.3611	ug/L	11.03681	7.3611	ppb	11.03681	149.93%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	984.4	2.7984	ug/L	0.36879	2.7984	ppb	0.36879	13.18%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-496.7	3.0606	ug/L	0.32361	3.0606	ppb	0.32361	10.57%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-633.6	-0.2945	ug/L	0.02251	-0.2945	ppb	0.02251	7.64%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	301386.4	482250	ug/L	16776.0	482250	ppb	16776.0	3.48%

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   QC value within limits for Ca 317.933Radial  Recovery = 96.45%
Cd 226.502†          1721.6      -0.4090 ug/L       1.03158      -0.4090 ppb       1.03158 252.21%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†            56.5      -1.5750 ug/L       0.17142      -1.5750 ppb       0.17142  10.88%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†          -182.6       1.6510 ug/L       0.41608       1.6510 ppb       0.41608  25.20%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†          -1794.7      4.6183 ug/L       0.21212       4.6183 ppb       0.21212   4.59%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†   21838.5      188990 ug/L        6063.4       188990 ppb        6063.4   3.21%
   QC value within limits for Fe 238.204 Radial  Recovery = 94.50%
K 766.490 Radial†     -307.0      -217.45 ug/L        23.302      -217.45 ppb        23.302  10.72%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†      14719.2      491600 ug/L       16033.9       491600 ppb       16033.9   3.26%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.32%
Mn 257.610†          1564.6       2.7318 ug/L       0.11211       2.7318 ppb       0.11211   4.10%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†          -267.3      -0.2285 ug/L       1.71148      -0.2285 ppb       1.71148 748.88%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†     27.1       8.1139 ug/L      15.99672       8.1139 ppb      15.99672 197.15%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†           146.4       3.6456 ug/L       0.16660       3.6456 ppb       0.16660   4.57%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†            -38.5      -47.244 ug/L       21.4927      -47.244 ppb       21.4927  45.49%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†          -817.2      -0.0021 ug/L       3.18456      -0.0021 ppb       3.18456 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†       49.1      -26.698 ug/L       10.7748      -26.698 ppb       10.7748  40.36%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†            54.5       3.4051 ug/L       6.66881       3.4051 ppb       6.66881 195.85%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†          -937.8       25.196 ug/L       26.7838       25.196 ppb       26.7838 106.30%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†           128.8       4.3352 ug/L       0.73581       4.3352 ppb       0.73581  16.97%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†          -425.0      -3.1627 ug/L       4.92134      -3.1627 ppb       4.92134 155.60%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†           614.5       0.3680 ug/L       0.06654       0.3680 ppb       0.06654  18.08%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†        -14514.3      -9.0067 ug/L       0.45711      -9.0067 ppb       0.45711   5.08%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†           -73.9      -22.889 ug/L        1.2413      -22.889 ppb        1.2413   5.42%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†           1131.3       11.833 ug/L        5.6743       11.833 ppb        5.6743  47.95%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†           2719.2      -1.0046 ug/L       0.53220      -1.0046 ppb       0.53220  52.98%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†          2774.1       7.8888 ug/L       1.01667       7.8888 ppb       1.01667  12.89%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                 101.2       7.4195 ug/L       1.46525       7.4195 ppb       1.46525  19.75%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 1/11/2010 16:05:30
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4469.6	4469.6	88.8	%			16:07:27
1	Y RADIAL	4809.0	4809.0	88.57	%			16:07:27
1	Al 396.153Radial†	589484.3	664101.1	512320	ug/L	512320	ppb	16:07:22
1	Ca 317.933Radial†	265752.0	299370.7	479020	ug/L	479020	ppb	16:07:22
1	Fe 238.204 Radial†	19164.5	21581.4	186780	ug/L	186780	ppb	16:07:27
1	K 766.490 Radial†	29032.3	30117.0	5349.0	ug/L	5349.0	ppb	16:07:22
1	Mg 279.077 IEC†	12958.7	14597.1	487520	ug/L	487520	ppb	16:07:27
1	Na 589.592 Radial†	15352.0	18575.7	5561.8	ug/L	5561.8	ppb	16:07:27
1	Sr 421.552†	69848.9	78709.8	504.80	ug/L	504.80	ppb	16:07:22
1	Sc 361.383	733242.9	733242.9	86.021	%			16:07:55
1	Y 371.029	603990.2	603990.2	83.578	%			16:07:55
1	Ag 328.068†	41150.7	47479.9	274.18	ug/L	274.18	ppb	16:07:55
1	As 188.979†	942.0	1118.8	522.69	ug/L	522.69	ppb	16:08:15
1	B 249.677†	20042.0	23930.7	513.29	ug/L	513.29	ppb	16:07:55
1	Ba 233.527†	54223.8	63046.9	500.15	ug/L	500.15	ppb	16:07:55
1	Be 313.107†	552945.6	647387.0	247.79	ug/L	247.79	ppb	16:07:55
1	Cd 226.502†	37791.5	44136.9	470.86	ug/L	470.86	ppb	16:07:55
1	Co 228.616†	18898.2	22043.9	448.66	ug/L	448.66	ppb	16:08:15
1	Cr 267.716†	37112.9	43060.7	485.60	ug/L	485.60	ppb	16:07:55
1	Cu 324.752†	163461.5	183612.5	558.64	ug/L	558.64	ppb	16:07:55
1	Mn 257.610†	377253.8	438114.2	486.61	ug/L	486.61	ppb	16:07:55
1	Mo 202.031†	5893.7	6827.7	501.02	ug/L	501.02	ppb	16:08:15
1	Ni 231.604†	15601.4	18068.8	449.64	ug/L	449.64	ppb	16:08:15
1	P 214.914†	3772.2	4155.3	2402.3	ug/L	2402.3	ppb	16:08:15
1	Pb 220.353†	2538.3	3014.1	469.98	ug/L	469.98	ppb	16:08:15
1	S 181.975 Axial†	1708.1	1942.6	2653.1	ug/L	2653.1	ppb	16:08:15
1	Sb 206.836†	1381.1	1577.6	543.20	ug/L	543.20	ppb	16:08:15
1	Se 196.026†	2597.7	3051.8	2590.6	ug/L	2590.6	ppb	16:08:15
1	Si 251.611†	143466.2	166229.6	5288.2	ug/L	5288.2	ppb	16:07:55
1	Sn 189.927†	2072.9	2402.1	497.21	ug/L	497.21	ppb	16:08:15
1	Ti 334.940†	261822.7	305744.6	506.54	ug/L	506.54	ppb	16:07:55
1	Tl 190.801†	1235.3	1469.0	453.76	ug/L	453.76	ppb	16:08:15
1	U 409.014†	13895.2	18164.8	513.49	ug/L	513.49	ppb	16:07:55
1	V 292.402†	64913.2	76771.6	512.44	ug/L	512.44	ppb	16:07:55
1	Zn 213.857†	48411.3	55658.1	504.70	ug/L	504.70	ppb	16:07:55
1	SiO2†	146220.1	169409.8	11546	ug/L	11546	ppb	16:09:13
2	Sc Radial	4482.5	4482.5	89.0	%			16:07:37
2	Y RADIAL	4833.9	4833.9	89.03	%			16:07:37
2	Al 396.153Radial†	596758.8	670353.8	517150	ug/L	517150	ppb	16:07:32
2	Ca 317.933Radial†	268788.3	301916.4	483100	ug/L	483100	ppb	16:07:32
2	Fe 238.204 Radial†	19305.8	21677.7	187620	ug/L	187620	ppb	16:07:37
2	K 766.490 Radial†	29387.3	30421.3	5403.4	ug/L	5403.4	ppb	16:07:32
2	Mg 279.077 IEC†	13078.8	14689.8	490620	ug/L	490620	ppb	16:07:37
2	Na 589.592 Radial†	15393.1	18571.9	5560.7	ug/L	5560.7	ppb	16:07:37
2	Sr 421.552†	70603.2	79329.8	508.78	ug/L	508.78	ppb	16:07:32
2	Sc 361.383	737995.2	737995.2	86.579	%			16:08:21
2	Y 371.029	608619.5	608619.5	84.218	%			16:08:21
2	Ag 328.068†	41527.3	47606.8	274.98	ug/L	274.98	ppb	16:08:21
2	As 188.979†	945.9	1116.1	521.71	ug/L	521.71	ppb	16:08:41
2	B 249.677†	20299.3	24077.9	516.49	ug/L	516.49	ppb	16:08:21
2	Ba 233.527†	54397.7	62841.8	498.58	ug/L	498.58	ppb	16:08:21
2	Be 313.107†	555552.7	646258.9	247.36	ug/L	247.36	ppb	16:08:21
2	Cd 226.502†	37861.3	43934.5	468.53	ug/L	468.53	ppb	16:08:21
2	Co 228.616†	18993.1	22012.0	447.99	ug/L	447.99	ppb	16:08:41
2	Cr 267.716†	37212.9	42898.3	483.80	ug/L	483.80	ppb	16:08:21
2	Cu 324.752†	164184.5	183223.9	557.53	ug/L	557.53	ppb	16:08:21
2	Mn 257.610†	377987.3	436137.4	484.39	ug/L	484.39	ppb	16:08:21
2	Mo 202.031†	5898.1	6788.7	498.37	ug/L	498.37	ppb	16:08:41
2	Ni 231.604†	15639.9	17996.4	447.84	ug/L	447.84	ppb	16:08:41

2	P 214.914†	3764.0	4117.6	2380.0 ug/L	2380.0 ppb	16:08:41
2	Pb 220.353†	2527.3	2982.4	467.12 ug/L	467.12 ppb	16:08:41
2	S 181.975 Axial†	1734.4	1960.2	2677.1 ug/L	2677.1 ppb	16:08:41
2	Sb 206.836†	1373.1	1558.1	536.24 ug/L	536.24 ppb	16:08:41
2	Se 196.026†	2597.7	3032.4	2581.0 ug/L	2581.0 ppb	16:08:41
2	Si 251.611†	144086.2	165871.8	5276.8 ug/L	5276.8 ppb	16:08:21
2	Sn 189.927†	2066.7	2379.4	493.77 ug/L	493.77 ppb	16:08:41
2	Ti 334.940†	262922.7	305055.0	505.64 ug/L	505.64 ppb	16:08:21
2	Tl 190.801†	1230.9	1454.6	449.33 ug/L	449.33 ppb	16:08:41
2	U 409.014†	13731.9	17872.2	504.76 ug/L	504.76 ppb	16:08:21
2	V 292.402†	65177.6	76591.0	511.08 ug/L	511.08 ppb	16:08:21
2	Zn 213.857†	48545.6	55450.8	502.67 ug/L	502.67 ppb	16:08:21
2	SiO2†	145974.6	168031.6	11452 ug/L	11452 ppb	16:09:18
3	Sc Radial	4634.8	4634.8	92.0 %		16:07:48
3	Y RADIAL	4938.0	4938.0	90.95 %		16:07:48
3	Al 396.153Radial†	592956.6	644189.1	496960 ug/L	496960 ppb	16:07:43
3	Ca 317.933Radial†	267381.8	290463.9	464770 ug/L	464770 ppb	16:07:43
3	Fe 238.204 Radial†	19723.7	21419.0	185380 ug/L	185380 ppb	16:07:48
3	K 766.490 Radial†	29237.8	29173.8	5180.8 ug/L	5180.8 ppb	16:07:43
3	Mg 279.077 IEC†	13294.3	14441.1	482310 ug/L	482310 ppb	16:07:48
3	Na 589.592 Radial†	15764.7	18407.2	5511.3 ug/L	5511.3 ppb	16:07:48
3	Sr 421.552†	70214.2	76300.3	489.35 ug/L	489.35 ppb	16:07:43
3	Sc 361.383	739056.4	739056.4	86.703 %		16:08:47
3	Y 371.029	609358.3	609358.3	84.321 %		16:08:47
3	Ag 328.068†	41608.9	47632.1	274.62 ug/L	274.62 ppb	16:08:47
3	As 188.979†	929.1	1095.3	512.22 ug/L	512.22 ppb	16:09:07
3	B 249.677†	20332.9	24083.0	516.83 ug/L	516.83 ppb	16:08:47
3	Ba 233.527†	54550.3	62927.6	499.17 ug/L	499.17 ppb	16:08:47
3	Be 313.107†	558331.1	648542.1	248.23 ug/L	248.23 ppb	16:08:47
3	Cd 226.502†	38038.4	44076.1	470.33 ug/L	470.33 ppb	16:08:47
3	Co 228.616†	19038.4	22032.7	448.46 ug/L	448.46 ppb	16:09:07
3	Cr 267.716†	37415.7	43070.5	485.69 ug/L	485.69 ppb	16:08:47
3	Cu 324.752†	164933.9	183816.0	559.18 ug/L	559.18 ppb	16:08:47
3	Mn 257.610†	379307.2	437032.8	485.47 ug/L	485.47 ppb	16:08:47
3	Mo 202.031†	5959.2	6849.4	502.29 ug/L	502.29 ppb	16:09:07
3	Ni 231.604†	15702.5	18042.6	448.99 ug/L	448.99 ppb	16:09:07
3	P 214.914†	3787.4	4138.4	2389.1 ug/L	2389.1 ppb	16:09:07
3	Pb 220.353†	2520.7	2970.7	461.27 ug/L	461.27 ppb	16:09:07
3	S 181.975 Axial†	1738.7	1962.3	2683.9 ug/L	2683.9 ppb	16:09:07
3	Sb 206.836†	1379.5	1563.1	538.63 ug/L	538.63 ppb	16:09:07
3	Se 196.026†	2613.4	3046.2	2581.7 ug/L	2581.7 ppb	16:09:07
3	Si 251.611†	144664.3	166299.5	5290.4 ug/L	5290.4 ppb	16:08:47
3	Sn 189.927†	2078.2	2389.2	492.86 ug/L	492.86 ppb	16:09:07
3	Ti 334.940†	263667.7	305478.3	504.93 ug/L	504.93 ppb	16:08:47
3	Tl 190.801†	1247.7	1471.8	454.64 ug/L	454.64 ppb	16:09:07
3	U 409.014†	13855.3	17991.8	508.54 ug/L	508.54 ppb	16:08:47
3	V 292.402†	65506.8	76862.6	513.19 ug/L	513.19 ppb	16:08:47
3	Zn 213.857†	48718.7	55569.9	504.00 ug/L	504.00 ppb	16:08:47
3	SiO2†	143683.8	165147.4	11255 ug/L	11255 ppb	16:09:23

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	736764.8	86.434	%	0.3632				0.42%
Sc Radial	4529.0	89.9	%	1.83				2.03%
Y 371.029	607322.6	84.039	%	0.4026				0.48%
Y RADIAL	4860.3	89.52	%	1.261				1.41%
Ag 328.068†	47572.9	274.59	ug/L	0.401	274.59	ppb	0.401	0.15%
QC value within limits for Ag 328.068 Recovery = 109.84%								
Al 396.153Radial†	659548.0	508810	ug/L	10541.4	508810	ppb	10541.4	2.07%
QC value within limits for Al 396.153Radial Recovery = 101.76%								
As 188.979†	1110.0	518.87	ug/L	5.780	518.87	ppb	5.780	1.11%
QC value within limits for As 188.979 Recovery = 103.77%								
B 249.677†	24030.5	515.54	ug/L	1.951	515.54	ppb	1.951	0.38%
QC value within limits for B 249.677 Recovery = 103.11%								
Ba 233.527†	62938.7	499.30	ug/L	0.795	499.30	ppb	0.795	0.16%
QC value within limits for Ba 233.527 Recovery = 99.86%								
Be 313.107†	647396.0	247.79	ug/L	0.436	247.79	ppb	0.436	0.18%
QC value within limits for Be 313.107 Recovery = 99.12%								
Ca 317.933Radial†	297250.3	475630	ug/L	9622.1	475630	ppb	9622.1	2.02%

QC value within limits for Ca 317.933Radial Recovery = 95.13%

Cd 226.502†	44049.2	469.91 ug/L	1.224	469.91 ppb	1.224	0.26%
QC value within limits for Cd 226.502 Recovery = 93.98%						
Co 228.616†	22029.6	448.37 ug/L	0.343	448.37 ppb	0.343	0.08%
QC value within limits for Co 228.616 Recovery = 89.67%						
Cr 267.716†	43009.8	485.03 ug/L	1.063	485.03 ppb	1.063	0.22%
QC value within limits for Cr 267.716 Recovery = 97.01%						
Cu 324.752†	183550.8	558.45 ug/L	0.842	558.45 ppb	0.842	0.15%
QC value within limits for Cu 324.752 Recovery = 111.69%						
Fe 238.204 Radial†	21559.4	186590 ug/L	1131.9	186590 ppb	1131.9	0.61%
QC value within limits for Fe 238.204 Radial Recovery = 93.30%						
K 766.490 Radial†	29904.0	5311.1 ug/L	116.05	5311.1 ppb	116.05	2.19%
QC value within limits for K 766.490 Radial Recovery = 106.22%						
Mg 279.077 IEC†	14576.0	486820 ug/L	4198.7	486820 ppb	4198.7	0.86%
QC value within limits for Mg 279.077 IEC Recovery = 97.36%						
Mn 257.610†	437094.8	485.49 ug/L	1.113	485.49 ppb	1.113	0.23%
QC value within limits for Mn 257.610 Recovery = 97.10%						
Mo 202.031†	6821.9	500.56 ug/L	2.000	500.56 ppb	2.000	0.40%
QC value within limits for Mo 202.031 Recovery = 100.11%						
Na 589.592 Radial†	18518.3	5544.6 ug/L	28.80	5544.6 ppb	28.80	0.52%
QC value within limits for Na 589.592 Radial Recovery = 110.89%						
Ni 231.604†	18035.9	448.83 ug/L	0.913	448.83 ppb	0.913	0.20%
QC value within limits for Ni 231.604 Recovery = 89.77%						
P 214.914†	4137.1	2390.4 ug/L	11.21	2390.4 ppb	11.21	0.47%
QC value within limits for P 214.914 Recovery = 95.62%						
Pb 220.353†	2989.1	466.12 ug/L	4.440	466.12 ppb	4.440	0.95%
QC value within limits for Pb 220.353 Recovery = 93.22%						
S 181.975 Axial†	1955.1	2671.4 ug/L	16.16	2671.4 ppb	16.16	0.61%
QC value within limits for S 181.975 Axial Recovery = 106.86%						
Sb 206.836†	1566.3	539.36 ug/L	3.534	539.36 ppb	3.534	0.66%
QC value within limits for Sb 206.836 Recovery = 107.87%						
Se 196.026†	3043.4	2584.5 ug/L	5.36	2584.5 ppb	5.36	0.21%
QC value within limits for Se 196.026 Recovery = 103.38%						
Si 251.611†	166133.6	5285.2 ug/L	7.28	5285.2 ppb	7.28	0.14%
QC value within limits for Si 251.611 Recovery = 105.70%						
Sn 189.927†	2390.2	494.61 ug/L	2.289	494.61 ppb	2.289	0.46%
QC value within limits for Sn 189.927 Recovery = 98.92%						
Sr 421.552†	78113.3	500.98 ug/L	10.265	500.98 ppb	10.265	2.05%
QC value within limits for Sr 421.552 Recovery = 100.20%						
Ti 334.940†	305426.0	505.70 ug/L	0.808	505.70 ppb	0.808	0.16%
QC value within limits for Ti 334.940 Recovery = 101.14%						
Tl 190.801†	1465.1	452.58 ug/L	2.842	452.58 ppb	2.842	0.63%
QC value within limits for Tl 190.801 Recovery = 90.52%						
U 409.014†	18009.6	508.93 ug/L	4.374	508.93 ppb	4.374	0.86%
QC value within limits for U 409.014 Recovery = 101.79%						
V 292.402†	76741.8	512.24 ug/L	1.067	512.24 ppb	1.067	0.21%
QC value within limits for V 292.402 Recovery = 102.45%						
Zn 213.857†	55559.6	503.79 ug/L	1.031	503.79 ppb	1.031	0.20%
QC value within limits for Zn 213.857 Recovery = 100.76%						
SiO2†	167529.6	11418 ug/L	148.4	11418 ppb	148.4	1.30%
QC value within limits for SiO2 Recovery = 106.76%						

All analyte(s) passed QC.

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 1/11/2010 16:11:34
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4437.1	4437.1	88.1	%			16:13:31
1	Y RADIAL	4779.6	4779.6	88.03	%			16:13:31
1	Al 396.153Radial†	570573.2	647502.8	499540	ug/L	499540	ppb	16:13:26
1	Ca 317.933Radial†	256964.9	291591.1	466570	ug/L	466570	ppb	16:13:26
1	Fe 238.204 Radial†	43538.9	49400.2	427520	ug/L	427520	ppb	16:13:31
1	K 766.490 Radial†	3585.3	1478.6	-161.78	ug/L	-161.78	ppb	16:13:26
1	Mg 279.077 IEC†	12496.5	14179.5	473320	ug/L	473320	ppb	16:13:31
1	Na 589.592 Radial†	1462340.2	1660784.5	497260	ug/L	497260	ppb	16:13:26
1	Sr 421.552†	705.4	820.0	1.8125	ug/L	1.8125	ppb	16:13:31
1	Sc 361.383	717381.5	717381.5	84.160	%			16:13:59
1	Y 371.029	593191.9	593191.9	82.084	%			16:13:59
1	Ag 328.068†	-22544.0	-27144.9	-4.8683	ug/L	-4.8683	ppb	16:13:59
1	As 188.979†	-182.6	-193.3	0.3508	ug/L	0.3508	ppb	16:14:19
1	B 249.677†	1714.1	2668.6	16.167	ug/L	16.167	ppb	16:13:59
1	Ba 233.527†	-1281.5	-1511.3	3.8804	ug/L	3.8804	ppb	16:14:19
1	Be 313.107†	-11195.4	-8717.1	-3.3744	ug/L	-3.3744	ppb	16:13:59
1	Cd 226.502†	3286.5	4109.1	4.3236	ug/L	4.3236	ppb	16:14:19
1	Co 228.616†	204.3	317.5	0.2605	ug/L	0.2605	ppb	16:14:19
1	Cr 267.716†	-58.9	-153.2	0.7866	ug/L	0.7866	ppb	16:14:19
1	Cu 324.752†	1322.8	-4840.4	-0.0414	ug/L	-0.0414	ppb	16:13:59
1	Mn 257.610†	-18590.9	-22534.8	3.3888	ug/L	3.3888	ppb	16:13:59
1	Mo 202.031†	-460.9	-571.3	-5.5879	ug/L	-5.5879	ppb	16:14:19
1	Ni 231.604†	239.7	216.9	5.3963	ug/L	5.3963	ppb	16:14:19
1	P 214.914†	545.7	418.6	38.508	ug/L	38.508	ppb	16:14:19
1	Pb 220.353†	-536.8	-574.5	3.6095	ug/L	3.6095	ppb	16:14:19
1	S 181.975 Axial†	110.4	88.2	31.183	ug/L	31.183	ppb	16:14:19
1	Sb 206.836†	59.5	42.8	-0.8075	ug/L	-0.8075	ppb	16:14:19
1	Se 196.026†	-1922.8	-2252.6	-61.956	ug/L	-61.956	ppb	16:14:19
1	Si 251.611†	-256.1	-854.8	-26.726	ug/L	-26.726	ppb	16:14:19
1	Sn 189.927†	-404.2	-488.0	-12.538	ug/L	-12.538	ppb	16:14:19
1	Ti 334.940†	-13335.9	-14471.3	-15.725	ug/L	-15.725	ppb	16:13:59
1	Tl 190.801†	-102.1	-88.5	-27.535	ug/L	-27.535	ppb	16:14:19
1	U 409.014†	420670.5	501855.4	14756	ug/L	14756	ppb	16:13:59
1	V 292.402†	3161.2	5065.9	6.1761	ug/L	6.1761	ppb	16:14:19
1	Zn 213.857†	5617.3	6054.3	15.776	ug/L	15.776	ppb	16:14:19
1	SiO2†	-255.6	-875.3	-58.627	ug/L	-58.627	ppb	16:15:16
2	Sc Radial	4444.7	4444.7	88.3	%			16:13:42
2	Y RADIAL	4767.1	4767.1	87.80	%			16:13:42
2	Al 396.153Radial†	570446.8	646252.1	498580	ug/L	498580	ppb	16:13:37
2	Ca 317.933Radial†	257026.3	291161.8	465890	ug/L	465890	ppb	16:13:37
2	Fe 238.204 Radial†	43407.6	49166.9	425500	ug/L	425500	ppb	16:13:42
2	K 766.490 Radial†	3497.9	1372.5	-179.48	ug/L	-179.48	ppb	16:13:37
2	Mg 279.077 IEC†	12459.3	14113.1	471100	ug/L	471100	ppb	16:13:42
2	Na 589.592 Radial†	1456824.9	1651697.6	494540	ug/L	494540	ppb	16:13:37
2	Sr 421.552†	676.9	786.3	1.6000	ug/L	1.6000	ppb	16:13:42
2	Sc 361.383	714481.0	714481.0	83.820	%			16:14:25
2	Y 371.029	589648.5	589648.5	81.593	%			16:14:25
2	Ag 328.068†	-22728.5	-27473.7	-7.0546	ug/L	-7.0546	ppb	16:14:25
2	As 188.979†	-198.6	-213.3	-8.7227	ug/L	-8.7227	ppb	16:14:45
2	B 249.677†	1700.9	2661.1	16.205	ug/L	16.205	ppb	16:14:25
2	Ba 233.527†	-1334.4	-1580.5	3.2659	ug/L	3.2659	ppb	16:14:45
2	Be 313.107†	-11238.0	-8821.9	-3.4141	ug/L	-3.4141	ppb	16:14:25
2	Cd 226.502†	3283.9	4121.8	4.6798	ug/L	4.6798	ppb	16:14:45
2	Co 228.616†	210.5	325.8	0.4624	ug/L	0.4624	ppb	16:14:45
2	Cr 267.716†	13.0	-67.7	1.6900	ug/L	1.6900	ppb	16:14:45
2	Cu 324.752†	1337.1	-4817.0	-0.0968	ug/L	-0.0968	ppb	16:14:25
2	Mn 257.610†	-18508.4	-22525.9	3.2638	ug/L	3.2638	ppb	16:14:25
2	Mo 202.031†	-444.3	-553.8	-4.4944	ug/L	-4.4944	ppb	16:14:45
2	Ni 231.604†	242.8	221.7	5.5161	ug/L	5.5161	ppb	16:14:45

2	P 214.914†	534.8	408.1	33.511 ug/L	33.511 ppb	16:14:45
2	Pb 220.353†	-534.5	-574.3	3.6051 ug/L	3.6051 ppb	16:14:45
2	S 181.975 Axial†	118.3	98.1	45.374 ug/L	45.374 ppb	16:14:45
2	Sb 206.836†	36.9	16.1	-9.8346 ug/L	-9.8346 ppb	16:14:45
2	Se 196.026†	-1916.7	-2254.7	-69.767 ug/L	-69.767 ppb	16:14:45
2	Si 251.611†	-296.1	-903.7	-28.300 ug/L	-28.300 ppb	16:14:45
2	Sn 189.927†	-389.6	-472.5	-9.9307 ug/L	-9.9307 ppb	16:14:45
2	Ti 334.940†	-13239.2	-14420.3	-15.554 ug/L	-15.554 ppb	16:14:25
2	Tl 190.801†	-90.9	-75.6	-23.594 ug/L	-23.594 ppb	16:14:45
2	U 409.014†	419923.4	502993.3	14790 ug/L	14790 ppb	16:14:25
2	V 292.402†	3152.1	5070.3	6.5539 ug/L	6.5539 ppb	16:14:45
2	Zn 213.857†	5598.1	6058.5	16.011 ug/L	16.011 ppb	16:14:45
2	SiO2†	-335.2	-971.6	-65.230 ug/L	-65.230 ppb	16:15:21
3	Sc Radial	4407.6	4407.6	87.5 %		16:13:52
3	Y RADIAL	4705.1	4705.1	86.66 %		16:13:52
3	Al 396.153Radial†	570884.8	652181.5	503150 ug/L	503150 ppb	16:13:47
3	Ca 317.933Radial†	256834.6	293388.9	469450 ug/L	469450 ppb	16:13:47
3	Fe 238.204 Radial†	43209.0	49353.2	427110 ug/L	427110 ppb	16:13:52
3	K 766.490 Radial†	3501.2	1409.6	-176.86 ug/L	-176.86 ppb	16:13:47
3	Mg 279.077 IEC†	12409.5	14174.7	473160 ug/L	473160 ppb	16:13:52
3	Na 589.592 Radial†	1460322.3	1669557.9	499890 ug/L	499890 ppb	16:13:47
3	Sr 421.552†	734.4	858.5	2.0393 ug/L	2.0393 ppb	16:13:52
3	Sc 361.383	723948.7	723948.7	84.931 %		16:14:51
3	Y 371.029	598389.1	598389.1	82.803 %		16:14:51
3	Ag 328.068†	-22796.8	-27199.6	-5.3293 ug/L	-5.3293 ppb	16:14:51
3	As 188.979†	-194.3	-205.2	-4.8896 ug/L	-4.8896 ppb	16:15:11
3	B 249.677†	1601.8	2517.9	12.848 ug/L	12.848 ppb	16:14:51
3	Ba 233.527†	-1246.6	-1456.4	4.2918 ug/L	4.2918 ppb	16:15:11
3	Be 313.107†	-11266.6	-8680.3	-3.3605 ug/L	-3.3605 ppb	16:14:51
3	Cd 226.502†	3248.9	4029.4	3.4892 ug/L	3.4892 ppb	16:15:11
3	Co 228.616†	215.4	328.3	0.4945 ug/L	0.4945 ppb	16:15:11
3	Cr 267.716†	-24.2	-111.8	1.2233 ug/L	1.2233 ppb	16:15:11
3	Cu 324.752†	1265.0	-4922.7	-0.3325 ug/L	-0.3325 ppb	16:14:51
3	Mn 257.610†	-19046.2	-22870.4	2.9777 ug/L	2.9777 ppb	16:14:51
3	Mo 202.031†	-438.9	-540.5	-3.3985 ug/L	-3.3985 ppb	16:15:11
3	Ni 231.604†	244.9	220.4	5.4827 ug/L	5.4827 ppb	16:15:11
3	P 214.914†	544.0	410.7	35.003 ug/L	35.003 ppb	16:15:11
3	Pb 220.353†	-504.4	-530.5	9.8610 ug/L	9.8610 ppb	16:15:11
3	S 181.975 Axial†	96.5	70.6	5.6681 ug/L	5.6681 ppb	16:15:11
3	Sb 206.836†	56.2	38.2	-2.3405 ug/L	-2.3405 ppb	16:15:11
3	Se 196.026†	-1905.6	-2211.7	-36.677 ug/L	-36.677 ppb	16:15:11
3	Si 251.611†	-249.7	-844.5	-26.425 ug/L	-26.425 ppb	16:15:11
3	Sn 189.927†	-384.9	-460.9	-7.3345 ug/L	-7.3345 ppb	16:15:11
3	Ti 334.940†	-13496.1	-14516.1	-15.477 ug/L	-15.477 ppb	16:14:51
3	Tl 190.801†	-114.1	-101.5	-31.527 ug/L	-31.527 ppb	16:15:11
3	U 409.014†	425739.2	503289.2	14798 ug/L	14798 ppb	16:14:51
3	V 292.402†	3062.1	4915.1	5.3194 ug/L	5.3194 ppb	16:15:11
3	Zn 213.857†	5542.5	5905.6	14.409 ug/L	14.409 ppb	16:15:11
3	SiO2†	-361.9	-997.7	-67.037 ug/L	-67.037 ppb	16:15:26

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	718603.7	84.304	%	0.5691				0.68%
Sc Radial	4429.8	88.0	%	0.39				0.44%
Y 371.029	593743.2	82.160	%	0.6083				0.74%
Y RADIAL	4750.6	87.50	%	0.735				0.84%
Ag 328.068†	-27272.7	-5.7507	ug/L	1.15246	-5.7507	ppb	1.15246	20.04%
Al 396.153Radial†	648645.5	500420	ug/L	2411.2	500420	ppb	2411.2	0.48%
QC value within limits for Al 396.153Radial Recovery = 100.08%								
As 188.979†	-203.9	-4.4205	ug/L	4.55488	-4.4205	ppb	4.55488	103.04%
B 249.677†	2615.9	15.073	ug/L	1.9270	15.073	ppb	1.9270	12.78%
Ba 233.527†	-1516.1	3.8127	ug/L	0.51630	3.8127	ppb	0.51630	13.54%
Be 313.107†	-8739.8	-3.3830	ug/L	0.02783	-3.3830	ppb	0.02783	0.82%
Ca 317.933Radial†	292047.3	467300	ug/L	1890.6	467300	ppb	1890.6	0.40%
QC value within limits for Ca 317.933Radial Recovery = 93.46%								
Cd 226.502†	4086.8	4.1642	ug/L	0.61107	4.1642	ppb	0.61107	14.67%
Co 228.616†	323.9	0.4058	ug/L	0.12683	0.4058	ppb	0.12683	31.26%
Cr 267.716†	-110.9	1.2333	ug/L	0.45181	1.2333	ppb	0.45181	36.63%
Cu 324.752†	-4860.0	-0.1569	ug/L	0.15457	-0.1569	ppb	0.15457	98.52%

Fe 238.204 Radial†	49306.8	426710	ug/L	1067.6	426710	ppb	1067.6	0.25%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 85.34%								
K 766.490 Radial†	1420.2	-172.71	ug/L	9.554	-172.71	ppb	9.554	5.53%
Mg 279.077 IEC†	14155.8	472520	ug/L	1236.3	472520	ppb	1236.3	0.26%
QC value within limits for Mg 279.077 IEC Recovery = 94.50%								
Mn 257.610†	-22643.7	3.2101	ug/L	0.21071	3.2101	ppb	0.21071	6.56%
Mo 202.031†	-555.2	-4.4936	ug/L	1.09466	-4.4936	ppb	1.09466	24.36%
Na 589.592 Radial†	1660680.0	497230	ug/L	2673.9	497230	ppb	2673.9	0.54%
QC value within limits for Na 589.592 Radial Recovery = 99.45%								
Ni 231.604†	219.6	5.4650	ug/L	0.06185	5.4650	ppb	0.06185	1.13%
P 214.914†	412.5	35.674	ug/L	2.5652	35.674	ppb	2.5652	7.19%
Pb 220.353†	-559.8	5.6918	ug/L	3.61057	5.6918	ppb	3.61057	63.43%
S 181.975 Axial†	85.6	27.408	ug/L	20.1201	27.408	ppb	20.1201	73.41%
Sb 206.836†	32.4	-4.3275	ug/L	4.83044	-4.3275	ppb	4.83044	111.62%
Se 196.026†	-2239.7	-56.133	ug/L	17.2963	-56.133	ppb	17.2963	30.81%
Si 251.611†	-867.7	-27.150	ug/L	1.0073	-27.150	ppb	1.0073	3.71%
Sn 189.927†	-473.8	-9.9342	ug/L	2.60154	-9.9342	ppb	2.60154	26.19%
Sr 421.552†	821.6	1.8172	ug/L	0.21969	1.8172	ppb	0.21969	12.09%
Ti 334.940†	-14469.2	-15.585	ug/L	0.1267	-15.585	ppb	0.1267	0.81%
Tl 190.801†	-88.5	-27.552	ug/L	3.9664	-27.552	ppb	3.9664	14.40%
U 409.014†	502712.6	14781	ug/L	22.4	14781	ppb	22.4	0.15%
QC value within limits for U 409.014 Recovery = 98.54%								
V 292.402†	5017.1	6.0165	ug/L	0.63254	6.0165	ppb	0.63254	10.51%
Zn 213.857†	6006.1	15.399	ug/L	0.8650	15.399	ppb	0.8650	5.62%
SiO2†	-948.2	-63.631	ug/L	4.4273	-63.631	ppb	4.4273	6.96%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 1/11/2010 16:17:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	4991.9	4991.9	99.1	%			16:19:35
1	Y RADIAL	5291.5	5291.5	97.46	%			16:19:35
1	Al 396.153Radial†	559.9	565.4	-47.303	ug/L	-47.303	ppb	16:19:35
1	Ca 317.933Radial†	23.2	3.6	5.7610	ug/L	5.7610	ppb	16:19:55
1	Fe 238.204 Radial†	-23.5	-32.6	2.9771	ug/L	2.9771	ppb	16:19:55
1	K 766.490 Radial†	1585008.6	1596183.6	292480	ug/L	292480	ppb	16:19:30
1	Mg 279.077 IEC†	-3.6	-5.5	-79.004	ug/L	-79.004	ppb	16:19:55
1	Na 589.592 Radial†	-332.2	945.4	283.07	ug/L	283.07	ppb	16:19:35
1	Sr 421.552†	1498984.9	1512022.4	9766.0	ug/L	9766.0	ppb	16:19:30
1	Sc 361.383	804787.1	804787.1	94.414	%			16:21:12
1	Y 371.029	663375.9	663375.9	91.795	%			16:21:12
1	Ag 328.068†	-8134.3	-8973.6	-3.5960	ug/L	-3.5960	ppb	16:21:17
1	As 188.979†	22123.2	23455.6	10186	ug/L	10186	ppb	16:21:17
1	B 249.677†	211371.7	224508.2	4977.9	ug/L	4977.9	ppb	16:21:12
1	Ba 233.527†	1722642.5	1824564.7	14266	ug/L	14266	ppb	16:21:12
1	Be 313.107†	7247660.3	7681014.3	2949.2	ug/L	2949.2	ppb	16:21:06
1	Cd 226.502†	828330.1	877537.9	9743.8	ug/L	9743.8	ppb	16:21:12
1	Co 228.616†	438981.9	465026.6	9517.6	ug/L	9517.6	ppb	16:21:17
1	Cr 267.716†	2044395.3	2165257.6	24218	ug/L	24218	ppb	16:21:12
1	Cu 324.752†	6362228.7	6732203.4	20131	ug/L	20131	ppb	16:21:06
1	Mn 257.610†	8086158.8	8564087.8	9494.2	ug/L	9494.2	ppb	16:21:06
1	Mo 202.031†	133209.9	141066.8	9969.9	ug/L	9969.9	ppb	16:21:17
1	Ni 231.604†	368642.8	390383.6	9714.9	ug/L	9714.9	ppb	16:21:17
1	P 214.914†	30105.1	31656.2	15065	ug/L	15065	ppb	16:21:17
1	Pb 220.353†	189546.2	200823.0	24605	ug/L	24605	ppb	16:21:17
1	S 181.975 Axial†	35159.1	37196.1	52639	ug/L	52639	ppb	16:21:17
1	Sb 206.836†	29097.2	30790.6	10918	ug/L	10918	ppb	16:21:17
1	Se 196.026†	15056.3	15979.1	10327	ug/L	10327	ppb	16:21:17
1	Si 251.611†	1437742.2	1522247.9	48358	ug/L	48358	ppb	16:21:12
1	Sn 189.927†	56894.3	60252.5	10675	ug/L	10675	ppb	16:21:17
1	Ti 334.940†	5821832.8	6167624.7	9928.0	ug/L	9928.0	ppb	16:21:06
1	Tl 190.801†	30033.0	31842.5	9829.6	ug/L	9829.6	ppb	16:21:17
1	U 409.014†	-809.1	1154.7	-20.062	ug/L	-20.062	ppb	16:21:17
1	V 292.402†	1394534.0	1478343.7	10220	ug/L	10220	ppb	16:21:12
1	Zn 213.857†	1422944.5	1506505.1	14160	ug/L	14160	ppb	16:21:12
1	SiO2†	1433580.2	1517818.5	103290	ug/L	103290	ppb	16:22:03
2	Sc Radial	4952.1	4952.1	98.3	%			16:20:06
2	Y RADIAL	5240.7	5240.7	96.52	%			16:20:06
2	Al 396.153Radial†	559.5	569.6	-39.470	ug/L	-39.470	ppb	16:20:06
2	Ca 317.933Radial†	29.7	10.4	16.707	ug/L	16.707	ppb	16:20:26
2	Fe 238.204 Radial†	-20.8	-30.1	22.078	ug/L	22.078	ppb	16:20:26
2	K 766.490 Radial†	1571896.7	1595728.8	292400	ug/L	292400	ppb	16:20:01
2	Mg 279.077 IEC†	-5.7	-7.7	-154.53	ug/L	-154.53	ppb	16:20:26
2	Na 589.592 Radial†	-419.6	853.8	255.63	ug/L	255.63	ppb	16:20:06
2	Sr 421.552†	1477909.3	1502771.2	9706.3	ug/L	9706.3	ppb	16:20:01
2	Sc 361.383	809144.9	809144.9	94.926	%			16:21:32
2	Y 371.029	667135.6	667135.6	92.316	%			16:21:32
2	Ag 328.068†	-8079.8	-8869.7	-3.1377	ug/L	-3.1377	ppb	16:21:37
2	As 188.979†	22074.5	23278.1	10109	ug/L	10109	ppb	16:21:37
2	B 249.677†	212628.4	224626.4	4980.8	ug/L	4980.8	ppb	16:21:32
2	Ba 233.527†	1730278.2	1822782.3	14252	ug/L	14252	ppb	16:21:32
2	Be 313.107†	7131078.4	7516858.6	2886.2	ug/L	2886.2	ppb	16:21:26
2	Cd 226.502†	830186.7	874768.8	9713.0	ug/L	9713.0	ppb	16:21:32
2	Co 228.616†	437441.8	460900.1	9433.4	ug/L	9433.4	ppb	16:21:37
2	Cr 267.716†	2051622.2	2161209.3	24173	ug/L	24173	ppb	16:21:32
2	Cu 324.752†	6253182.6	6581036.8	19679	ug/L	19679	ppb	16:21:26
2	Mn 257.610†	7968353.2	8393859.9	9305.5	ug/L	9305.5	ppb	16:21:26
2	Mo 202.031†	132663.8	139731.7	9875.5	ug/L	9875.5	ppb	16:21:37
2	Ni 231.604†	366974.4	386523.2	9618.8	ug/L	9618.8	ppb	16:21:37

2	P 214.914†	29796.6	31159.5	14858 ug/L	14858 ppb	16:21:37
2	Pb 220.353†	188596.1	198740.9	24350 ug/L	24350 ppb	16:21:37
2	S 181.975 Axial†	34924.4	36748.3	52005 ug/L	52005 ppb	16:21:37
2	Sb 206.836†	28910.9	30428.4	10791 ug/L	10791 ppb	16:21:37
2	Se 196.026†	14969.6	15801.8	10213 ug/L	10213 ppb	16:21:37
2	Si 251.611†	1445521.3	1522241.7	48359 ug/L	48359 ppb	16:21:32
2	Sn 189.927†	56563.6	59579.6	10555 ug/L	10555 ppb	16:21:37
2	Ti 334.940†	5736371.6	6044386.2	9729.5 ug/L	9729.5 ppb	16:21:26
2	Tl 190.801†	29934.8	31567.9	9743.4 ug/L	9743.4 ppb	16:21:37
2	U 409.014†	-856.1	1109.8	-21.289 ug/L	-21.289 ppb	16:21:37
2	V 292.402†	1401052.3	1477255.8	10212 ug/L	10212 ppb	16:21:32
2	Zn 213.857†	1427087.7	1502753.0	14125 ug/L	14125 ppb	16:21:32
2	SiO2†	1423108.9	1498610.0	101980 ug/L	101980 ppb	16:22:09
3	Sc Radial	5028.1	5028.1	99.9 %		16:20:36
3	Y RADIAL	5309.4	5309.4	97.79 %		16:20:36
3	Al 396.153Radial†	563.8	565.3	-41.381 ug/L	-41.381 ppb	16:20:36
3	Ca 317.933Radial†	25.5	5.8	9.2464 ug/L	9.2464 ppb	16:20:56
3	Fe 238.204 Radial†	-19.9	-28.8	32.277 ug/L	32.277 ppb	16:20:56
3	K 766.490 Radial†	1561237.2	1560882.2	286010 ug/L	286010 ppb	16:20:31
3	Mg 279.077 IEC†	-6.7	-8.7	-186.07 ug/L	-186.07 ppb	16:20:56
3	Na 589.592 Radial†	-439.1	840.7	251.71 ug/L	251.71 ppb	16:20:36
3	Sr 421.552†	1470891.5	1473016.8	9514.1 ug/L	9514.1 ppb	16:20:31
3	Sc 361.383	806505.5	806505.5	94.616 %		16:21:52
3	Y 371.029	665096.9	665096.9	92.034 %		16:21:52
3	Ag 328.068†	-8025.0	-8839.6	-2.9981 ug/L	-2.9981 ppb	16:21:57
3	As 188.979†	21983.3	23257.8	10101 ug/L	10101 ppb	16:21:57
3	B 249.677†	211338.3	223995.9	4966.8 ug/L	4966.8 ppb	16:21:52
3	Ba 233.527†	1725269.5	1823453.8	14257 ug/L	14257 ppb	16:21:52
3	Be 313.107†	7253487.4	7670817.6	2945.4 ug/L	2945.4 ppb	16:21:45
3	Cd 226.502†	827943.0	875259.5	9718.4 ug/L	9718.4 ppb	16:21:52
3	Co 228.616†	435486.3	460341.5	9421.4 ug/L	9421.4 ppb	16:21:57
3	Cr 267.716†	2045813.6	2162143.1	24183 ug/L	24183 ppb	16:21:52
3	Cu 324.752†	6387520.1	6744576.6	20168 ug/L	20168 ppb	16:21:45
3	Mn 257.610†	8097220.6	8557531.4	9486.9 ug/L	9486.9 ppb	16:21:45
3	Mo 202.031†	131837.6	139315.9	9846.1 ug/L	9846.1 ppb	16:21:57
3	Ni 231.604†	364839.7	385532.2	9594.1 ug/L	9594.1 ppb	16:21:57
3	P 214.914†	29558.0	31010.1	14660 ug/L	14660 ppb	16:21:57
3	Pb 220.353†	187687.5	198430.8	24312 ug/L	24312 ppb	16:21:57
3	S 181.975 Axial†	34653.1	36582.0	51770 ug/L	51770 ppb	16:21:57
3	Sb 206.836†	28792.3	30402.7	10781 ug/L	10781 ppb	16:21:57
3	Se 196.026†	14875.5	15754.0	10182 ug/L	10182 ppb	16:21:57
3	Si 251.611†	1439625.9	1520994.4	48320 ug/L	48320 ppb	16:21:52
3	Sn 189.927†	56292.5	59488.0	10539 ug/L	10539 ppb	16:21:57
3	Ti 334.940†	5842211.5	6176025.1	9941.6 ug/L	9941.6 ppb	16:21:45
3	Tl 190.801†	29753.9	31479.9	9718.8 ug/L	9718.8 ppb	16:21:57
3	U 409.014†	-809.0	1156.5	-19.934 ug/L	-19.934 ppb	16:21:57
3	V 292.402†	1396430.5	1477201.2	10211 ug/L	10211 ppb	16:21:52
3	Zn 213.857†	1423384.7	1503759.2	14134 ug/L	14134 ppb	16:21:52
3	SiO2†	1392777.2	1471458.7	100130 ug/L	100130 ppb	16:22:15

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	806812.5	94.652	%	0.2575				0.27%
Sc Radial	4990.7	99.1	%	0.76				0.76%
Y 371.029	665202.8	92.048	%	0.2604				0.28%
Y RADIAL	5280.5	97.26	%	0.656				0.67%
Ag 328.068†	-8894.3	-3.2439	ug/L	0.31278	-3.2439	ppb	0.31278	9.64%
Al 396.153Radial†	566.8	-42.718	ug/L	4.0836	-42.718	ppb	4.0836	9.56%
As 188.979†	23330.5	10132	ug/L	47.2	10132	ppb	47.2	0.47%
QC value within limits for As 188.979 Recovery = 101.32%								
B 249.677†	224376.8	4975.2	ug/L	7.41	4975.2	ppb	7.41	0.15%
QC value within limits for B 249.677 Recovery = 99.50%								
Ba 233.527†	1823600.3	14258	ug/L	7.0	14258	ppb	7.0	0.05%
QC value within limits for Ba 233.527 Recovery = 95.06%								
Be 313.107†	7622896.8	2927.0	ug/L	35.31	2927.0	ppb	35.31	1.21%
QC value within limits for Be 313.107 Recovery = 97.57%								
Ca 317.933Radial†	6.6	10.572	ug/L	5.5922	10.572	ppb	5.5922	52.90%
Cd 226.502†	875855.4	9725.0	ug/L	16.44	9725.0	ppb	16.44	0.17%
QC value within limits for Cd 226.502 Recovery = 97.25%								

Co 228.616†	462089.4	9457.5 ug/L	52.44	9457.5 ppb	52.44	0.55%
QC value within limits for Co 228.616 Recovery = 94.57%						
Cr 267.716†	2162870.0	24191 ug/L	23.7	24191 ppb	23.7	0.10%
QC value within limits for Cr 267.716 Recovery = 96.77%						
Cu 324.752†	6685938.9	19993 ug/L	272.3	19993 ppb	272.3	1.36%
QC value within limits for Cu 324.752 Recovery = 99.96%						
Fe 238.204 Radial†	-30.5	19.111 ug/L	14.8738	19.111 ppb	14.8738	77.83%
K 766.490 Radial†	1584264.9	290300 ug/L	3713.4	290300 ppb	3713.4	1.28%
QC value within limits for K 766.490 Radial Recovery = 96.77%						
Mg 279.077 IEC†	-7.3	-139.87 ug/L	55.018	-139.87 ppb	55.018	39.34%
Mn 257.610†	8505159.7	9428.9 ug/L	106.92	9428.9 ppb	106.92	1.13%
QC value within limits for Mn 257.610 Recovery = 94.29%						
Mo 202.031†	140038.1	9897.2 ug/L	64.65	9897.2 ppb	64.65	0.65%
QC value within limits for Mo 202.031 Recovery = 98.97%						
Na 589.592 Radial†	880.0	263.47 ug/L	17.085	263.47 ppb	17.085	6.48%
Ni 231.604†	387479.7	9642.6 ug/L	63.79	9642.6 ppb	63.79	0.66%
QC value within limits for Ni 231.604 Recovery = 96.43%						
P 214.914†	31275.3	14861 ug/L	202.2	14861 ppb	202.2	1.36%
QC value within limits for P 214.914 Recovery = 99.07%						
Pb 220.353†	199331.6	24422 ug/L	159.4	24422 ppb	159.4	0.65%
QC value within limits for Pb 220.353 Recovery = 97.69%						
S 181.975 Axial†	36842.1	52138 ug/L	449.5	52138 ppb	449.5	0.86%
QC value within limits for S 181.975 Axial Recovery = 104.28%						
Sb 206.836†	30540.6	10830 ug/L	76.7	10830 ppb	76.7	0.71%
QC value within limits for Sb 206.836 Recovery = 108.30%						
Se 196.026†	15844.9	10241 ug/L	76.6	10241 ppb	76.6	0.75%
QC value within limits for Se 196.026 Recovery = 102.41%						
Si 251.611†	1521828.0	48346 ug/L	22.5	48346 ppb	22.5	0.05%
QC value within limits for Si 251.611 Recovery = 96.69%						
Sn 189.927†	59773.4	10590 ug/L	74.0	10590 ppb	74.0	0.70%
QC value within limits for Sn 189.927 Recovery = 105.90%						
Sr 421.552†	1495936.8	9662.1 ug/L	131.64	9662.1 ppb	131.64	1.36%
QC value within limits for Sr 421.552 Recovery = 96.62%						
Ti 334.940†	6129345.3	9866.4 ug/L	118.73	9866.4 ppb	118.73	1.20%
QC value within limits for Ti 334.940 Recovery = 98.66%						
Tl 190.801†	31630.1	9764.0 ug/L	58.21	9764.0 ppb	58.21	0.60%
QC value within limits for Tl 190.801 Recovery = 97.64%						
U 409.014†	1140.3	-20.429 ug/L	0.7484	-20.429 ppb	0.7484	3.66%
V 292.402†	1477600.2	10214 ug/L	5.3	10214 ppb	5.3	0.05%
QC value within limits for V 292.402 Recovery = 102.14%						
Zn 213.857†	1504339.1	14140 ug/L	17.8	14140 ppb	17.8	0.13%
QC value within limits for Zn 213.857 Recovery = 94.27%						
SiO2†	1495962.4	101800 ug/L	1587.7	101800 ppb	1587.7	1.56%
QC value within limits for SiO2 Recovery = 95.14%						

All analyte(s) passed QC.

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/11/2010 16:24:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4845.6	4845.6	96.2	%			16:26:17
1	Y RADIAL	5193.6	5193.6	95.66	%			16:26:17
1	Al 396.153Radial†	6165.4	6407.5	4918.6	ug/L	4918.6	ppb	16:26:17
1	Ca 317.933Radial†	3100.6	3202.2	5123.9	ug/L	5123.9	ppb	16:26:37
1	Fe 238.204 Radial†	590.6	604.9	5249.7	ug/L	5249.7	ppb	16:26:37
1	K 766.490 Radial†	30409.6	29010.2	5301.3	ug/L	5301.3	ppb	16:26:17
1	Mg 279.077 IEC†	154.9	159.1	5315.7	ug/L	5315.7	ppb	16:26:37
1	Na 589.592 Radial†	32452.7	35003.8	10481	ug/L	10481	ppb	16:26:17
1	Sr 421.552†	74696.1	77640.3	501.43	ug/L	501.43	ppb	16:26:17
1	Sc 361.383	847993.6	847993.6	99.483	%			16:27:34
1	Y 371.029	707266.0	707266.0	97.869	%			16:27:34
1	Ag 328.068†	110454.8	110670.5	512.81	ug/L	512.81	ppb	16:27:39
1	As 188.979†	1203.5	1233.4	536.61	ug/L	536.61	ppb	16:27:59
1	B 249.677†	22887.1	23637.9	524.99	ug/L	524.99	ppb	16:27:39
1	Ba 233.527†	64157.9	64502.5	504.85	ug/L	504.85	ppb	16:27:39
1	Be 313.107†	1328475.5	1339960.8	511.70	ug/L	511.70	ppb	16:27:34
1	Cd 226.502†	45264.0	45703.2	507.02	ug/L	507.02	ppb	16:27:39
1	Co 228.616†	24528.7	24730.8	506.32	ug/L	506.32	ppb	16:27:39
1	Cr 267.716†	45211.9	45363.5	507.79	ug/L	507.79	ppb	16:27:39
1	Cu 324.752†	172347.3	166830.3	498.86	ug/L	498.86	ppb	16:27:39
1	Mn 257.610†	456024.6	457948.2	508.05	ug/L	508.05	ppb	16:27:34
1	Mo 202.031†	7195.0	7208.7	509.89	ug/L	509.89	ppb	16:27:59
1	Ni 231.604†	20385.6	20423.5	508.24	ug/L	508.24	ppb	16:27:39
1	P 214.914†	4304.6	4097.1	2398.2	ug/L	2398.2	ppb	16:27:59
1	Pb 220.353†	4045.2	4129.6	507.32	ug/L	507.32	ppb	16:27:59
1	S 181.975 Axial†	762.6	723.6	1023.1	ug/L	1023.1	ppb	16:27:59
1	Sb 206.836†	1541.9	1521.9	539.64	ug/L	539.64	ppb	16:27:59
1	Se 196.026†	743.6	779.5	520.86	ug/L	520.86	ppb	16:27:59
1	Si 251.611†	80888.8	80758.5	2565.8	ug/L	2565.8	ppb	16:27:39
1	Sn 189.927†	2878.7	2886.0	512.12	ug/L	512.12	ppb	16:27:59
1	Ti 334.940†	306785.6	309753.5	498.79	ug/L	498.79	ppb	16:27:39
1	Tl 190.801†	1616.3	1657.5	511.60	ug/L	511.60	ppb	16:27:59
1	U 409.014†	15342.7	17434.0	512.57	ug/L	512.57	ppb	16:27:39
1	V 292.402†	72166.7	73851.2	511.26	ug/L	511.26	ppb	16:27:39
1	Zn 213.857†	54020.2	53680.6	503.30	ug/L	503.30	ppb	16:27:39
1	SiO2†	80682.3	80529.6	5480.8	ug/L	5480.8	ppb	16:29:07
2	Sc Radial	4995.5	4995.5	99.2	%			16:26:42
2	Y RADIAL	5295.4	5295.4	97.53	%			16:26:42
2	Al 396.153Radial†	6349.7	6400.9	4913.2	ug/L	4913.2	ppb	16:26:42
2	Ca 317.933Radial†	3100.9	3105.8	4969.5	ug/L	4969.5	ppb	16:27:02
2	Fe 238.204 Radial†	587.8	583.6	5066.1	ug/L	5066.1	ppb	16:27:02
2	K 766.490 Radial†	30840.1	28495.6	5207.0	ug/L	5207.0	ppb	16:26:42
2	Mg 279.077 IEC†	155.1	154.5	5161.0	ug/L	5161.0	ppb	16:27:02
2	Na 589.592 Radial†	33113.8	34658.0	10377	ug/L	10377	ppb	16:26:42
2	Sr 421.552†	76746.9	77377.8	499.74	ug/L	499.74	ppb	16:26:42
2	Sc 361.383	840766.4	840766.4	98.635	%			16:28:05
2	Y 371.029	701355.4	701355.4	97.051	%			16:28:05
2	Ag 328.068†	111103.1	112282.2	520.19	ug/L	520.19	ppb	16:28:10
2	As 188.979†	1187.9	1227.9	534.21	ug/L	534.21	ppb	16:28:30
2	B 249.677†	23113.9	24065.6	534.52	ug/L	534.52	ppb	16:28:10
2	Ba 233.527†	64650.7	65556.6	513.08	ug/L	513.08	ppb	16:28:10
2	Be 313.107†	1314415.4	1337185.2	510.66	ug/L	510.66	ppb	16:28:05
2	Cd 226.502†	45475.1	46308.4	513.77	ug/L	513.77	ppb	16:28:10
2	Co 228.616†	24763.0	25180.3	515.52	ug/L	515.52	ppb	16:28:10
2	Cr 267.716†	45371.7	45916.1	513.96	ug/L	513.96	ppb	16:28:10
2	Cu 324.752†	173614.1	169603.8	507.14	ug/L	507.14	ppb	16:28:10
2	Mn 257.610†	451698.8	457503.0	507.54	ug/L	507.54	ppb	16:28:05
2	Mo 202.031†	7217.1	7293.2	515.85	ug/L	515.85	ppb	16:28:30
2	Ni 231.604†	20534.4	20750.6	516.38	ug/L	516.38	ppb	16:28:10

2	P 214.914†	4326.1	4156.0	2432.6 ug/L	2432.6 ppb	16:28:30
2	Pb 220.353†	4093.9	4213.9	517.67 ug/L	517.67 ppb	16:28:30
2	S 181.975 Axial†	770.8	738.5	1044.2 ug/L	1044.2 ppb	16:28:30
2	Sb 206.836†	1548.8	1542.3	546.88 ug/L	546.88 ppb	16:28:30
2	Se 196.026†	752.4	794.8	530.15 ug/L	530.15 ppb	16:28:30
2	Si 251.611†	81405.9	81981.6	2604.6 ug/L	2604.6 ppb	16:28:10
2	Sn 189.927†	2906.1	2938.6	521.41 ug/L	521.41 ppb	16:28:30
2	Ti 334.940†	309064.2	314714.5	506.77 ug/L	506.77 ppb	16:28:10
2	Tl 190.801†	1613.7	1668.9	515.09 ug/L	515.09 ppb	16:28:30
2	U 409.014†	15570.1	17797.1	523.28 ug/L	523.28 ppb	16:28:10
2	V 292.402†	72422.8	74734.4	517.41 ug/L	517.41 ppb	16:28:10
2	Zn 213.857†	54316.6	54447.8	510.51 ug/L	510.51 ppb	16:28:10
2	SiO2†	80842.8	81389.6	5539.3 ug/L	5539.3 ppb	16:29:12
3	Sc Radial	4867.2	4867.2	96.7 %		16:27:07
3	Y RADIAL	5186.1	5186.1	95.52 %		16:27:07
3	Al 396.153Radial†	6211.2	6426.4	4932.9 ug/L	4932.9 ppb	16:27:07
3	Ca 317.933Radial†	3097.6	3184.8	5096.0 ug/L	5096.0 ppb	16:27:27
3	Fe 238.204 Radial†	598.7	610.5	5298.4 ug/L	5298.4 ppb	16:27:27
3	K 766.490 Radial†	30160.6	28611.9	5228.3 ug/L	5228.3 ppb	16:27:07
3	Mg 279.077 IEC†	154.4	157.9	5274.8 ug/L	5274.8 ppb	16:27:27
3	Na 589.592 Radial†	32127.1	34516.9	10335 ug/L	10335 ppb	16:27:07
3	Sr 421.552†	74900.1	77506.1	500.57 ug/L	500.57 ppb	16:27:07
3	Sc 361.383	837940.2	837940.2	98.304 %		16:28:36
3	Y 371.029	699451.1	699451.1	96.787 %		16:28:36
3	Ag 328.068†	110448.3	111996.0	518.94 ug/L	518.94 ppb	16:28:41
3	As 188.979†	1184.4	1228.4	534.49 ug/L	534.49 ppb	16:29:01
3	B 249.677†	22973.9	24002.1	533.09 ug/L	533.09 ppb	16:28:41
3	Ba 233.527†	64324.5	65445.8	512.22 ug/L	512.22 ppb	16:28:41
3	Be 313.107†	1306491.0	1333618.5	509.30 ug/L	509.30 ppb	16:28:36
3	Cd 226.502†	45097.9	46080.1	511.21 ug/L	511.21 ppb	16:28:41
3	Co 228.616†	24563.8	25062.3	513.10 ug/L	513.10 ppb	16:28:41
3	Cr 267.716†	45147.3	45843.0	513.15 ug/L	513.15 ppb	16:28:41
3	Cu 324.752†	172911.7	169482.9	506.79 ug/L	506.79 ppb	16:28:41
3	Mn 257.610†	449517.1	456828.2	506.82 ug/L	506.82 ppb	16:28:36
3	Mo 202.031†	7164.5	7264.4	513.83 ug/L	513.83 ppb	16:29:01
3	Ni 231.604†	20294.3	20576.4	512.05 ug/L	512.05 ppb	16:28:41
3	P 214.914†	4263.9	4107.6	2402.8 ug/L	2402.8 ppb	16:29:01
3	Pb 220.353†	4036.0	4169.0	512.15 ug/L	512.15 ppb	16:29:01
3	S 181.975 Axial†	751.6	721.5	1020.2 ug/L	1020.2 ppb	16:29:01
3	Sb 206.836†	1536.8	1535.4	544.40 ug/L	544.40 ppb	16:29:01
3	Se 196.026†	749.9	794.8	530.91 ug/L	530.91 ppb	16:29:01
3	Si 251.611†	80849.5	81694.0	2595.5 ug/L	2595.5 ppb	16:28:41
3	Sn 189.927†	2867.3	2909.1	516.20 ug/L	516.20 ppb	16:29:01
3	Ti 334.940†	307295.1	313971.7	505.58 ug/L	505.58 ppb	16:28:41
3	Tl 190.801†	1599.9	1660.3	512.46 ug/L	512.46 ppb	16:29:01
3	U 409.014†	15506.0	17785.2	522.91 ug/L	522.91 ppb	16:28:41
3	V 292.402†	72025.9	74578.3	516.29 ug/L	516.29 ppb	16:28:41
3	Zn 213.857†	53817.0	54125.4	507.46 ug/L	507.46 ppb	16:28:41
3	SiO2†	81333.2	82164.9	5592.3 ug/L	5592.3 ppb	16:29:17

Mean Data: CCV

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	842233.4	98.808	%	0.6083				0.62%
Sc Radial	4902.8	97.4	%	1.61				1.65%
Y 371.029	702690.8	97.236	%	0.5639				0.58%
Y RADIAL	5225.0	96.24	%	1.125				1.17%
Ag 328.068†	111649.6	517.31	ug/L	3.950	517.31	ppb	3.950	0.76%
QC value within limits for Ag 328.068 Recovery = 103.46%								
Al 396.153Radial†	6411.6	4921.6	ug/L	10.20	4921.6	ppb	10.20	0.21%
QC value within limits for Al 396.153Radial Recovery = 98.43%								
As 188.979†	1229.9	535.11	ug/L	1.313	535.11	ppb	1.313	0.25%
QC value within limits for As 188.979 Recovery = 107.02%								
B 249.677†	23901.8	530.87	ug/L	5.138	530.87	ppb	5.138	0.97%
QC value within limits for B 249.677 Recovery = 106.17%								
Ba 233.527†	65168.3	510.05	ug/L	4.527	510.05	ppb	4.527	0.89%
QC value within limits for Ba 233.527 Recovery = 102.01%								
Be 313.107†	1336921.5	510.55	ug/L	1.204	510.55	ppb	1.204	0.24%
QC value within limits for Be 313.107 Recovery = 102.11%								
Ca 317.933Radial†	3164.3	5063.1	ug/L	82.24	5063.1	ppb	82.24	1.62%

QC value within limits for Ca 317.933Radial Recovery = 101.26%

Cd 226.502†	46030.6	510.67 ug/L	3.403	510.67 ppb	3.403	0.67%
QC value within limits for Cd 226.502 Recovery = 102.13%						
Co 228.616†	24991.1	511.64 ug/L	4.770	511.64 ppb	4.770	0.93%
QC value within limits for Co 228.616 Recovery = 102.33%						
Cr 267.716†	45707.5	511.63 ug/L	3.357	511.63 ppb	3.357	0.66%
QC value within limits for Cr 267.716 Recovery = 102.33%						
Cu 324.752†	168639.0	504.26 ug/L	4.682	504.26 ppb	4.682	0.93%
QC value within limits for Cu 324.752 Recovery = 100.85%						
Fe 238.204 Radial†	599.6	5204.7 ug/L	122.48	5204.7 ppb	122.48	2.35%
QC value within limits for Fe 238.204 Radial Recovery = 104.09%						
K 766.490 Radial†	28705.9	5245.5 ug/L	49.45	5245.5 ppb	49.45	0.94%
QC value within limits for K 766.490 Radial Recovery = 104.91%						
Mg 279.077 IEC†	157.1	5250.5 ug/L	80.16	5250.5 ppb	80.16	1.53%
QC value within limits for Mg 279.077 IEC Recovery = 105.01%						
Mn 257.610†	457426.5	507.47 ug/L	0.621	507.47 ppb	0.621	0.12%
QC value within limits for Mn 257.610 Recovery = 101.49%						
Mo 202.031†	7255.4	513.19 ug/L	3.030	513.19 ppb	3.030	0.59%
QC value within limits for Mo 202.031 Recovery = 102.64%						
Na 589.592 Radial†	34726.2	10397 ug/L	75.0	10397 ppb	75.0	0.72%
QC value within limits for Na 589.592 Radial Recovery = 103.97%						
Ni 231.604†	20583.5	512.22 ug/L	4.072	512.22 ppb	4.072	0.79%
QC value within limits for Ni 231.604 Recovery = 102.44%						
P 214.914†	4120.3	2411.2 ug/L	18.68	2411.2 ppb	18.68	0.77%
QC value within limits for P 214.914 Recovery = 96.45%						
Pb 220.353†	4170.8	512.38 ug/L	5.177	512.38 ppb	5.177	1.01%
QC value within limits for Pb 220.353 Recovery = 102.48%						
S 181.975 Axial†	727.9	1029.1 ug/L	13.10	1029.1 ppb	13.10	1.27%
QC value within limits for S 181.975 Axial Recovery = 102.91%						
Sb 206.836†	1533.2	543.64 ug/L	3.678	543.64 ppb	3.678	0.68%
QC value within limits for Sb 206.836 Recovery = 108.73%						
Se 196.026†	789.7	527.31 ug/L	5.594	527.31 ppb	5.594	1.06%
QC value within limits for Se 196.026 Recovery = 105.46%						
Si 251.611†	81478.0	2588.6 ug/L	20.33	2588.6 ppb	20.33	0.79%
QC value within limits for Si 251.611 Recovery = 103.55%						
Sn 189.927†	2911.2	516.58 ug/L	4.655	516.58 ppb	4.655	0.90%
QC value within limits for Sn 189.927 Recovery = 103.32%						
Sr 421.552†	77508.0	500.58 ug/L	0.847	500.58 ppb	0.847	0.17%
QC value within limits for Sr 421.552 Recovery = 100.12%						
Ti 334.940†	312813.2	503.71 ug/L	4.305	503.71 ppb	4.305	0.85%
QC value within limits for Ti 334.940 Recovery = 100.74%						
Tl 190.801†	1662.2	513.05 ug/L	1.814	513.05 ppb	1.814	0.35%
QC value within limits for Tl 190.801 Recovery = 102.61%						
U 409.014†	17672.1	519.59 ug/L	6.082	519.59 ppb	6.082	1.17%
QC value within limits for U 409.014 Recovery = 103.92%						
V 292.402†	74388.0	514.99 ug/L	3.275	514.99 ppb	3.275	0.64%
QC value within limits for V 292.402 Recovery = 103.00%						
Zn 213.857†	54084.6	507.09 ug/L	3.620	507.09 ppb	3.620	0.71%
QC value within limits for Zn 213.857 Recovery = 101.42%						
SiO2†	81361.4	5537.4 ug/L	55.76	5537.4 ppb	55.76	1.01%
QC value within limits for SiO2 Recovery = 103.55%						

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/11/2010 16:31:27
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4938.2	4938.2	98.1	%			16:33:19
1	Y RADIAL	5358.4	5358.4	98.69	%			16:33:19
1	Al 396.153Radial†	-7.9	-7.4	-5.7335	ug/L	-5.7335	ppb	16:33:19
1	Ca 317.933Radial†	10.0	-9.6	-15.283	ug/L	-15.283	ppb	16:33:39
1	Fe 238.204 Radial†	9.0	0.3	2.1671	ug/L	2.1671	ppb	16:33:39
1	K 766.490 Radial†	3304.7	779.5	142.91	ug/L	142.91	ppb	16:33:19
1	Mg 279.077 IEC†	1.5	-0.4	-13.724	ug/L	-13.724	ppb	16:33:39
1	Na 589.592 Radial†	-1067.3	192.1	57.530	ug/L	57.530	ppb	16:33:19
1	Sr 421.552†	12.7	32.4	0.2097	ug/L	0.2097	ppb	16:33:19
1	Sc 361.383	830550.2	830550.2	97.437	%			16:34:36
1	Y 371.029	705478.2	705478.2	97.621	%			16:34:36
1	Ag 328.068†	391.2	43.5	0.2013	ug/L	0.2013	ppb	16:34:36
1	As 188.979†	3.6	27.3	11.834	ug/L	11.834	ppb	16:34:56
1	B 249.677†	142.2	777.8	17.341	ug/L	17.341	ppb	16:34:56
1	Ba 233.527†	-10.2	0.9	0.0055	ug/L	0.0055	ppb	16:34:56
1	Be 313.107†	-4533.5	-67.4	-0.0260	ug/L	-0.0260	ppb	16:34:36
1	Cd 226.502†	-171.4	28.2	0.3122	ug/L	0.3122	ppb	16:34:56
1	Co 228.616†	-91.6	-19.3	-0.3939	ug/L	-0.3939	ppb	16:34:56
1	Cr 267.716†	79.4	-1.8	-0.0200	ug/L	-0.0200	ppb	16:34:56
1	Cu 324.752†	6362.6	117.8	0.3542	ug/L	0.3542	ppb	16:34:36
1	Mn 257.610†	432.1	-1.4	-0.0007	ug/L	-0.0007	ppb	16:34:56
1	Mo 202.031†	28.8	5.8	0.4111	ug/L	0.4111	ppb	16:34:56
1	Ni 231.604†	68.4	2.3	0.0570	ug/L	0.0570	ppb	16:34:56
1	P 214.914†	221.9	-2.1	-1.3602	ug/L	-1.3602	ppb	16:34:56
1	Pb 220.353†	-25.0	37.7	4.6186	ug/L	4.6186	ppb	16:34:56
1	S 181.975 Axial†	43.3	1.4	1.9669	ug/L	1.9669	ppb	16:34:56
1	Sb 206.836†	63.9	37.6	12.917	ug/L	12.917	ppb	16:34:56
1	Se 196.026†	-34.5	-3.4	-2.2073	ug/L	-2.2073	ppb	16:34:56
1	Si 251.611†	585.6	50.5	1.6034	ug/L	1.6034	ppb	16:34:56
1	Sn 189.927†	8.8	1.3	0.2337	ug/L	0.2337	ppb	16:34:56
1	Ti 334.940†	-1415.5	-78.3	-0.1252	ug/L	-0.1252	ppb	16:34:36
1	Tl 190.801†	-35.1	-3.1	-0.9555	ug/L	-0.9555	ppb	16:34:56
1	U 409.014†	-2070.6	-113.5	-3.3477	ug/L	-3.3477	ppb	16:34:36
1	V 292.402†	-1380.6	-107.2	-0.7326	ug/L	-0.7326	ppb	16:34:36
1	Zn 213.857†	695.8	93.8	0.8864	ug/L	0.8864	ppb	16:34:56
1	SiO2†	660.4	106.1	7.2291	ug/L	7.2291	ppb	16:35:52
2	Sc Radial	4977.1	4977.1	98.8	%			16:33:44
2	Y RADIAL	5379.5	5379.5	99.08	%			16:33:44
2	Al 396.153Radial†	16.4	17.3	13.346	ug/L	13.346	ppb	16:33:44
2	Ca 317.933Radial†	13.4	-6.2	-9.9695	ug/L	-9.9695	ppb	16:34:05
2	Fe 238.204 Radial†	9.2	0.4	3.5666	ug/L	3.5666	ppb	16:34:05
2	K 766.490 Radial†	3248.7	696.5	127.69	ug/L	127.69	ppb	16:33:44
2	Mg 279.077 IEC†	1.8	-0.1	-2.8814	ug/L	-2.8814	ppb	16:34:05
2	Na 589.592 Radial†	-1037.9	230.4	68.993	ug/L	68.993	ppb	16:33:44
2	Sr 421.552†	29.1	49.0	0.3163	ug/L	0.3163	ppb	16:33:44
2	Sc 361.383	846971.0	846971.0	99.363	%			16:35:02
2	Y 371.029	719409.4	719409.4	99.549	%			16:35:02
2	Ag 328.068†	221.3	-135.3	-0.6237	ug/L	-0.6237	ppb	16:35:02
2	As 188.979†	-11.7	11.8	5.1352	ug/L	5.1352	ppb	16:35:22
2	B 249.677†	108.6	741.1	16.522	ug/L	16.522	ppb	16:35:22
2	Ba 233.527†	-17.9	-6.6	-0.0524	ug/L	-0.0524	ppb	16:35:22
2	Be 313.107†	-4604.5	-48.6	-0.0186	ug/L	-0.0186	ppb	16:35:02
2	Cd 226.502†	-183.7	19.2	0.2130	ug/L	0.2130	ppb	16:35:22
2	Co 228.616†	-83.3	-9.2	-0.1902	ug/L	-0.1902	ppb	16:35:22
2	Cr 267.716†	104.3	21.7	0.2422	ug/L	0.2422	ppb	16:35:22
2	Cu 324.752†	6577.4	207.3	0.6197	ug/L	0.6197	ppb	16:35:02
2	Mn 257.610†	434.9	-7.1	-0.0074	ug/L	-0.0074	ppb	16:35:22
2	Mo 202.031†	13.5	-10.2	-0.7188	ug/L	-0.7188	ppb	16:35:22
2	Ni 231.604†	74.8	7.3	0.1816	ug/L	0.1816	ppb	16:35:22

2	P 214.914†	222.0	-6.4	-4.0468 ug/L	-4.0468 ppb	16:35:22
2	Pb 220.353†	-52.1	10.9	1.3325 ug/L	1.3325 ppb	16:35:22
2	S 181.975 Axial†	46.0	3.3	4.6311 ug/L	4.6311 ppb	16:35:22
2	Sb 206.836†	60.8	33.2	11.395 ug/L	11.395 ppb	16:35:22
2	Se 196.026†	-27.3	4.5	2.9119 ug/L	2.9119 ppb	16:35:22
2	Si 251.611†	593.5	46.8	1.5009 ug/L	1.5009 ppb	16:35:22
2	Sn 189.927†	12.7	5.1	0.9018 ug/L	0.9018 ppb	16:35:22
2	Ti 334.940†	-1383.5	-17.9	-0.0302 ug/L	-0.0302 ppb	16:35:02
2	Tl 190.801†	-42.6	-10.0	-3.0756 ug/L	-3.0756 ppb	16:35:22
2	U 409.014†	-1968.8	30.2	0.8911 ug/L	0.8911 ppb	16:35:02
2	V 292.402†	-1349.2	-48.1	-0.3383 ug/L	-0.3383 ppb	16:35:02
2	Zn 213.857†	694.8	79.0	0.7452 ug/L	0.7452 ppb	16:35:22
2	SiO2†	603.2	35.4	2.4352 ug/L	2.4352 ppb	16:35:57
3	Sc Radial	4936.5	4936.5	98.0 %		16:34:10
3	Y RADIAL	5325.3	5325.3	98.08 %		16:34:10
3	Al 396.153Radial†	2.6	3.3	2.5634 ug/L	2.5634 ppb	16:34:10
3	Ca 317.933Radial†	13.6	-5.9	-9.3960 ug/L	-9.3960 ppb	16:34:30
3	Fe 238.204 Radial†	8.6	-0.1	-1.1579 ug/L	-1.1579 ppb	16:34:30
3	K 766.490 Radial†	3161.3	634.5	116.32 ug/L	116.32 ppb	16:34:10
3	Mg 279.077 IEC†	-1.9	-3.9	-129.81 ug/L	-129.81 ppb	16:34:30
3	Na 589.592 Radial†	-1104.9	153.5	45.952 ug/L	45.952 ppb	16:34:10
3	Sr 421.552†	-31.9	-13.0	-0.0842 ug/L	-0.0842 ppb	16:34:10
3	Sc 361.383	840442.8	840442.8	98.597 %		16:35:27
3	Y 371.029	714287.5	714287.5	98.840 %		16:35:27
3	Ag 328.068†	305.1	-48.6	-0.2213 ug/L	-0.2213 ppb	16:35:27
3	As 188.979†	-10.0	13.5	5.8431 ug/L	5.8431 ppb	16:35:47
3	B 249.677†	74.6	707.5	15.773 ug/L	15.773 ppb	16:35:47
3	Ba 233.527†	-12.8	-1.6	-0.0126 ug/L	-0.0126 ppb	16:35:47
3	Be 313.107†	-4499.3	22.0	0.0083 ug/L	0.0083 ppb	16:35:27
3	Cd 226.502†	-176.2	25.4	0.2813 ug/L	0.2813 ppb	16:35:47
3	Co 228.616†	-88.4	-15.0	-0.3063 ug/L	-0.3063 ppb	16:35:47
3	Cr 267.716†	95.4	13.5	0.1525 ug/L	0.1525 ppb	16:35:47
3	Cu 324.752†	6418.3	97.4	0.2934 ug/L	0.2934 ppb	16:35:27
3	Mn 257.610†	440.8	2.2	0.0076 ug/L	0.0076 ppb	16:35:47
3	Mo 202.031†	23.3	-0.1	-0.0083 ug/L	-0.0083 ppb	16:35:47
3	Ni 231.604†	78.6	11.8	0.2929 ug/L	0.2929 ppb	16:35:47
3	P 214.914†	214.4	-12.4	-7.6292 ug/L	-7.6292 ppb	16:35:47
3	Pb 220.353†	-53.3	9.3	1.1359 ug/L	1.1359 ppb	16:35:47
3	S 181.975 Axial†	47.1	4.7	6.6920 ug/L	6.6920 ppb	16:35:47
3	Sb 206.836†	52.6	25.4	8.7048 ug/L	8.7048 ppb	16:35:47
3	Se 196.026†	-39.6	-8.2	-5.2896 ug/L	-5.2896 ppb	16:35:47
3	Si 251.611†	561.4	19.0	0.6040 ug/L	0.6040 ppb	16:35:47
3	Sn 189.927†	10.8	3.3	0.5891 ug/L	0.5891 ppb	16:35:47
3	Ti 334.940†	-1374.1	-19.1	-0.0195 ug/L	-0.0195 ppb	16:35:27
3	Tl 190.801†	-30.3	2.1	0.6498 ug/L	0.6498 ppb	16:35:47
3	U 409.014†	-2124.1	-142.7	-4.2104 ug/L	-4.2104 ppb	16:35:27
3	V 292.402†	-1316.1	-25.1	-0.1819 ug/L	-0.1819 ppb	16:35:27
3	Zn 213.857†	697.1	86.8	0.8190 ug/L	0.8190 ppb	16:35:47
3	SiO2†	583.7	20.4	1.3897 ug/L	1.3897 ppb	16:36:02

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	839321.3	98.466	%	0.9699				0.99%
Sc Radial	4950.6	98.3	%	0.46				0.46%
Y 371.029	713058.4	98.670	%	0.9751				0.99%
Y RADIAL	5354.4	98.62	%	0.504				0.51%
Ag 328.068†	-46.8	-0.2146	ug/L	0.41254	-0.2146	ppb	0.41254	192.26%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	4.4	3.3920	ug/L	9.56669	3.3920	ppb	9.56669	282.04%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	17.5	7.6040	ug/L	3.68017	7.6040	ppb	3.68017	48.40%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	742.1	16.545	ug/L	0.7845	16.545	ppb	0.7845	4.74%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-2.4	-0.0198	ug/L	0.02961	-0.0198	ppb	0.02961	149.50%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-31.3	-0.0121	ug/L	0.01804	-0.0121	ppb	0.01804	149.45%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-7.2	-11.549	ug/L	3.2460	-11.549	ppb	3.2460	28.10%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              24.3      0.2688 ug/L       0.05076      0.2688 ppb       0.05076  18.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†             -14.5     -0.2968 ug/L       0.10215     -0.2968 ppb       0.10215  34.42%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              11.2      0.1249 ug/L       0.13322      0.1249 ppb       0.13322 106.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             140.8      0.4225 ug/L       0.17351      0.4225 ppb       0.17351  41.07%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.2      1.5253 ug/L       2.42676      1.5253 ppb       2.42676 159.11%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       703.5      128.97 ug/L        13.341      128.97 ppb        13.341  10.34%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -1.5     -48.807 ug/L       70.3643     -48.807 ppb       70.3643 144.17%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -2.1     -0.0002 ug/L       0.00752     -0.0002 ppb       0.00752 >999.9%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.5     -0.1053 ug/L       0.57117     -0.1053 ppb       0.57117 542.32%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      192.0      57.491 ug/L       11.5206      57.491 ppb       11.5206  20.04%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               7.1      0.1771 ug/L       0.11803      0.1771 ppb       0.11803  66.63%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -7.0     -4.3454 ug/L       3.14512     -4.3454 ppb       3.14512  72.38%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              19.3      2.3624 ug/L       1.95644      2.3624 ppb       1.95644  82.82%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          3.1      4.4300 ug/L       2.36900      4.4300 ppb       2.36900  53.48%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              32.1      11.006 ug/L        2.1330      11.006 ppb        2.1330  19.38%
   QC value greater than the upper limit for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.4     -1.5283 ug/L       4.14268     -1.5283 ppb       4.14268 271.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              38.8      1.2361 ug/L       0.54983      1.2361 ppb       0.54983  44.48%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.3      0.5749 ug/L       0.33426      0.5749 ppb       0.33426  58.15%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              22.8      0.1473 ug/L       0.20740      0.1473 ppb       0.20740 140.84%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -38.4     -0.0583 ug/L       0.05820     -0.0583 ppb       0.05820  99.84%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -3.7     -1.1271 ug/L       1.86864     -1.1271 ppb       1.86864 165.79%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -75.3     -2.2223 ug/L       2.73056     -2.2223 ppb       2.73056 122.87%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -60.2     -0.4176 ug/L       0.28376     -0.4176 ppb       0.28376  67.95%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              86.6      0.8169 ug/L       0.07064      0.8169 ppb       0.07064   8.65%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    54.0      3.6847 ug/L       3.11377      3.6847 ppb       3.11377  84.51%
   QC value within limits for SiO2  Recovery = Not calculated
QC Failed.  Continue with analysis.
```

User canceled analysis.

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Analysis Begun

Start Time: 1/11/2010 16:38:46 **Plasma On Time: 1/11/2010 06:15:31**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\011110.sif
Batch ID:
Results Data Set: 011110A
Results Library: C:\pe\Optima3\Results\Results.mdb

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Sequence No.: 13 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/11/2010 16:38:48**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4882.6	4882.6	97.0	%			16:40:39
1	Y RADIAL	5223.2	5223.2	96.20	%			16:40:39
1	Al 396.153Radial†	6253.5	6449.7	4951.3	ug/L	4951.3	ppb	16:40:39
1	Ca 317.933Radial†	3059.0	3134.9	5016.2	ug/L	5016.2	ppb	16:40:59
1	Fe 238.204 Radial†	576.8	585.9	5085.4	ug/L	5085.4	ppb	16:40:59
1	K 766.490 Radial†	29412.0	27741.6	5069.0	ug/L	5069.0	ppb	16:40:39
1	Mg 279.077 IEC†	152.5	155.3	5189.7	ug/L	5189.7	ppb	16:40:59
1	Na 589.592 Radial†	31106.7	33359.8	9988.3	ug/L	9988.3	ppb	16:40:39
1	Sr 421.552†	73905.9	76236.5	492.37	ug/L	492.37	ppb	16:40:39
1	Sc 361.383	845780.1	845780.1	99.224	%			16:41:57
1	Y 371.029	705843.2	705843.2	97.672	%			16:41:57
1	Ag 328.068†	108502.2	108993.2	505.01	ug/L	505.01	ppb	16:42:02
1	As 188.979†	1129.0	1161.4	505.37	ug/L	505.37	ppb	16:42:22
1	B 249.677†	21566.4	22367.0	496.70	ug/L	496.70	ppb	16:42:02
1	Ba 233.527†	63263.6	63770.0	499.11	ug/L	499.11	ppb	16:42:02
1	Be 313.107†	1321061.2	1335983.3	510.17	ug/L	510.17	ppb	16:41:57
1	Cd 226.502†	44316.2	44867.1	497.76	ug/L	497.76	ppb	16:42:02
1	Co 228.616†	24190.7	24454.7	500.68	ug/L	500.68	ppb	16:42:02
1	Cr 267.716†	44404.7	44668.9	500.01	ug/L	500.01	ppb	16:42:02
1	Cu 324.752†	169480.5	164394.5	491.57	ug/L	491.57	ppb	16:42:02
1	Mn 257.610†	453830.1	456936.2	506.92	ug/L	506.92	ppb	16:41:57
1	Mo 202.031†	7137.7	7169.9	507.13	ug/L	507.13	ppb	16:42:22
1	Ni 231.604†	20031.9	20120.7	500.71	ug/L	500.71	ppb	16:42:02
1	P 214.914†	4274.5	4078.1	2388.2	ug/L	2388.2	ppb	16:42:22
1	Pb 220.353†	4005.5	4100.2	503.74	ug/L	503.74	ppb	16:42:22
1	S 181.975 Axial†	759.0	721.9	1020.7	ug/L	1020.7	ppb	16:42:22
1	Sb 206.836†	1494.6	1478.4	524.59	ug/L	524.59	ppb	16:42:22
1	Se 196.026†	743.3	781.1	521.36	ug/L	521.36	ppb	16:42:22
1	Si 251.611†	79232.2	79301.7	2519.4	ug/L	2519.4	ppb	16:42:02
1	Sn 189.927†	2850.0	2864.7	508.32	ug/L	508.32	ppb	16:42:22
1	Ti 334.940†	301952.2	305689.3	492.24	ug/L	492.24	ppb	16:42:02
1	Tl 190.801†	1587.5	1632.8	503.99	ug/L	503.99	ppb	16:42:22
1	U 409.014†	14919.9	17048.3	501.22	ug/L	501.22	ppb	16:42:02
1	V 292.402†	70898.2	72762.7	503.80	ug/L	503.80	ppb	16:42:02
1	Zn 213.857†	52974.0	52768.2	494.74	ug/L	494.74	ppb	16:42:02
1	SiO2†	80240.9	80297.0	5465.0	ug/L	5465.0	ppb	16:43:29
2	Sc Radial	4869.0	4869.0	96.7	%			16:41:04
2	Y RADIAL	5223.7	5223.7	96.21	%			16:41:04
2	Al 396.153Radial†	6219.1	6432.2	4937.9	ug/L	4937.9	ppb	16:41:04
2	Ca 317.933Radial†	3097.5	3183.6	5094.0	ug/L	5094.0	ppb	16:41:24
2	Fe 238.204 Radial†	583.9	595.0	5164.1	ug/L	5164.1	ppb	16:41:24
2	K 766.490 Radial†	29527.0	27945.4	5106.4	ug/L	5106.4	ppb	16:41:04
2	Mg 279.077 IEC†	150.3	153.5	5129.5	ug/L	5129.5	ppb	16:41:24
2	Na 589.592 Radial†	31283.3	33632.3	10070	ug/L	10070	ppb	16:41:04
2	Sr 421.552†	74177.7	76730.8	495.56	ug/L	495.56	ppb	16:41:04
2	Sc 361.383	857147.9	857147.9	100.56	%			16:42:28

2	Y 371.029	715084.0	715084.0	98.951 %		16:42:28
2	Ag 328.068†	110354.2	109384.7	506.84 ug/L	506.84 ppb	16:42:33
2	As 188.979†	1145.2	1162.5	505.84 ug/L	505.84 ppb	16:42:53
2	B 249.677†	21931.9	22442.2	498.36 ug/L	498.36 ppb	16:42:33
2	Ba 233.527†	64151.9	63807.8	499.41 ug/L	499.41 ppb	16:42:33
2	Be 313.107†	1333477.0	1330672.9	508.14 ug/L	508.14 ppb	16:42:28
2	Cd 226.502†	45190.4	45144.1	500.82 ug/L	500.82 ppb	16:42:33
2	Co 228.616†	24545.1	24483.7	501.26 ug/L	501.26 ppb	16:42:33
2	Cr 267.716†	45142.8	44809.4	501.58 ug/L	501.58 ppb	16:42:33
2	Cu 324.752†	172257.5	164890.7	493.06 ug/L	493.06 ppb	16:42:33
2	Mn 257.610†	457824.2	454842.3	504.61 ug/L	504.61 ppb	16:42:28
2	Mo 202.031†	7181.0	7117.5	503.44 ug/L	503.44 ppb	16:42:53
2	Ni 231.604†	20361.3	20180.5	502.20 ug/L	502.20 ppb	16:42:33
2	P 214.914†	4307.4	4053.6	2372.8 ug/L	2372.8 ppb	16:42:53
2	Pb 220.353†	4036.2	4077.2	500.90 ug/L	500.90 ppb	16:42:53
2	S 181.975 Axial†	759.0	711.8	1006.4 ug/L	1006.4 ppb	16:42:53
2	Sb 206.836†	1502.1	1465.8	520.15 ug/L	520.15 ppb	16:42:53
2	Se 196.026†	747.7	775.6	518.03 ug/L	518.03 ppb	16:42:53
2	Si 251.611†	80567.2	79570.2	2528.0 ug/L	2528.0 ppb	16:42:33
2	Sn 189.927†	2863.5	2839.9	503.95 ug/L	503.95 ppb	16:42:53
2	Ti 334.940†	306689.7	306364.7	493.34 ug/L	493.34 ppb	16:42:33
2	Tl 190.801†	1602.6	1626.5	502.07 ug/L	502.07 ppb	16:42:53
2	U 409.014†	15377.6	17304.0	508.75 ug/L	508.75 ppb	16:42:33
2	V 292.402†	71992.3	72903.1	504.70 ug/L	504.70 ppb	16:42:33
2	Zn 213.857†	53815.4	52897.0	495.94 ug/L	495.94 ppb	16:42:33
2	SiO2†	79728.2	78714.7	5357.1 ug/L	5357.1 ppb	16:43:34
3	Sc Radial	4810.3	4810.3	95.5 %		16:41:30
3	Y RADIAL	5124.6	5124.6	94.38 %		16:41:30
3	Al 396.153Radial†	6306.8	6602.6	5068.9 ug/L	5068.9 ppb	16:41:30
3	Ca 317.933Radial†	3080.5	3204.9	5128.1 ug/L	5128.1 ppb	16:41:50
3	Fe 238.204 Radial†	588.4	607.0	5268.5 ug/L	5268.5 ppb	16:41:50
3	K 766.490 Radial†	29544.2	28336.3	5177.8 ug/L	5177.8 ppb	16:41:30
3	Mg 279.077 IEC†	157.6	163.1	5449.4 ug/L	5449.4 ppb	16:41:50
3	Na 589.592 Radial†	31435.3	34186.5	10236 ug/L	10236 ppb	16:41:30
3	Sr 421.552†	74786.5	78305.0	505.73 ug/L	505.73 ppb	16:41:30
3	Sc 361.383	839569.1	839569.1	98.495 %		16:42:59
3	Y 371.029	700329.4	700329.4	96.909 %		16:42:59
3	Ag 328.068†	110088.2	111412.4	516.24 ug/L	516.24 ppb	16:43:04
3	As 188.979†	1138.0	1179.0	513.05 ug/L	513.05 ppb	16:43:24
3	B 249.677†	22005.5	22973.6	510.17 ug/L	510.17 ppb	16:43:04
3	Ba 233.527†	64098.3	65089.1	509.43 ug/L	509.43 ppb	16:43:04
3	Be 313.107†	1304992.4	1329518.6	507.73 ug/L	507.73 ppb	16:42:59
3	Cd 226.502†	45083.5	45976.5	510.06 ug/L	510.06 ppb	16:43:04
3	Co 228.616†	24559.1	25009.1	512.01 ug/L	512.01 ppb	16:43:04
3	Cr 267.716†	44972.2	45576.1	510.17 ug/L	510.17 ppb	16:43:04
3	Cu 324.752†	172089.4	168306.7	503.27 ug/L	503.27 ppb	16:43:04
3	Mn 257.610†	449125.2	455543.1	505.38 ug/L	505.38 ppb	16:42:59
3	Mo 202.031†	7174.4	7260.3	513.54 ug/L	513.54 ppb	16:43:24
3	Ni 231.604†	20313.7	20556.1	511.54 ug/L	511.54 ppb	16:43:04
3	P 214.914†	4293.6	4129.3	2416.9 ug/L	2416.9 ppb	16:43:24
3	Pb 220.353†	4030.2	4155.2	510.49 ug/L	510.49 ppb	16:43:24
3	S 181.975 Axial†	757.6	726.1	1026.6 ug/L	1026.6 ppb	16:43:24
3	Sb 206.836†	1500.4	1495.4	530.64 ug/L	530.64 ppb	16:43:24
3	Se 196.026†	746.7	790.1	527.77 ug/L	527.77 ppb	16:43:24
3	Si 251.611†	80487.4	81166.8	2578.7 ug/L	2578.7 ppb	16:43:04
3	Sn 189.927†	2857.0	2893.0	513.35 ug/L	513.35 ppb	16:43:24
3	Ti 334.940†	306093.6	312145.3	502.63 ug/L	502.63 ppb	16:43:04
3	Tl 190.801†	1601.4	1658.8	511.96 ug/L	511.96 ppb	16:43:24
3	U 409.014†	15311.6	17557.2	516.19 ug/L	516.19 ppb	16:43:04
3	V 292.402†	71844.9	74252.4	514.06 ug/L	514.06 ppb	16:43:04
3	Zn 213.857†	53742.9	53943.9	505.76 ug/L	505.76 ppb	16:43:04
3	SiO2†	80273.2	80928.1	5507.9 ug/L	5507.9 ppb	16:43:40

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	847499.0	99.425	%	1.0458				1.05%
Sc Radial	4854.0	96.4	%	0.76				0.79%
Y 371.029	707085.5	97.844	%	1.0316				1.05%
Y RADIAL	5190.5	95.60	%	1.052				1.10%

Ag 328.068†	109930.1	509.36 ug/L	6.024	509.36 ppb	6.024	1.18%
QC value within limits for Ag 328.068 Recovery = 101.87%						
Al 396.153Radial†	6494.8	4986.0 ug/L	72.07	4986.0 ppb	72.07	1.45%
QC value within limits for Al 396.153Radial Recovery = 99.72%						
As 188.979†	1167.6	508.09 ug/L	4.305	508.09 ppb	4.305	0.85%
QC value within limits for As 188.979 Recovery = 101.62%						
B 249.677†	22594.3	501.74 ug/L	7.344	501.74 ppb	7.344	1.46%
QC value within limits for B 249.677 Recovery = 100.35%						
Ba 233.527†	64222.3	502.65 ug/L	5.877	502.65 ppb	5.877	1.17%
QC value within limits for Ba 233.527 Recovery = 100.53%						
Be 313.107†	1332058.3	508.68 ug/L	1.305	508.68 ppb	1.305	0.26%
QC value within limits for Be 313.107 Recovery = 101.74%						
Ca 317.933Radial†	3174.4	5079.4 ug/L	57.37	5079.4 ppb	57.37	1.13%
QC value within limits for Ca 317.933Radial Recovery = 101.59%						
Cd 226.502†	45329.2	502.88 ug/L	6.403	502.88 ppb	6.403	1.27%
QC value within limits for Cd 226.502 Recovery = 100.58%						
Co 228.616†	24649.2	504.65 ug/L	6.385	504.65 ppb	6.385	1.27%
QC value within limits for Co 228.616 Recovery = 100.93%						
Cr 267.716†	45018.2	503.92 ug/L	5.466	503.92 ppb	5.466	1.08%
QC value within limits for Cr 267.716 Recovery = 100.78%						
Cu 324.752†	165864.0	495.97 ug/L	6.370	495.97 ppb	6.370	1.28%
QC value within limits for Cu 324.752 Recovery = 99.19%						
Fe 238.204 Radial†	596.0	5172.7 ug/L	91.84	5172.7 ppb	91.84	1.78%
QC value within limits for Fe 238.204 Radial Recovery = 103.45%						
K 766.490 Radial†	28007.7	5117.7 ug/L	55.30	5117.7 ppb	55.30	1.08%
QC value within limits for K 766.490 Radial Recovery = 102.35%						
Mg 279.077 IEC†	157.3	5256.2 ug/L	170.00	5256.2 ppb	170.00	3.23%
QC value within limits for Mg 279.077 IEC Recovery = 105.12%						
Mn 257.610†	455773.9	505.64 ug/L	1.176	505.64 ppb	1.176	0.23%
QC value within limits for Mn 257.610 Recovery = 101.13%						
Mo 202.031†	7182.5	508.04 ug/L	5.112	508.04 ppb	5.112	1.01%
QC value within limits for Mo 202.031 Recovery = 101.61%						
Na 589.592 Radial†	33726.2	10098 ug/L	126.1	10098 ppb	126.1	1.25%
QC value within limits for Na 589.592 Radial Recovery = 100.98%						
Ni 231.604†	20285.8	504.82 ug/L	5.873	504.82 ppb	5.873	1.16%
QC value within limits for Ni 231.604 Recovery = 100.96%						
P 214.914†	4087.0	2392.6 ug/L	22.36	2392.6 ppb	22.36	0.93%
QC value within limits for P 214.914 Recovery = 95.71%						
Pb 220.353†	4110.9	505.04 ug/L	4.924	505.04 ppb	4.924	0.98%
QC value within limits for Pb 220.353 Recovery = 101.01%						
S 181.975 Axial†	719.9	1017.9 ug/L	10.40	1017.9 ppb	10.40	1.02%
QC value within limits for S 181.975 Axial Recovery = 101.79%						
Sb 206.836†	1479.9	525.12 ug/L	5.267	525.12 ppb	5.267	1.00%
QC value within limits for Sb 206.836 Recovery = 105.02%						
Se 196.026†	782.2	522.39 ug/L	4.947	522.39 ppb	4.947	0.95%
QC value within limits for Se 196.026 Recovery = 104.48%						
Si 251.611†	80012.9	2542.0 ug/L	32.06	2542.0 ppb	32.06	1.26%
QC value within limits for Si 251.611 Recovery = 101.68%						
Sn 189.927†	2865.9	508.54 ug/L	4.707	508.54 ppb	4.707	0.93%
QC value within limits for Sn 189.927 Recovery = 101.71%						
Sr 421.552†	77090.8	497.88 ug/L	6.976	497.88 ppb	6.976	1.40%
QC value within limits for Sr 421.552 Recovery = 99.58%						
Ti 334.940†	308066.5	496.07 ug/L	5.704	496.07 ppb	5.704	1.15%
QC value within limits for Ti 334.940 Recovery = 99.21%						
Tl 190.801†	1639.4	506.01 ug/L	5.246	506.01 ppb	5.246	1.04%
QC value within limits for Tl 190.801 Recovery = 101.20%						
U 409.014†	17303.2	508.72 ug/L	7.484	508.72 ppb	7.484	1.47%
QC value within limits for U 409.014 Recovery = 101.74%						
V 292.402†	73306.1	507.52 ug/L	5.678	507.52 ppb	5.678	1.12%
QC value within limits for V 292.402 Recovery = 101.50%						
Zn 213.857†	53203.0	498.81 ug/L	6.044	498.81 ppb	6.044	1.21%
QC value within limits for Zn 213.857 Recovery = 99.76%						
SiO2†	79979.9	5443.3 ug/L	77.67	5443.3 ppb	77.67	1.43%
QC value within limits for SiO2 Recovery = 101.79%						

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/11/2010 16:45:50
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4821.6	4821.6	95.8	%			16:47:42
1	Y RADIAL	5232.3	5232.3	96.37	%			16:47:42
1	Al 396.153Radial†	-11.8	-11.7	-8.9640	ug/L	-8.9640	ppb	16:47:42
1	Ca 317.933Radial†	17.7	-1.3	-2.0768	ug/L	-2.0768	ppb	16:48:02
1	Fe 238.204 Radial†	10.2	1.7	14.859	ug/L	14.859	ppb	16:48:02
1	K 766.490 Radial†	3051.9	597.0	109.49	ug/L	109.49	ppb	16:47:42
1	Mg 279.077 IEC†	1.3	-0.5	-18.276	ug/L	-18.276	ppb	16:48:02
1	Na 589.592 Radial†	-1271.9	-47.8	-14.311	ug/L	-14.311	ppb	16:47:42
1	Sr 421.552†	5.9	25.6	0.1655	ug/L	0.1655	ppb	16:47:42
1	Sc 361.383	841525.7	841525.7	98.724	%			16:48:59
1	Y 371.029	715554.7	715554.7	99.016	%			16:48:59
1	Ag 328.068†	323.2	-30.6	-0.1346	ug/L	-0.1346	ppb	16:48:59
1	As 188.979†	-18.8	4.6	2.0049	ug/L	2.0049	ppb	16:49:19
1	B 249.677†	-282.3	345.9	7.7098	ug/L	7.7098	ppb	16:49:19
1	Ba 233.527†	-12.7	-1.5	-0.0116	ug/L	-0.0116	ppb	16:49:19
1	Be 313.107†	-4552.1	-25.5	-0.0096	ug/L	-0.0096	ppb	16:48:59
1	Cd 226.502†	-186.4	15.3	0.1676	ug/L	0.1676	ppb	16:49:19
1	Co 228.616†	-84.8	-11.2	-0.2326	ug/L	-0.2326	ppb	16:49:19
1	Cr 267.716†	86.2	4.1	0.0467	ug/L	0.0467	ppb	16:49:19
1	Cu 324.752†	6436.7	107.6	0.3241	ug/L	0.3241	ppb	16:48:59
1	Mn 257.610†	416.7	-22.8	-0.0228	ug/L	-0.0228	ppb	16:49:19
1	Mo 202.031†	9.1	-14.5	-1.0240	ug/L	-1.0240	ppb	16:49:19
1	Ni 231.604†	63.7	-3.4	-0.0843	ug/L	-0.0843	ppb	16:49:19
1	P 214.914†	214.3	-12.8	-7.8928	ug/L	-7.8928	ppb	16:49:19
1	Pb 220.353†	-53.2	9.4	1.1493	ug/L	1.1493	ppb	16:49:19
1	S 181.975 Axial†	43.0	0.5	0.7238	ug/L	0.7238	ppb	16:49:19
1	Sb 206.836†	37.3	9.9	3.3534	ug/L	3.3534	ppb	16:49:19
1	Se 196.026†	-29.4	2.2	1.4795	ug/L	1.4795	ppb	16:49:19
1	Si 251.611†	537.7	-5.8	-0.1729	ug/L	-0.1729	ppb	16:49:19
1	Sn 189.927†	5.7	-1.9	-0.3300	ug/L	-0.3300	ppb	16:49:19
1	Ti 334.940†	-1328.3	29.0	0.0492	ug/L	0.0492	ppb	16:48:59
1	Tl 190.801†	-20.5	12.1	3.7103	ug/L	3.7103	ppb	16:49:19
1	U 409.014†	-2076.7	-91.9	-2.7131	ug/L	-2.7131	ppb	16:48:59
1	V 292.402†	-1322.2	-29.6	-0.2251	ug/L	-0.2251	ppb	16:48:59
1	Zn 213.857†	640.3	28.4	0.2671	ug/L	0.2671	ppb	16:49:19
1	SiO2†	524.6	-40.3	-2.7219	ug/L	-2.7219	ppb	16:50:15
2	Sc Radial	4944.4	4944.4	98.2	%			16:48:07
2	Y RADIAL	5363.5	5363.5	98.79	%			16:48:07
2	Al 396.153Radial†	-2.7	-2.1	-1.6010	ug/L	-1.6010	ppb	16:48:07
2	Ca 317.933Radial†	14.2	-5.3	-8.4304	ug/L	-8.4304	ppb	16:48:27
2	Fe 238.204 Radial†	9.3	0.6	4.8751	ug/L	4.8751	ppb	16:48:27
2	K 766.490 Radial†	2945.0	409.0	74.983	ug/L	74.983	ppb	16:48:07
2	Mg 279.077 IEC†	3.9	2.0	67.948	ug/L	67.948	ppb	16:48:27
2	Na 589.592 Radial†	-1212.0	46.2	13.819	ug/L	13.819	ppb	16:48:07
2	Sr 421.552†	0.7	20.2	0.1309	ug/L	0.1309	ppb	16:48:07
2	Sc 361.383	833346.4	833346.4	97.765	%			16:49:24
2	Y 371.029	708291.2	708291.2	98.011	%			16:49:24
2	Ag 328.068†	309.5	-41.5	-0.1903	ug/L	-0.1903	ppb	16:49:24
2	As 188.979†	-5.5	18.0	7.7871	ug/L	7.7871	ppb	16:49:44
2	B 249.677†	-299.8	325.2	7.2486	ug/L	7.2486	ppb	16:49:44
2	Ba 233.527†	-19.0	-8.0	-0.0637	ug/L	-0.0637	ppb	16:49:44
2	Be 313.107†	-4542.3	-60.8	-0.0233	ug/L	-0.0233	ppb	16:49:24
2	Cd 226.502†	-200.4	-0.9	-0.0103	ug/L	-0.0103	ppb	16:49:44
2	Co 228.616†	-78.0	-5.1	-0.1048	ug/L	-0.1048	ppb	16:49:44
2	Cr 267.716†	85.0	3.6	0.0404	ug/L	0.0404	ppb	16:49:44
2	Cu 324.752†	6402.2	136.4	0.4086	ug/L	0.4086	ppb	16:49:24
2	Mn 257.610†	421.6	-13.7	-0.0174	ug/L	-0.0174	ppb	16:49:44
2	Mo 202.031†	24.8	1.6	0.1158	ug/L	0.1158	ppb	16:49:44
2	Ni 231.604†	64.4	-2.1	-0.0527	ug/L	-0.0527	ppb	16:49:44

2	P 214.914†	234.2	9.7	5.8359 ug/L	5.8359 ppb	16:49:44
2	Pb 220.353†	-63.6	-1.7	-0.2065 ug/L	-0.2065 ppb	16:49:44
2	S 181.975 Axial†	53.0	11.2	15.884 ug/L	15.884 ppb	16:49:44
2	Sb 206.836†	37.6	10.5	3.6095 ug/L	3.6095 ppb	16:49:44
2	Se 196.026†	-27.3	4.1	2.6695 ug/L	2.6695 ppb	16:49:44
2	Si 251.611†	533.3	-4.9	-0.1584 ug/L	-0.1584 ppb	16:49:44
2	Sn 189.927†	9.7	2.2	0.3903 ug/L	0.3903 ppb	16:49:44
2	Ti 334.940†	-1379.2	-36.2	-0.0643 ug/L	-0.0643 ppb	16:49:24
2	Tl 190.801†	-43.6	-11.8	-3.6161 ug/L	-3.6161 ppb	16:49:44
2	U 409.014†	-2001.5	-35.7	-1.0528 ug/L	-1.0528 ppb	16:49:24
2	V 292.402†	-1354.0	-75.3	-0.5137 ug/L	-0.5137 ppb	16:49:24
2	Zn 213.857†	649.3	43.9	0.4145 ug/L	0.4145 ppb	16:49:44
2	SiO2†	532.3	-27.2	-1.8597 ug/L	-1.8597 ppb	16:50:20
3	Sc Radial	4889.1	4889.1	97.1 %		16:48:32
3	Y RADIAL	5263.1	5263.1	96.94 %		16:48:32
3	Al 396.153Radial†	2.7	3.5	2.6530 ug/L	2.6530 ppb	16:48:32
3	Ca 317.933Radial†	13.3	-6.1	-9.6929 ug/L	-9.6929 ppb	16:48:52
3	Fe 238.204 Radial†	10.5	1.9	16.443 ug/L	16.443 ppb	16:48:52
3	K 766.490 Radial†	2886.8	383.0	70.229 ug/L	70.229 ppb	16:48:32
3	Mg 279.077 IEC†	3.9	2.1	68.851 ug/L	68.851 ppb	16:48:52
3	Na 589.592 Radial†	-1260.2	-17.4	-5.2205 ug/L	-5.2205 ppb	16:48:32
3	Sr 421.552†	27.4	47.7	0.3082 ug/L	0.3082 ppb	16:48:32
3	Sc 361.383	840103.4	840103.4	98.558 %		16:49:50
3	Y 371.029	713031.9	713031.9	98.667 %		16:49:50
3	Ag 328.068†	251.5	-102.8	-0.4704 ug/L	-0.4704 ppb	16:49:50
3	As 188.979†	-20.0	3.4	1.4597 ug/L	1.4597 ppb	16:50:10
3	B 249.677†	-305.6	321.8	7.1715 ug/L	7.1715 ppb	16:50:10
3	Ba 233.527†	-15.5	-4.3	-0.0339 ug/L	-0.0339 ppb	16:50:10
3	Be 313.107†	-4547.9	-29.1	-0.0110 ug/L	-0.0110 ppb	16:49:50
3	Cd 226.502†	-184.4	17.0	0.1873 ug/L	0.1873 ppb	16:50:10
3	Co 228.616†	-66.0	7.7	0.1585 ug/L	0.1585 ppb	16:50:10
3	Cr 267.716†	75.0	-7.2	-0.0807 ug/L	-0.0807 ppb	16:50:10
3	Cu 324.752†	6412.0	93.7	0.2803 ug/L	0.2803 ppb	16:49:50
3	Mn 257.610†	417.7	-21.1	-0.0244 ug/L	-0.0244 ppb	16:50:10
3	Mo 202.031†	28.5	5.2	0.3676 ug/L	0.3676 ppb	16:50:10
3	Ni 231.604†	70.8	3.9	0.0977 ug/L	0.0977 ppb	16:50:10
3	P 214.914†	211.6	-15.2	-9.3652 ug/L	-9.3652 ppb	16:50:10
3	Pb 220.353†	-52.6	10.0	1.2274 ug/L	1.2274 ppb	16:50:10
3	S 181.975 Axial†	47.5	5.2	7.4133 ug/L	7.4133 ppb	16:50:10
3	Sb 206.836†	41.1	13.7	4.7078 ug/L	4.7078 ppb	16:50:10
3	Se 196.026†	-22.7	9.0	5.8487 ug/L	5.8487 ppb	16:50:10
3	Si 251.611†	539.2	-3.4	-0.1131 ug/L	-0.1131 ppb	16:50:10
3	Sn 189.927†	5.5	-2.1	-0.3663 ug/L	-0.3663 ppb	16:50:10
3	Ti 334.940†	-1325.3	29.8	0.0408 ug/L	0.0408 ppb	16:49:50
3	Tl 190.801†	-39.2	-6.9	-2.1238 ug/L	-2.1238 ppb	16:50:10
3	U 409.014†	-1943.8	39.4	1.1607 ug/L	1.1607 ppb	16:49:50
3	V 292.402†	-1337.5	-47.4	-0.3169 ug/L	-0.3169 ppb	16:49:50
3	Zn 213.857†	648.7	37.9	0.3562 ug/L	0.3562 ppb	16:50:10
3	SiO2†	528.8	-35.2	-2.4107 ug/L	-2.4107 ppb	16:50:25

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	838325.1	98.349	%	0.5127				0.52%
Sc Radial	4885.1	97.0	%	1.22				1.26%
Y 371.029	712292.6	98.564	%	0.5103				0.52%
Y RADIAL	5286.3	97.36	%	1.264				1.30%
Ag 328.068†	-58.3	-0.2651	ug/L	0.17994	-0.2651	ppb	0.17994	67.88%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.4	-2.6374	ug/L	5.87742	-2.6374	ppb	5.87742	222.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	8.6	3.7505	ug/L	3.50634	3.7505	ppb	3.50634	93.49%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	330.9	7.3766	ug/L	0.29109	7.3766	ppb	0.29109	3.95%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.6	-0.0364	ug/L	0.02618	-0.0364	ppb	0.02618	71.94%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-38.5	-0.0146	ug/L	0.00753	-0.0146	ppb	0.00753	51.48%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-4.2	-6.7334	ug/L	4.08178	-6.7334	ppb	4.08178	60.62%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	10.5	0.1149 ug/L	0.10883	0.1149 ppb	0.10883	94.73%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-2.9	-0.0596 ug/L	0.19944	-0.0596 ppb	0.19944	334.48%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	0.2	0.0021 ug/L	0.07181	0.0021 ppb	0.07181	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	112.5	0.3376 ug/L	0.06521	0.3376 ppb	0.06521	19.31%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.4	12.059 ug/L	6.2716	12.059 ppb	6.2716	52.01%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	463.0	84.900 ug/L	21.4263	84.900 ppb	21.4263	25.24%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.2	39.507 ug/L	50.0440	39.507 ppb	50.0440	126.67%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-19.2	-0.0215 ug/L	0.00367	-0.0215 ppb	0.00367	17.03%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-2.6	-0.1802 ug/L	0.74151	-0.1802 ppb	0.74151	411.52%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-6.4	-1.9044 ug/L	14.35517	-1.9044 ppb	14.35517	753.79%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-0.5	-0.0131 ug/L	0.09724	-0.0131 ppb	0.09724	742.61%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-6.1	-3.8073 ug/L	8.38371	-3.8073 ppb	8.38371	220.20%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	5.9	0.7234 ug/L	0.80625	0.7234 ppb	0.80625	111.45%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	5.7	8.0070 ug/L	7.59738	8.0070 ppb	7.59738	94.88%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	11.4	3.8903 ug/L	0.71952	3.8903 ppb	0.71952	18.50%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	5.1	3.3326 ug/L	2.25879	3.3326 ppb	2.25879	67.78%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-4.7	-0.1481 ug/L	0.03119	-0.1481 ppb	0.03119	21.05%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-0.6	-0.1020 ug/L	0.42669	-0.1020 ppb	0.42669	418.38%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	31.2	0.2015 ug/L	0.09402	0.2015 ppb	0.09402	46.65%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	7.6	0.0086 ug/L	0.06327	0.0086 ppb	0.06327	738.97%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-2.2	-0.6765 ug/L	3.87170	-0.6765 ppb	3.87170	572.28%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-29.4	-0.8684 ug/L	1.94345	-0.8684 ppb	1.94345	223.79%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-50.8	-0.3519 ug/L	0.14743	-0.3519 ppb	0.14743	41.89%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	36.7	0.3459 ug/L	0.07426	0.3459 ppb	0.07426	21.47%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-34.2	-2.3307 ug/L	0.43664	-2.3307 ppb	0.43664	18.73%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 15
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 1/11/2010 16:52:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4777.8	4777.8	94.9	%			16:54:28
1	Y RADIAL	5095.9	5095.9	93.86	%			16:54:28
1	Al 396.153Radial†	-50.3	-52.3	-39.092	ug/L	-39.092	ppb	16:54:28
1	Ca 317.933Radial†	4.9	-14.7	-23.455	ug/L	-23.455	ppb	16:54:48
1	Fe 238.204 Radial†	40364.7	42530.9	368070	ug/L	368070	ppb	16:54:28
1	K 766.490 Radial†	2544.8	91.8	17.484	ug/L	17.484	ppb	16:54:28
1	Mg 279.077 IEC†	12.9	11.7	6.7228	ug/L	6.7228	ppb	16:54:48
1	Na 589.592 Radial†	-1204.3	11.3	3.3701	ug/L	3.3701	ppb	16:54:28
1	Sr 421.552†	54.9	77.3	0.4997	ug/L	0.4997	ppb	16:54:28
1	Sc 361.383	818966.7	818966.7	96.078	%			16:55:46
1	Y 371.029	688939.7	688939.7	95.333	%			16:55:46
1	Ag 328.068†	-24130.4	-25473.5	2.0432	ug/L	2.0432	ppb	16:55:46
1	As 188.979†	-200.7	-185.3	-7.8085	ug/L	-7.8085	ppb	16:56:06
1	B 249.677†	2067.2	2783.4	24.753	ug/L	24.753	ppb	16:55:46
1	Ba 233.527†	-1499.2	-1549.0	1.4702	ug/L	1.4702	ppb	16:55:46
1	Be 313.107†	-4472.3	-69.5	-0.0263	ug/L	-0.0263	ppb	16:55:46
1	Cd 226.502†	3072.4	3402.0	-0.2547	ug/L	-0.2547	ppb	16:55:46
1	Co 228.616†	165.2	246.6	-0.3410	ug/L	-0.3410	ppb	16:56:06
1	Cr 267.716†	-480.4	-583.2	0.7094	ug/L	0.7094	ppb	16:55:46
1	Cu 324.752†	1109.3	-5257.7	3.7230	ug/L	3.7230	ppb	16:55:46
1	Mn 257.610†	-30280.6	-31961.6	5.6541	ug/L	5.6541	ppb	16:55:46
1	Mo 202.031†	-335.3	-372.7	-1.1646	ug/L	-1.1646	ppb	16:55:46
1	Ni 231.604†	153.8	92.2	2.2920	ug/L	2.2920	ppb	16:56:06
1	P 214.914†	659.6	456.6	-13.871	ug/L	-13.871	ppb	16:56:06
1	Pb 220.353†	194.2	265.5	-2.7177	ug/L	-2.7177	ppb	16:56:06
1	S 181.975 Axial†	61.1	20.6	29.174	ug/L	29.174	ppb	16:56:06
1	Sb 206.836†	16.3	-10.9	-4.2280	ug/L	-4.2280	ppb	16:56:06
1	Se 196.026†	-1598.4	-1631.7	122.69	ug/L	122.69	ppb	16:56:06
1	Si 251.611†	-541.9	-1114.4	-35.169	ug/L	-35.169	ppb	16:55:46
1	Sn 189.927†	-22.0	-30.5	0.7785	ug/L	0.7785	ppb	16:56:06
1	Ti 334.940†	-1274.2	48.3	0.0161	ug/L	0.0161	ppb	16:55:46
1	Tl 190.801†	-46.2	-15.3	-4.9887	ug/L	-4.9887	ppb	16:56:06
1	U 409.014†	253.7	2275.6	25.185	ug/L	25.185	ppb	16:55:46
1	V 292.402†	7032.4	8629.2	2.4205	ug/L	2.4205	ppb	16:55:46
1	Zn 213.857†	4281.9	3836.4	0.5878	ug/L	0.5878	ppb	16:56:06
1	SiO2†	-450.1	-1040.2	-70.254	ug/L	-70.254	ppb	16:57:03
2	Sc Radial	4866.8	4866.8	96.7	%			16:54:53
2	Y RADIAL	5221.8	5221.8	96.18	%			16:54:53
2	Al 396.153Radial†	-37.8	-38.4	-28.382	ug/L	-28.382	ppb	16:54:53
2	Ca 317.933Radial†	0.8	-18.9	-30.269	ug/L	-30.269	ppb	16:55:13
2	Fe 238.204 Radial†	40766.9	42169.0	364940	ug/L	364940	ppb	16:54:53
2	K 766.490 Radial†	2544.0	41.9	8.3168	ug/L	8.3168	ppb	16:54:53
2	Mg 279.077 IEC†	10.6	9.1	-78.311	ug/L	-78.311	ppb	16:55:13
2	Na 589.592 Radial†	-1155.7	84.8	25.380	ug/L	25.380	ppb	16:54:53
2	Sr 421.552†	68.4	90.3	0.5833	ug/L	0.5833	ppb	16:54:53
2	Sc 361.383	829182.3	829182.3	97.276	%			16:56:12
2	Y 371.029	697004.5	697004.5	96.449	%			16:56:12
2	Ag 328.068†	-24523.8	-25568.4	0.5944	ug/L	0.5944	ppb	16:56:12
2	As 188.979†	-195.6	-177.5	-5.0286	ug/L	-5.0286	ppb	16:56:32
2	B 249.677†	2120.2	2811.4	25.694	ug/L	25.694	ppb	16:56:12
2	Ba 233.527†	-1466.1	-1495.7	1.7714	ug/L	1.7714	ppb	16:56:12
2	Be 313.107†	-4499.1	-39.7	-0.0153	ug/L	-0.0153	ppb	16:56:12
2	Cd 226.502†	3152.6	3445.0	0.5456	ug/L	0.5456	ppb	16:56:12
2	Co 228.616†	175.5	255.1	-0.1209	ug/L	-0.1209	ppb	16:56:32
2	Cr 267.716†	-487.2	-584.1	0.6397	ug/L	0.6397	ppb	16:56:12
2	Cu 324.752†	1142.3	-5237.9	3.6181	ug/L	3.6181	ppb	16:56:12
2	Mn 257.610†	-30582.1	-31883.2	5.3949	ug/L	5.3949	ppb	16:56:12
2	Mo 202.031†	-336.1	-369.3	-1.1378	ug/L	-1.1378	ppb	16:56:12
2	Ni 231.604†	131.9	67.6	1.6811	ug/L	1.6811	ppb	16:56:32

2	P 214.914†	676.9	465.9	-5.6765 ug/L	-5.6765 ppb	16:56:32
2	Pb 220.353†	220.9	290.4	0.6332 ug/L	0.6332 ppb	16:56:32
2	S 181.975 Axial†	62.0	20.8	29.382 ug/L	29.382 ppb	16:56:32
2	Sb 206.836†	15.4	-12.1	-4.6329 ug/L	-4.6329 ppb	16:56:32
2	Se 196.026†	-1598.1	-1610.8	126.14 ug/L	126.14 ppb	16:56:32
2	Si 251.611†	-519.6	-1084.6	-34.221 ug/L	-34.221 ppb	16:56:12
2	Sn 189.927†	-26.0	-34.3	0.0507 ug/L	0.0507 ppb	16:56:32
2	Ti 334.940†	-1370.9	-34.7	-0.1098 ug/L	-0.1098 ppb	16:56:12
2	Tl 190.801†	-59.8	-28.6	-9.0942 ug/L	-9.0942 ppb	16:56:32
2	U 409.014†	145.7	2161.4	22.173 ug/L	22.173 ppb	16:56:12
2	V 292.402†	7100.9	8609.4	2.7594 ug/L	2.7594 ppb	16:56:12
2	Zn 213.857†	4292.4	3792.4	0.4787 ug/L	0.4787 ppb	16:56:32
2	SiO2†	-566.8	-1154.3	-78.052 ug/L	-78.052 ppb	16:57:08
3	Sc Radial	4800.8	4800.8	95.3 %		16:55:18
3	Y RADIAL	5158.3	5158.3	95.01 %		16:55:18
3	Al 396.153Radial†	-18.9	-19.1	-13.529 ug/L	-13.529 ppb	16:55:18
3	Ca 317.933Radial†	1.3	-18.5	-29.528 ug/L	-29.528 ppb	16:55:38
3	Fe 238.204 Radial†	40311.5	42271.3	365820 ug/L	365820 ppb	16:55:18
3	K 766.490 Radial†	2604.4	141.5	26.583 ug/L	26.583 ppb	16:55:18
3	Mg 279.077 IEC†	12.7	11.4	-3.2079 ug/L	-3.2079 ppb	16:55:38
3	Na 589.592 Radial†	-1206.3	15.3	4.5686 ug/L	4.5686 ppb	16:55:18
3	Sr 421.552†	41.7	63.2	0.4085 ug/L	0.4085 ppb	16:55:18
3	Sc 361.383	829219.1	829219.1	97.281 %		16:56:38
3	Y 371.029	697536.2	697536.2	96.522 %		16:56:38
3	Ag 328.068†	-24469.1	-25511.1	1.1485 ug/L	1.1485 ppb	16:56:38
3	As 188.979†	-203.4	-185.4	-8.2984 ug/L	-8.2984 ppb	16:56:58
3	B 249.677†	2104.4	2795.1	25.241 ug/L	25.241 ppb	16:56:38
3	Ba 233.527†	-1455.6	-1484.9	1.8902 ug/L	1.8902 ppb	16:56:38
3	Be 313.107†	-4451.5	9.5	0.0035 ug/L	0.0035 ppb	16:56:38
3	Cd 226.502†	3124.6	3416.1	0.1330 ug/L	0.1330 ppb	16:56:38
3	Co 228.616†	169.2	248.6	-0.2640 ug/L	-0.2640 ppb	16:56:58
3	Cr 267.716†	-505.9	-603.2	0.4449 ug/L	0.4449 ppb	16:56:38
3	Cu 324.752†	1105.3	-5276.0	3.5514 ug/L	3.5514 ppb	16:56:38
3	Mn 257.610†	-30493.2	-31790.4	5.5936 ug/L	5.5936 ppb	16:56:38
3	Mo 202.031†	-326.2	-359.0	-0.3506 ug/L	-0.3506 ppb	16:56:38
3	Ni 231.604†	150.8	87.0	2.1641 ug/L	2.1641 ppb	16:56:58
3	P 214.914†	651.3	439.6	-22.474 ug/L	-22.474 ppb	16:56:58
3	Pb 220.353†	225.1	294.8	1.0868 ug/L	1.0868 ppb	16:56:58
3	S 181.975 Axial†	67.3	26.1	36.983 ug/L	36.983 ppb	16:56:58
3	Sb 206.836†	27.2	-0.0	-0.4637 ug/L	-0.4637 ppb	16:56:58
3	Se 196.026†	-1612.5	-1625.5	119.47 ug/L	119.47 ppb	16:56:58
3	Si 251.611†	-573.4	-1139.9	-35.992 ug/L	-35.992 ppb	16:56:38
3	Sn 189.927†	-23.8	-32.1	0.4652 ug/L	0.4652 ppb	16:56:58
3	Ti 334.940†	-1374.2	-38.1	-0.1212 ug/L	-0.1212 ppb	16:56:38
3	Tl 190.801†	-52.5	-21.1	-6.7740 ug/L	-6.7740 ppb	16:56:58
3	U 409.014†	135.7	2151.1	21.769 ug/L	21.769 ppb	16:56:38
3	V 292.402†	7232.4	8744.3	3.5566 ug/L	3.5566 ppb	16:56:38
3	Zn 213.857†	4297.9	3797.8	0.4413 ug/L	0.4413 ppb	16:56:58
3	SiO2†	-544.4	-1131.3	-76.497 ug/L	-76.497 ppb	16:57:13

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	825789.4	96.878	%	0.6932				0.72%
Sc Radial	4815.2	95.6	%	0.92				0.96%
Y 371.029	694493.5	96.101	%	0.6666				0.69%
Y RADIAL	5158.7	95.01	%	1.160				1.22%
Ag 328.068†	-25517.6	1.2620	ug/L	0.73104	1.2620	ppb	0.73104	57.93%
Al 396.153Radial†	-36.6	-27.001	ug/L	12.8374	-27.001	ppb	12.8374	47.54%
As 188.979†	-182.7	-7.0452	ug/L	1.76352	-7.0452	ppb	1.76352	25.03%
B 249.677†	2796.6	25.229	ug/L	0.4711	25.229	ppb	0.4711	1.87%
Ba 233.527†	-1509.8	1.7106	ug/L	0.21652	1.7106	ppb	0.21652	12.66%
Be 313.107†	-33.2	-0.0127	ug/L	0.01504	-0.0127	ppb	0.01504	118.51%
Ca 317.933Radial†	-17.3	-27.751	ug/L	3.7384	-27.751	ppb	3.7384	13.47%
Cd 226.502†	3421.0	0.1413	ug/L	0.40020	0.1413	ppb	0.40020	283.23%
Co 228.616†	250.1	-0.2420	ug/L	0.11167	-0.2420	ppb	0.11167	46.15%
Cr 267.716†	-590.2	0.5980	ug/L	0.13708	0.5980	ppb	0.13708	22.92%
Cu 324.752†	-5257.2	3.6308	ug/L	0.08649	3.6308	ppb	0.08649	2.38%
Fe 238.204 Radial†	42323.7	366280	ug/L	1614.1	366280	ppb	1614.1	0.44%
K 766.490 Radial†	91.7	17.461	ug/L	9.1333	17.461	ppb	9.1333	52.31%

Mg 279.077 IEC†	10.7	-24.932	ug/L	46.4932	-24.932	ppb	46.4932 186.48%
Mn 257.610†	-31878.4	5.5475	ug/L	0.13558	5.5475	ppb	0.13558 2.44%
Mo 202.031†	-367.0	-0.8843	ug/L	0.46241	-0.8843	ppb	0.46241 52.29%
Na 589.592 Radial†	37.1	11.106	ug/L	12.3761	11.106	ppb	12.3761 111.43%
Ni 231.604†	82.3	2.0457	ug/L	0.32221	2.0457	ppb	0.32221 15.75%
P 214.914†	454.1	-14.007	ug/L	8.3993	-14.007	ppb	8.3993 59.97%
Pb 220.353†	283.6	-0.3325	ug/L	2.07800	-0.3325	ppb	2.07800 624.92%
S 181.975 Axial†	22.5	31.847	ug/L	4.4497	31.847	ppb	4.4497 13.97%
Sb 206.836†	-7.7	-3.1082	ug/L	2.29916	-3.1082	ppb	2.29916 73.97%
Se 196.026†	-1622.7	122.77	ug/L	3.335	122.77	ppb	3.335 2.72%
Si 251.611†	-1113.0	-35.127	ug/L	0.8860	-35.127	ppb	0.8860 2.52%
Sn 189.927†	-32.3	0.4315	ug/L	0.36508	0.4315	ppb	0.36508 84.61%
Sr 421.552†	76.9	0.4972	ug/L	0.08744	0.4972	ppb	0.08744 17.59%
Ti 334.940†	-8.2	-0.0717	ug/L	0.07619	-0.0717	ppb	0.07619 106.30%
Tl 190.801†	-21.7	-6.9523	ug/L	2.05856	-6.9523	ppb	2.05856 29.61%
U 409.014†	2196.1	23.042	ug/L	1.8667	23.042	ppb	1.8667 8.10%
V 292.402†	8661.0	2.9122	ug/L	0.58327	2.9122	ppb	0.58327 20.03%
Zn 213.857†	3808.9	0.5026	ug/L	0.07610	0.5026	ppb	0.07610 15.14%
SiO2†	-1108.6	-74.934	ug/L	4.1270	-74.934	ppb	4.1270 5.51%

Sequence No.: 16
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 16:59:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4917.0	4917.0	97.7	%			17:01:17
1	Y RADIAL	5235.9	5235.9	96.43	%			17:01:17
1	Al 396.153Radial†	6169.6	6318.6	4850.2	ug/L	4850.2	ppb	17:01:17
1	Ca 317.933Radial†	3017.0	3069.8	4911.9	ug/L	4911.9	ppb	17:01:37
1	Fe 238.204 Radial†	566.0	570.7	4954.4	ug/L	4954.4	ppb	17:01:37
1	K 766.490 Radial†	28759.1	26860.8	4908.0	ug/L	4908.0	ppb	17:01:17
1	Mg 279.077 IEC†	147.7	149.3	4989.0	ug/L	4989.0	ppb	17:01:37
1	Na 589.592 Radial†	29743.6	31739.6	9503.2	ug/L	9503.2	ppb	17:01:17
1	Sr 421.552†	71970.1	73720.9	476.12	ug/L	476.12	ppb	17:01:17
1	Sc 361.383	838361.1	838361.1	98.353	%			17:02:34
1	Y 371.029	700105.7	700105.7	96.878	%			17:02:34
1	Ag 328.068†	108759.4	110222.4	510.64	ug/L	510.64	ppb	17:02:39
1	As 188.979†	1120.4	1162.8	505.94	ug/L	505.94	ppb	17:02:59
1	B 249.677†	21434.1	22424.8	497.99	ug/L	497.99	ppb	17:02:39
1	Ba 233.527†	63114.9	64183.1	502.33	ug/L	502.33	ppb	17:02:39
1	Be 313.107†	1277275.1	1303246.3	497.70	ug/L	497.70	ppb	17:02:34
1	Cd 226.502†	44324.9	45271.2	502.26	ug/L	502.26	ppb	17:02:39
1	Co 228.616†	24105.9	24584.2	503.32	ug/L	503.32	ppb	17:02:39
1	Cr 267.716†	44273.4	44931.5	502.95	ug/L	502.95	ppb	17:02:39
1	Cu 324.752†	169720.3	166149.8	496.81	ug/L	496.81	ppb	17:02:39
1	Mn 257.610†	438566.0	445464.1	494.19	ug/L	494.19	ppb	17:02:34
1	Mo 202.031†	7074.4	7169.1	507.07	ug/L	507.07	ppb	17:02:59
1	Ni 231.604†	20045.4	20313.1	505.50	ug/L	505.50	ppb	17:02:39
1	P 214.914†	4239.4	4080.5	2388.6	ug/L	2388.6	ppb	17:02:59
1	Pb 220.353†	3987.5	4117.6	505.85	ug/L	505.85	ppb	17:02:59
1	S 181.975 Axial†	751.3	720.9	1019.3	ug/L	1019.3	ppb	17:02:59
1	Sb 206.836†	1455.6	1452.0	515.57	ug/L	515.57	ppb	17:02:59
1	Se 196.026†	738.2	782.6	521.90	ug/L	521.90	ppb	17:02:59
1	Si 251.611†	79252.1	80028.6	2542.5	ug/L	2542.5	ppb	17:02:39
1	Sn 189.927†	2830.9	2870.6	509.35	ug/L	509.35	ppb	17:02:59
1	Ti 334.940†	301641.2	308066.2	496.07	ug/L	496.07	ppb	17:02:39
1	Tl 190.801†	1572.2	1631.4	503.52	ug/L	503.52	ppb	17:02:59
1	U 409.014†	15002.9	17265.8	507.65	ug/L	507.65	ppb	17:02:39
1	V 292.402†	70723.5	73217.4	506.93	ug/L	506.93	ppb	17:02:39
1	Zn 213.857†	52923.1	53189.0	498.70	ug/L	498.70	ppb	17:02:39
1	SiO2†	78526.7	79269.8	5394.9	ug/L	5394.9	ppb	17:04:07
2	Sc Radial	4995.4	4995.4	99.2	%			17:01:42
2	Y RADIAL	5325.1	5325.1	98.08	%			17:01:42
2	Al 396.153Radial†	6217.2	6267.6	4811.3	ug/L	4811.3	ppb	17:01:42
2	Ca 317.933Radial†	2980.8	2984.8	4776.0	ug/L	4776.0	ppb	17:02:02
2	Fe 238.204 Radial†	559.0	554.6	4814.1	ug/L	4814.1	ppb	17:02:02
2	K 766.490 Radial†	29154.8	26797.8	4896.6	ug/L	4896.6	ppb	17:01:42
2	Mg 279.077 IEC†	149.7	149.0	4977.5	ug/L	4977.5	ppb	17:02:02
2	Na 589.592 Radial†	30095.6	31616.7	9466.4	ug/L	9466.4	ppb	17:01:42
2	Sr 421.552†	73036.4	73639.8	475.60	ug/L	475.60	ppb	17:01:42
2	Sc 361.383	849459.0	849459.0	99.655	%			17:03:05
2	Y 371.029	708280.0	708280.0	98.009	%			17:03:05
2	Ag 328.068†	106948.3	106960.3	495.53	ug/L	495.53	ppb	17:03:10
2	As 188.979†	1106.1	1133.5	493.19	ug/L	493.19	ppb	17:03:30
2	B 249.677†	20943.1	21647.4	480.71	ug/L	480.71	ppb	17:03:10
2	Ba 233.527†	62014.2	62240.2	487.13	ug/L	487.13	ppb	17:03:10
2	Be 313.107†	1291972.2	1301027.6	496.82	ug/L	496.82	ppb	17:03:05
2	Cd 226.502†	43636.6	43991.7	488.06	ug/L	488.06	ppb	17:03:10
2	Co 228.616†	23754.8	23911.6	489.56	ug/L	489.56	ppb	17:03:10
2	Cr 267.716†	43616.9	43684.5	488.99	ug/L	488.99	ppb	17:03:10
2	Cu 324.752†	166097.1	160259.5	479.20	ug/L	479.20	ppb	17:03:10
2	Mn 257.610†	444472.6	445565.5	494.29	ug/L	494.29	ppb	17:03:05
2	Mo 202.031†	7023.4	7024.0	496.80	ug/L	496.80	ppb	17:03:30
2	Ni 231.604†	19633.6	19633.6	488.58	ug/L	488.58	ppb	17:03:10

2	P 214.914†	4212.9	3997.6	2341.7 ug/L	2341.7 ppb	17:03:30
2	Pb 220.353†	3957.3	4034.3	495.64 ug/L	495.64 ppb	17:03:30
2	S 181.975 Axial†	739.1	698.7	987.85 ug/L	987.85 ppb	17:03:30
2	Sb 206.836†	1462.2	1439.4	510.86 ug/L	510.86 ppb	17:03:30
2	Se 196.026†	727.7	762.2	508.29 ug/L	508.29 ppb	17:03:30
2	Si 251.611†	77732.2	77450.7	2460.6 ug/L	2460.6 ppb	17:03:10
2	Sn 189.927†	2800.8	2802.8	497.31 ug/L	497.31 ppb	17:03:30
2	Ti 334.940†	296140.6	298539.7	480.72 ug/L	480.72 ppb	17:03:10
2	Tl 190.801†	1564.5	1602.8	494.71 ug/L	494.71 ppb	17:03:30
2	U 409.014†	14725.2	16787.8	493.59 ug/L	493.59 ppb	17:03:10
2	V 292.402†	69532.2	71082.5	492.22 ug/L	492.22 ppb	17:03:10
2	Zn 213.857†	52101.8	51661.8	484.40 ug/L	484.40 ppb	17:03:10
2	SiO2†	78941.9	78643.3	5352.4 ug/L	5352.4 ppb	17:04:12
3	Sc Radial	4857.7	4857.7	96.5 %		17:02:07
3	Y RADIAL	5177.7	5177.7	95.36 %		17:02:07
3	Al 396.153Radial†	6085.9	6309.0	4843.4 ug/L	4843.4 ppb	17:02:07
3	Ca 317.933Radial†	2976.8	3065.8	4905.5 ug/L	4905.5 ppb	17:02:27
3	Fe 238.204 Radial†	556.5	567.9	4929.7 ug/L	4929.7 ppb	17:02:27
3	K 766.490 Radial†	28539.9	26992.9	4932.4 ug/L	4932.4 ppb	17:02:07
3	Mg 279.077 IEC†	147.6	151.1	5047.1 ug/L	5047.1 ppb	17:02:27
3	Na 589.592 Radial†	29197.5	31545.2	9445.0 ug/L	9445.0 ppb	17:02:07
3	Sr 421.552†	71175.3	73796.3	476.61 ug/L	476.61 ppb	17:02:07
3	Sc 361.383	847741.7	847741.7	99.454 %		17:03:36
3	Y 371.029	706758.6	706758.6	97.799 %		17:03:36
3	Ag 328.068†	106910.9	107140.2	496.40 ug/L	496.40 ppb	17:03:41
3	As 188.979†	1100.5	1130.1	491.76 ug/L	491.76 ppb	17:04:01
3	B 249.677†	21005.1	21752.3	483.04 ug/L	483.04 ppb	17:03:41
3	Ba 233.527†	62001.9	62353.8	488.02 ug/L	488.02 ppb	17:03:41
3	Be 313.107†	1288634.6	1300297.9	496.55 ug/L	496.55 ppb	17:03:36
3	Cd 226.502†	43589.9	44033.5	488.51 ug/L	488.51 ppb	17:03:41
3	Co 228.616†	23702.8	23907.7	489.47 ug/L	489.47 ppb	17:03:41
3	Cr 267.716†	43578.7	43734.8	489.55 ug/L	489.55 ppb	17:03:41
3	Cu 324.752†	166861.5	161365.8	482.51 ug/L	482.51 ppb	17:03:41
3	Mn 257.610†	443145.9	445135.1	493.82 ug/L	493.82 ppb	17:03:36
3	Mo 202.031†	6957.0	6971.5	493.10 ug/L	493.10 ppb	17:04:01
3	Ni 231.604†	19601.1	19640.8	488.76 ug/L	488.76 ppb	17:03:41
3	P 214.914†	4162.6	3955.6	2315.2 ug/L	2315.2 ppb	17:04:01
3	Pb 220.353†	3910.9	3995.8	490.91 ug/L	490.91 ppb	17:04:01
3	S 181.975 Axial†	717.5	678.4	959.20 ug/L	959.20 ppb	17:04:01
3	Sb 206.836†	1444.3	1424.3	505.54 ug/L	505.54 ppb	17:04:01
3	Se 196.026†	720.1	756.1	504.72 ug/L	504.72 ppb	17:04:01
3	Si 251.611†	77743.9	77620.5	2466.0 ug/L	2466.0 ppb	17:03:41
3	Sn 189.927†	2768.1	2775.6	492.52 ug/L	492.52 ppb	17:04:01
3	Ti 334.940†	296778.4	299783.0	482.73 ug/L	482.73 ppb	17:03:41
3	Tl 190.801†	1557.1	1598.5	493.41 ug/L	493.41 ppb	17:04:01
3	U 409.014†	14832.8	16925.9	497.65 ug/L	497.65 ppb	17:03:41
3	V 292.402†	69675.9	71368.3	494.10 ug/L	494.10 ppb	17:03:41
3	Zn 213.857†	51990.8	51656.1	484.33 ug/L	484.33 ppb	17:03:41
3	SiO2†	78042.5	77899.5	5301.8 ug/L	5301.8 ppb	17:04:17

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	845187.3	99.154	%	0.7008				0.71%
Sc Radial	4923.4	97.8	%	1.37				1.40%
Y 371.029	705048.1	97.562	%	0.6016				0.62%
Y RADIAL	5246.2	96.63	%	1.367				1.42%
Ag 328.068†	108107.6	500.85	ug/L	8.485	500.85	ppb	8.485	1.69%
QC value within limits for Ag 328.068 Recovery = 100.17%								
Al 396.153Radial†	6298.4	4834.9	ug/L	20.78	4834.9	ppb	20.78	0.43%
QC value within limits for Al 396.153Radial Recovery = 96.70%								
As 188.979†	1142.1	496.96	ug/L	7.805	496.96	ppb	7.805	1.57%
QC value within limits for As 188.979 Recovery = 99.39%								
B 249.677†	21941.5	487.25	ug/L	9.376	487.25	ppb	9.376	1.92%
QC value within limits for B 249.677 Recovery = 97.45%								
Ba 233.527†	62925.7	492.50	ug/L	8.532	492.50	ppb	8.532	1.73%
QC value within limits for Ba 233.527 Recovery = 98.50%								
Be 313.107†	1301524.0	497.02	ug/L	0.603	497.02	ppb	0.603	0.12%
QC value within limits for Be 313.107 Recovery = 99.40%								
Ca 317.933Radial†	3040.1	4864.5	ug/L	76.69	4864.5	ppb	76.69	1.58%

QC value within limits for Ca 317.933Radial Recovery = 97.29%

Cd 226.502†	44432.1	492.95 ug/L	8.069	492.95 ppb	8.069	1.64%
QC value within limits for Cd 226.502 Recovery = 98.59%						
Co 228.616†	24134.5	494.12 ug/L	7.970	494.12 ppb	7.970	1.61%
QC value within limits for Co 228.616 Recovery = 98.82%						
Cr 267.716†	44116.9	493.83 ug/L	7.901	493.83 ppb	7.901	1.60%
QC value within limits for Cr 267.716 Recovery = 98.77%						
Cu 324.752†	162591.7	486.17 ug/L	9.360	486.17 ppb	9.360	1.93%
QC value within limits for Cu 324.752 Recovery = 97.23%						
Fe 238.204 Radial†	564.4	4899.4 ug/L	74.92	4899.4 ppb	74.92	1.53%
QC value within limits for Fe 238.204 Radial Recovery = 97.99%						
K 766.490 Radial†	26883.8	4912.3 ug/L	18.28	4912.3 ppb	18.28	0.37%
QC value within limits for K 766.490 Radial Recovery = 98.25%						
Mg 279.077 IEC†	149.8	5004.5 ug/L	37.33	5004.5 ppb	37.33	0.75%
QC value within limits for Mg 279.077 IEC Recovery = 100.09%						
Mn 257.610†	445388.2	494.10 ug/L	0.246	494.10 ppb	0.246	0.05%
QC value within limits for Mn 257.610 Recovery = 98.82%						
Mo 202.031†	7054.9	498.99 ug/L	7.237	498.99 ppb	7.237	1.45%
QC value within limits for Mo 202.031 Recovery = 99.80%						
Na 589.592 Radial†	31633.8	9471.5 ug/L	29.45	9471.5 ppb	29.45	0.31%
QC value within limits for Na 589.592 Radial Recovery = 94.72%						
Ni 231.604†	19862.5	494.28 ug/L	9.712	494.28 ppb	9.712	1.96%
QC value within limits for Ni 231.604 Recovery = 98.86%						
P 214.914†	4011.2	2348.5 ug/L	37.17	2348.5 ppb	37.17	1.58%
QC value within limits for P 214.914 Recovery = 93.94%						
Pb 220.353†	4049.2	497.47 ug/L	7.639	497.47 ppb	7.639	1.54%
QC value within limits for Pb 220.353 Recovery = 99.49%						
S 181.975 Axial†	699.3	988.77 ug/L	30.042	988.77 ppb	30.042	3.04%
QC value within limits for S 181.975 Axial Recovery = 98.88%						
Sb 206.836†	1438.6	510.66 ug/L	5.019	510.66 ppb	5.019	0.98%
QC value within limits for Sb 206.836 Recovery = 102.13%						
Se 196.026†	767.0	511.63 ug/L	9.063	511.63 ppb	9.063	1.77%
QC value within limits for Se 196.026 Recovery = 102.33%						
Si 251.611†	78366.6	2489.7 ug/L	45.84	2489.7 ppb	45.84	1.84%
QC value within limits for Si 251.611 Recovery = 99.59%						
Sn 189.927†	2816.3	499.73 ug/L	8.672	499.73 ppb	8.672	1.74%
QC value within limits for Sn 189.927 Recovery = 99.95%						
Sr 421.552†	73719.0	476.11 ug/L	0.505	476.11 ppb	0.505	0.11%
QC value within limits for Sr 421.552 Recovery = 95.22%						
Ti 334.940†	302129.6	486.51 ug/L	8.344	486.51 ppb	8.344	1.72%
QC value within limits for Ti 334.940 Recovery = 97.30%						
Tl 190.801†	1610.9	497.21 ug/L	5.504	497.21 ppb	5.504	1.11%
QC value within limits for Tl 190.801 Recovery = 99.44%						
U 409.014†	16993.1	499.63 ug/L	7.233	499.63 ppb	7.233	1.45%
QC value within limits for U 409.014 Recovery = 99.93%						
V 292.402†	71889.4	497.75 ug/L	8.004	497.75 ppb	8.004	1.61%
QC value within limits for V 292.402 Recovery = 99.55%						
Zn 213.857†	52169.0	489.14 ug/L	8.276	489.14 ppb	8.276	1.69%
QC value within limits for Zn 213.857 Recovery = 97.83%						
SiO2†	78604.2	5349.7 ug/L	46.62	5349.7 ppb	46.62	0.87%
QC value within limits for SiO2 Recovery = 100.04%						

All analyte(s) passed QC.

Sequence No.: 17
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/11/2010 17:06:27
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4959.7	4959.7	98.5	%			17:08:18
1	Y RADIAL	5307.7	5307.7	97.76	%			17:08:18
1	Al 396.153Radial†	-4.9	-4.3	-3.3458	ug/L	-3.3458	ppb	17:08:18
1	Ca 317.933Radial†	19.8	0.3	0.4603	ug/L	0.4603	ppb	17:08:38
1	Fe 238.204 Radial†	9.5	0.7	6.1769	ug/L	6.1769	ppb	17:08:38
1	K 766.490 Radial†	2810.4	263.1	48.253	ug/L	48.253	ppb	17:08:18
1	Mg 279.077 IEC†	2.1	0.2	6.2400	ug/L	6.2400	ppb	17:08:38
1	Na 589.592 Radial†	-1295.3	-34.6	-10.370	ug/L	-10.370	ppb	17:08:18
1	Sr 421.552†	17.7	37.5	0.2423	ug/L	0.2423	ppb	17:08:18
1	Sc 361.383	837653.4	837653.4	98.270	%			17:09:35
1	Y 371.029	711362.6	711362.6	98.436	%			17:09:35
1	Ag 328.068†	346.0	-5.9	-0.0314	ug/L	-0.0314	ppb	17:09:35
1	As 188.979†	-19.8	3.5	1.5161	ug/L	1.5161	ppb	17:09:55
1	B 249.677†	-408.4	216.2	4.8206	ug/L	4.8206	ppb	17:09:55
1	Ba 233.527†	-26.8	-15.8	-0.1246	ug/L	-0.1246	ppb	17:09:55
1	Be 313.107†	-4542.8	-37.4	-0.0145	ug/L	-0.0145	ppb	17:09:35
1	Cd 226.502†	-183.5	17.4	0.1936	ug/L	0.1936	ppb	17:09:55
1	Co 228.616†	-86.9	-13.8	-0.2826	ug/L	-0.2826	ppb	17:09:55
1	Cr 267.716†	73.6	-8.4	-0.0963	ug/L	-0.0963	ppb	17:09:55
1	Cu 324.752†	6361.6	61.3	0.1808	ug/L	0.1808	ppb	17:09:35
1	Mn 257.610†	389.6	-48.4	-0.0533	ug/L	-0.0533	ppb	17:09:55
1	Mo 202.031†	22.1	-1.2	-0.0850	ug/L	-0.0850	ppb	17:09:55
1	Ni 231.604†	73.5	6.8	0.1706	ug/L	0.1706	ppb	17:09:55
1	P 214.914†	221.3	-4.7	-2.9009	ug/L	-2.9009	ppb	17:09:55
1	Pb 220.353†	-52.7	9.8	1.1934	ug/L	1.1934	ppb	17:09:55
1	S 181.975 Axial†	41.9	-0.4	-0.5198	ug/L	-0.5198	ppb	17:09:55
1	Sb 206.836†	32.4	5.1	1.7413	ug/L	1.7413	ppb	17:09:55
1	Se 196.026†	-31.4	0.0	0.0460	ug/L	0.0460	ppb	17:09:55
1	Si 251.611†	518.3	-23.0	-0.7330	ug/L	-0.7330	ppb	17:09:55
1	Sn 189.927†	11.8	4.4	0.7768	ug/L	0.7768	ppb	17:09:55
1	Ti 334.940†	-1421.1	-71.6	-0.1181	ug/L	-0.1181	ppb	17:09:35
1	Tl 190.801†	-34.6	-2.3	-0.7178	ug/L	-0.7178	ppb	17:09:55
1	U 409.014†	-1795.9	184.1	5.4311	ug/L	5.4311	ppb	17:09:35
1	V 292.402†	-1357.4	-71.5	-0.4799	ug/L	-0.4799	ppb	17:09:35
1	Zn 213.857†	621.8	12.5	0.1168	ug/L	0.1168	ppb	17:09:55
1	SiO2†	560.0	-1.9	-0.1242	ug/L	-0.1242	ppb	17:10:51
2	Sc Radial	4896.6	4896.6	97.2	%			17:08:43
2	Y RADIAL	5271.4	5271.4	97.09	%			17:08:43
2	Al 396.153Radial†	-10.4	-10.1	-7.7640	ug/L	-7.7640	ppb	17:08:43
2	Ca 317.933Radial†	15.3	-4.1	-6.5489	ug/L	-6.5489	ppb	17:09:03
2	Fe 238.204 Radial†	9.7	1.1	9.5272	ug/L	9.5272	ppb	17:09:03
2	K 766.490 Radial†	2927.0	419.8	76.971	ug/L	76.971	ppb	17:08:43
2	Mg 279.077 IEC†	2.3	0.5	16.572	ug/L	16.572	ppb	17:09:03
2	Na 589.592 Radial†	-1238.7	6.7	1.9955	ug/L	1.9955	ppb	17:08:43
2	Sr 421.552†	10.5	30.3	0.1958	ug/L	0.1958	ppb	17:08:43
2	Sc 361.383	843411.1	843411.1	98.946	%			17:10:00
2	Y 371.029	714722.4	714722.4	98.901	%			17:10:00
2	Ag 328.068†	311.8	-42.8	-0.1993	ug/L	-0.1993	ppb	17:10:00
2	As 188.979†	-15.2	8.2	3.5609	ug/L	3.5609	ppb	17:10:21
2	B 249.677†	-412.7	214.8	4.7872	ug/L	4.7872	ppb	17:10:21
2	Ba 233.527†	-17.4	-6.1	-0.0496	ug/L	-0.0496	ppb	17:10:21
2	Be 313.107†	-4553.8	-17.0	-0.0067	ug/L	-0.0067	ppb	17:10:00
2	Cd 226.502†	-193.1	8.9	0.0988	ug/L	0.0988	ppb	17:10:21
2	Co 228.616†	-73.3	0.6	0.0129	ug/L	0.0129	ppb	17:10:21
2	Cr 267.716†	74.6	-7.9	-0.0906	ug/L	-0.0906	ppb	17:10:21
2	Cu 324.752†	6431.1	87.4	0.2607	ug/L	0.2607	ppb	17:10:00
2	Mn 257.610†	398.2	-42.5	-0.0467	ug/L	-0.0467	ppb	17:10:21
2	Mo 202.031†	22.5	-1.0	-0.0689	ug/L	-0.0689	ppb	17:10:21
2	Ni 231.604†	83.4	16.4	0.4073	ug/L	0.4073	ppb	17:10:21

2	P 214.914†	224.9	-2.5	-1.6212 ug/L	-1.6212 ppb	17:10:21
2	Pb 220.353†	-60.9	1.8	0.2229 ug/L	0.2229 ppb	17:10:21
2	S 181.975 Axial†	44.0	1.5	2.0848 ug/L	2.0848 ppb	17:10:21
2	Sb 206.836†	38.1	10.6	3.6132 ug/L	3.6132 ppb	17:10:21
2	Se 196.026†	-33.3	-1.6	-1.0076 ug/L	-1.0076 ppb	17:10:21
2	Si 251.611†	524.7	-20.2	-0.6422 ug/L	-0.6422 ppb	17:10:21
2	Sn 189.927†	6.9	-0.7	-0.1207 ug/L	-0.1207 ppb	17:10:21
2	Ti 334.940†	-1414.5	-55.1	-0.0917 ug/L	-0.0917 ppb	17:10:00
2	Tl 190.801†	-31.9	0.6	0.1901 ug/L	0.1901 ppb	17:10:21
2	U 409.014†	-1916.5	74.7	2.2040 ug/L	2.2040 ppb	17:10:00
2	V 292.402†	-1430.0	-135.5	-0.9229 ug/L	-0.9229 ppb	17:10:00
2	Zn 213.857†	625.3	11.7	0.1068 ug/L	0.1068 ppb	17:10:21
2	SiO2†	536.0	-30.0	-2.0444 ug/L	-2.0444 ppb	17:10:56
3	Sc Radial	4974.8	4974.8	98.8 %		17:09:09
3	Y RADIAL	5378.8	5378.8	99.07 %		17:09:09
3	Al 396.153Radial†	-18.8	-18.4	-14.146 ug/L	-14.146 ppb	17:09:09
3	Ca 317.933Radial†	15.1	-4.5	-7.1798 ug/L	-7.1798 ppb	17:09:29
3	Fe 238.204 Radial†	9.7	1.0	8.2705 ug/L	8.2705 ppb	17:09:29
3	K 766.490 Radial†	2774.3	217.9	39.967 ug/L	39.967 ppb	17:09:09
3	Mg 279.077 IEC†	3.7	1.9	62.848 ug/L	62.848 ppb	17:09:29
3	Na 589.592 Radial†	-1258.0	7.2	2.1488 ug/L	2.1488 ppb	17:09:09
3	Sr 421.552†	-11.3	8.1	0.0522 ug/L	0.0522 ppb	17:09:09
3	Sc 361.383	844303.5	844303.5	99.050 %		17:10:26
3	Y 371.029	716237.9	716237.9	99.110 %		17:10:26
3	Ag 328.068†	314.4	-40.6	-0.1886 ug/L	-0.1886 ppb	17:10:26
3	As 188.979†	-17.9	5.5	2.3949 ug/L	2.3949 ppb	17:10:46
3	B 249.677†	-440.3	187.3	4.1753 ug/L	4.1753 ppb	17:10:46
3	Ba 233.527†	-21.7	-10.4	-0.0822 ug/L	-0.0822 ppb	17:10:46
3	Be 313.107†	-4533.0	8.9	0.0035 ug/L	0.0035 ppb	17:10:26
3	Cd 226.502†	-173.4	29.1	0.3224 ug/L	0.3224 ppb	17:10:46
3	Co 228.616†	-78.4	-4.4	-0.0930 ug/L	-0.0930 ppb	17:10:46
3	Cr 267.716†	76.4	-6.1	-0.0702 ug/L	-0.0702 ppb	17:10:46
3	Cu 324.752†	6457.0	106.7	0.3176 ug/L	0.3176 ppb	17:10:26
3	Mn 257.610†	394.1	-47.0	-0.0538 ug/L	-0.0538 ppb	17:10:46
3	Mo 202.031†	13.4	-10.1	-0.7159 ug/L	-0.7159 ppb	17:10:46
3	Ni 231.604†	73.8	6.5	0.1624 ug/L	0.1624 ppb	17:10:46
3	P 214.914†	212.3	-15.5	-9.5711 ug/L	-9.5711 ppb	17:10:46
3	Pb 220.353†	-51.4	11.5	1.3962 ug/L	1.3962 ppb	17:10:46
3	S 181.975 Axial†	45.6	3.0	4.3163 ug/L	4.3163 ppb	17:10:46
3	Sb 206.836†	32.2	4.6	1.5872 ug/L	1.5872 ppb	17:10:46
3	Se 196.026†	-37.1	-5.4	-3.4812 ug/L	-3.4812 ppb	17:10:46
3	Si 251.611†	531.5	-13.8	-0.4313 ug/L	-0.4313 ppb	17:10:46
3	Sn 189.927†	14.4	6.8	1.2111 ug/L	1.2111 ppb	17:10:46
3	Ti 334.940†	-1332.2	29.5	0.0401 ug/L	0.0401 ppb	17:10:26
3	Tl 190.801†	-43.1	-10.7	-3.2853 ug/L	-3.2853 ppb	17:10:46
3	U 409.014†	-1872.5	121.2	3.5749 ug/L	3.5749 ppb	17:10:26
3	V 292.402†	-1358.4	-61.7	-0.4250 ug/L	-0.4250 ppb	17:10:26
3	Zn 213.857†	635.8	21.7	0.2027 ug/L	0.2027 ppb	17:10:46
3	SiO2†	525.2	-41.4	-2.8052 ug/L	-2.8052 ppb	17:11:01

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	841789.4	98.755	%	0.4235				0.43%
Sc Radial	4943.7	98.2	%	0.82				0.84%
Y 371.029	714107.6	98.815	%	0.3453				0.35%
Y RADIAL	5319.3	97.97	%	1.006				1.03%
Ag 328.068†	-29.8	-0.1398	ug/L	0.09402	-0.1398	ppb	0.09402	67.27%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-10.9	-8.4184	ug/L	5.42955	-8.4184	ppb	5.42955	64.50%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.7	2.4906	ug/L	1.02573	2.4906	ppb	1.02573	41.18%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	206.1	4.5944	ug/L	0.36331	4.5944	ppb	0.36331	7.91%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-10.8	-0.0855	ug/L	0.03759	-0.0855	ppb	0.03759	43.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-15.2	-0.0059	ug/L	0.00903	-0.0059	ppb	0.00903	153.14%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.8	-4.4228	ug/L	4.24064	-4.4228	ppb	4.24064	95.88%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              18.5      0.2049 ug/L       0.11223      0.2049 ppb       0.11223  54.76%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -5.9     -0.1209 ug/L       0.14974     -0.1209 ppb       0.14974 123.85%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -7.5     -0.0857 ug/L       0.01374     -0.0857 ppb       0.01374  16.03%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              85.2      0.2530 ug/L       0.06875      0.2530 ppb       0.06875  27.17%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.9      7.9915 ug/L       1.69250      7.9915 ppb       1.69250  21.18%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       300.3     55.064 ug/L       19.4196      55.064 ppb       19.4196  35.27%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.9      28.553 ug/L       30.1458      28.553 ppb       30.1458 105.58%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -46.0     -0.0512 ug/L       0.00395     -0.0512 ppb       0.00395   7.72%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -4.1     -0.2900 ug/L       0.36898     -0.2900 ppb       0.36898 127.25%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -6.9     -2.0753 ug/L       7.18399     -2.0753 ppb       7.18399 346.16%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               9.9      0.2467 ug/L       0.13908      0.2467 ppb       0.13908  56.37%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -7.6     -4.6977 ug/L       4.26868     -4.6977 ppb       4.26868  90.87%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               7.7      0.9375 ug/L       0.62714      0.9375 ppb       0.62714  66.90%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          1.4      1.9604 ug/L       2.42045      1.9604 ppb       2.42045 123.46%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               6.7      2.3139 ug/L       1.12789      2.3139 ppb       1.12789  48.74%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -2.3     -1.4809 ug/L       1.81058     -1.4809 ppb       1.81058 122.26%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -19.0     -0.6022 ug/L       0.15479     -0.6022 ppb       0.15479  25.71%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.5      0.6224 ug/L       0.67922      0.6224 ppb       0.67922 109.13%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              25.3      0.1634 ug/L       0.09908      0.1634 ppb       0.09908  60.62%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -32.4     -0.0566 ug/L       0.08476     -0.0566 ppb       0.08476 149.73%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -4.1     -1.2710 ug/L       1.80250     -1.2710 ppb       1.80250 141.82%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              126.7      3.7367 ug/L       1.61963      3.7367 ppb       1.61963  43.34%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -89.6     -0.6093 ug/L       0.27299     -0.6093 ppb       0.27299  44.81%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              15.3      0.1421 ug/L       0.05274      0.1421 ppb       0.05274  37.12%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -24.4     -1.6579 ug/L       1.38166     -1.6579 ppb       1.38166  83.34%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 24
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 17:54:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4943.4	4943.4	98.2	%			17:56:43
1	Y RADIAL	5326.3	5326.3	98.10	%			17:56:43
1	Al 396.153Radial†	6221.6	6337.9	4865.1	ug/L	4865.1	ppb	17:56:43
1	Ca 317.933Radial†	3084.4	3121.9	4995.4	ug/L	4995.4	ppb	17:57:03
1	Fe 238.204 Radial†	585.8	587.8	5102.0	ug/L	5102.0	ppb	17:57:03
1	K 766.490 Radial†	29082.8	27033.0	4939.2	ug/L	4939.2	ppb	17:56:43
1	Mg 279.077 IEC†	154.5	155.5	5194.4	ug/L	5194.4	ppb	17:57:03
1	Na 589.592 Radial†	31924.6	33798.2	10120	ug/L	10120	ppb	17:56:43
1	Sr 421.552†	74675.0	76082.0	491.37	ug/L	491.37	ppb	17:56:43
1	Sc 361.383	845530.9	845530.9	99.194	%			17:58:00
1	Y 371.029	705679.4	705679.4	97.649	%			17:58:00
1	Ag 328.068†	110106.0	110642.2	512.63	ug/L	512.63	ppb	17:58:05
1	As 188.979†	1110.7	1143.3	497.56	ug/L	497.56	ppb	17:58:25
1	B 249.677†	21674.1	22482.0	499.24	ug/L	499.24	ppb	17:58:05
1	Ba 233.527†	63973.4	64504.3	504.85	ug/L	504.85	ppb	17:58:05
1	Be 313.107†	1297233.9	1312354.9	501.18	ug/L	501.18	ppb	17:58:00
1	Cd 226.502†	45043.4	45613.3	506.04	ug/L	506.04	ppb	17:58:05
1	Co 228.616†	24493.4	24767.0	507.05	ug/L	507.05	ppb	17:58:05
1	Cr 267.716†	44813.9	45094.7	504.78	ug/L	504.78	ppb	17:58:05
1	Cu 324.752†	172335.0	167322.5	500.32	ug/L	500.32	ppb	17:58:05
1	Mn 257.610†	444721.0	447888.0	496.89	ug/L	496.89	ppb	17:58:00
1	Mo 202.031†	7106.9	7141.0	505.09	ug/L	505.09	ppb	17:58:25
1	Ni 231.604†	20226.5	20322.8	505.74	ug/L	505.74	ppb	17:58:05
1	P 214.914†	4247.0	4051.7	2370.1	ug/L	2370.1	ppb	17:58:25
1	Pb 220.353†	3993.6	4089.4	502.39	ug/L	502.39	ppb	17:58:25
1	S 181.975 Axial†	773.7	736.9	1042.0	ug/L	1042.0	ppb	17:58:25
1	Sb 206.836†	1472.3	1456.4	516.97	ug/L	516.97	ppb	17:58:25
1	Se 196.026†	733.8	771.8	515.41	ug/L	515.41	ppb	17:58:25
1	Si 251.611†	80324.8	80426.7	2555.2	ug/L	2555.2	ppb	17:58:05
1	Sn 189.927†	2834.6	2849.9	505.70	ug/L	505.70	ppb	17:58:25
1	Ti 334.940†	305739.2	309596.8	498.53	ug/L	498.53	ppb	17:58:05
1	Tl 190.801†	1589.9	1635.7	504.84	ug/L	504.84	ppb	17:58:25
1	U 409.014†	15255.7	17391.2	511.33	ug/L	511.33	ppb	17:58:05
1	V 292.402†	71801.3	73694.1	510.14	ug/L	510.14	ppb	17:58:05
1	Zn 213.857†	53681.6	53497.4	501.59	ug/L	501.59	ppb	17:58:05
1	SiO2†	79690.8	79766.3	5428.8	ug/L	5428.8	ppb	17:59:33
2	Sc Radial	4980.6	4980.6	98.9	%			17:57:08
2	Y RADIAL	5296.3	5296.3	97.55	%			17:57:08
2	Al 396.153Radial†	6157.6	6225.8	4778.7	ug/L	4778.7	ppb	17:57:08
2	Ca 317.933Radial†	3058.1	3071.9	4915.3	ug/L	4915.3	ppb	17:57:28
2	Fe 238.204 Radial†	585.6	583.2	5061.8	ug/L	5061.8	ppb	17:57:28
2	K 766.490 Radial†	28944.9	26672.5	4873.1	ug/L	4873.1	ppb	17:57:08
2	Mg 279.077 IEC†	156.7	156.5	5228.2	ug/L	5228.2	ppb	17:57:28
2	Na 589.592 Radial†	31804.4	33434.0	10011	ug/L	10011	ppb	17:57:08
2	Sr 421.552†	74078.2	74911.0	483.81	ug/L	483.81	ppb	17:57:08
2	Sc 361.383	846831.5	846831.5	99.347	%			17:58:31
2	Y 371.029	705456.9	705456.9	97.618	%			17:58:31
2	Ag 328.068†	108118.4	108471.1	502.59	ug/L	502.59	ppb	17:58:36
2	As 188.979†	1117.1	1148.0	499.55	ug/L	499.55	ppb	17:58:56
2	B 249.677†	21349.6	22121.8	491.23	ug/L	491.23	ppb	17:58:36
2	Ba 233.527†	62954.3	63379.5	496.05	ug/L	496.05	ppb	17:58:36
2	Be 313.107†	1301692.7	1314834.6	502.10	ug/L	502.10	ppb	17:58:31
2	Cd 226.502†	44261.0	44756.0	496.52	ug/L	496.52	ppb	17:58:36
2	Co 228.616†	24150.7	24384.1	499.23	ug/L	499.23	ppb	17:58:36
2	Cr 267.716†	44168.1	44375.1	496.72	ug/L	496.72	ppb	17:58:36
2	Cu 324.752†	168771.4	163468.6	488.81	ug/L	488.81	ppb	17:58:36
2	Mn 257.610†	447518.7	450015.5	499.24	ug/L	499.24	ppb	17:58:31
2	Mo 202.031†	7101.8	7124.8	503.95	ug/L	503.95	ppb	17:58:56
2	Ni 231.604†	19954.2	20017.4	498.14	ug/L	498.14	ppb	17:58:36

2	P 214.914†	4241.2	4039.2	2365.0 ug/L	2365.0 ppb	17:58:56
2	Pb 220.353†	3977.7	4067.2	499.66 ug/L	499.66 ppb	17:58:56
2	S 181.975 Axial†	769.5	731.6	1034.4 ug/L	1034.4 ppb	17:58:56
2	Sb 206.836†	1481.5	1463.3	519.36 ug/L	519.36 ppb	17:58:56
2	Se 196.026†	733.7	770.5	514.46 ug/L	514.46 ppb	17:58:56
2	Si 251.611†	79005.7	78974.6	2509.0 ug/L	2509.0 ppb	17:58:36
2	Sn 189.927†	2847.3	2858.3	507.18 ug/L	507.18 ppb	17:58:56
2	Ti 334.940†	300290.7	303639.2	488.93 ug/L	488.93 ppb	17:58:36
2	Tl 190.801†	1587.8	1631.1	503.44 ug/L	503.44 ppb	17:58:56
2	U 409.014†	14775.6	16884.3	496.40 ug/L	496.40 ppb	17:58:36
2	V 292.402†	70573.4	72347.0	500.92 ug/L	500.92 ppb	17:58:36
2	Zn 213.857†	52831.6	52558.6	492.78 ug/L	492.78 ppb	17:58:36
2	SiO2†	79443.8	79394.3	5403.5 ug/L	5403.5 ppb	17:59:38
3	Sc Radial	4940.6	4940.6	98.1 %		17:57:33
3	Y RADIAL	5244.0	5244.0	96.59 %		17:57:33
3	Al 396.153Radial†	6201.9	6321.4	4852.6 ug/L	4852.6 ppb	17:57:33
3	Ca 317.933Radial†	3035.5	3074.0	4918.6 ug/L	4918.6 ppb	17:57:53
3	Fe 238.204 Radial†	573.3	575.4	4994.1 ug/L	4994.1 ppb	17:57:53
3	K 766.490 Radial†	29108.4	27076.3	4947.1 ug/L	4947.1 ppb	17:57:33
3	Mg 279.077 IEC†	153.8	154.8	5173.0 ug/L	5173.0 ppb	17:57:53
3	Na 589.592 Radial†	31837.3	33728.2	10099 ug/L	10099 ppb	17:57:33
3	Sr 421.552†	74383.3	75828.9	489.74 ug/L	489.74 ppb	17:57:33
3	Sc 361.383	845532.3	845532.3	99.195 %		17:59:02
3	Y 371.029	703814.3	703814.3	97.391 %		17:59:02
3	Ag 328.068†	108607.2	109131.1	505.61 ug/L	505.61 ppb	17:59:07
3	As 188.979†	1114.9	1147.6	499.35 ug/L	499.35 ppb	17:59:27
3	B 249.677†	21384.0	22189.5	492.75 ug/L	492.75 ppb	17:59:07
3	Ba 233.527†	63066.7	63590.2	497.70 ug/L	497.70 ppb	17:59:07
3	Be 313.107†	1297232.3	1312351.2	501.16 ug/L	501.16 ppb	17:59:02
3	Cd 226.502†	44292.5	44856.3	497.65 ug/L	497.65 ppb	17:59:07
3	Co 228.616†	24132.8	24403.4	499.62 ug/L	499.62 ppb	17:59:07
3	Cr 267.716†	44341.5	44618.3	499.44 ug/L	499.44 ppb	17:59:07
3	Cu 324.752†	169422.0	164385.5	491.54 ug/L	491.54 ppb	17:59:07
3	Mn 257.610†	446325.3	449504.7	498.67 ug/L	498.67 ppb	17:59:02
3	Mo 202.031†	7055.8	7089.4	501.44 ug/L	501.44 ppb	17:59:27
3	Ni 231.604†	19961.1	20055.2	499.08 ug/L	499.08 ppb	17:59:07
3	P 214.914†	4227.3	4031.7	2359.9 ug/L	2359.9 ppb	17:59:27
3	Pb 220.353†	3982.2	4077.9	500.98 ug/L	500.98 ppb	17:59:27
3	S 181.975 Axial†	762.9	726.1	1026.7 ug/L	1026.7 ppb	17:59:27
3	Sb 206.836†	1468.4	1452.4	515.48 ug/L	515.48 ppb	17:59:27
3	Se 196.026†	733.4	771.3	514.75 ug/L	514.75 ppb	17:59:27
3	Si 251.611†	79182.1	79274.6	2518.6 ug/L	2518.6 ppb	17:59:07
3	Sn 189.927†	2818.8	2834.0	502.87 ug/L	502.87 ppb	17:59:27
3	Ti 334.940†	301118.4	304938.0	491.02 ug/L	491.02 ppb	17:59:07
3	Tl 190.801†	1587.9	1633.6	504.21 ug/L	504.21 ppb	17:59:27
3	U 409.014†	15084.2	17218.3	506.25 ug/L	506.25 ppb	17:59:07
3	V 292.402†	70750.3	72634.5	502.87 ug/L	502.87 ppb	17:59:07
3	Zn 213.857†	52945.3	52755.0	494.64 ug/L	494.64 ppb	17:59:07
3	SiO2†	79380.6	79453.5	5407.6 ug/L	5407.6 ppb	17:59:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	845964.9	99.245	%	0.0880				0.09%
Sc Radial	4954.9	98.4	%	0.44				0.45%
Y 371.029	704983.6	97.553	%	0.1410				0.14%
Y RADIAL	5288.9	97.41	%	0.767				0.79%
Ag 328.068†	109414.8	506.94	ug/L	5.148	506.94	ppb	5.148	1.02%
QC value within limits for Ag 328.068 Recovery = 101.39%								
Al 396.153Radial†	6295.0	4832.1	ug/L	46.69	4832.1	ppb	46.69	0.97%
QC value within limits for Al 396.153Radial Recovery = 96.64%								
As 188.979†	1146.3	498.82	ug/L	1.096	498.82	ppb	1.096	0.22%
QC value within limits for As 188.979 Recovery = 99.76%								
B 249.677†	22264.4	494.41	ug/L	4.252	494.41	ppb	4.252	0.86%
QC value within limits for B 249.677 Recovery = 98.88%								
Ba 233.527†	63824.7	499.53	ug/L	4.680	499.53	ppb	4.680	0.94%
QC value within limits for Ba 233.527 Recovery = 99.91%								
Be 313.107†	1313180.3	501.48	ug/L	0.538	501.48	ppb	0.538	0.11%
QC value within limits for Be 313.107 Recovery = 100.30%								
Ca 317.933Radial†	3089.3	4943.1	ug/L	45.31	4943.1	ppb	45.31	0.92%

QC value within limits for Ca 317.933Radial Recovery = 98.86%

Cd 226.502†	45075.2	500.07 ug/L	5.201	500.07 ppb	5.201	1.04%
QC value within limits for Cd 226.502 Recovery = 100.01%						
Co 228.616†	24518.2	501.97 ug/L	4.407	501.97 ppb	4.407	0.88%
QC value within limits for Co 228.616 Recovery = 100.39%						
Cr 267.716†	44696.0	500.31 ug/L	4.097	500.31 ppb	4.097	0.82%
QC value within limits for Cr 267.716 Recovery = 100.06%						
Cu 324.752†	165058.9	493.56 ug/L	6.018	493.56 ppb	6.018	1.22%
QC value within limits for Cu 324.752 Recovery = 98.71%						
Fe 238.204 Radial†	582.1	5052.6 ug/L	54.49	5052.6 ppb	54.49	1.08%
QC value within limits for Fe 238.204 Radial Recovery = 101.05%						
K 766.490 Radial†	26927.3	4919.8 ug/L	40.63	4919.8 ppb	40.63	0.83%
QC value within limits for K 766.490 Radial Recovery = 98.40%						
Mg 279.077 IEC†	155.6	5198.5 ug/L	27.82	5198.5 ppb	27.82	0.54%
QC value within limits for Mg 279.077 IEC Recovery = 103.97%						
Mn 257.610†	449136.1	498.27 ug/L	1.227	498.27 ppb	1.227	0.25%
QC value within limits for Mn 257.610 Recovery = 99.65%						
Mo 202.031†	7118.4	503.49 ug/L	1.868	503.49 ppb	1.868	0.37%
QC value within limits for Mo 202.031 Recovery = 100.70%						
Na 589.592 Radial†	33653.5	10076 ug/L	57.9	10076 ppb	57.9	0.57%
QC value within limits for Na 589.592 Radial Recovery = 100.76%						
Ni 231.604†	20131.8	500.98 ug/L	4.143	500.98 ppb	4.143	0.83%
QC value within limits for Ni 231.604 Recovery = 100.20%						
P 214.914†	4040.9	2365.0 ug/L	5.11	2365.0 ppb	5.11	0.22%
QC value within limits for P 214.914 Recovery = 94.60%						
Pb 220.353†	4078.2	501.01 ug/L	1.365	501.01 ppb	1.365	0.27%
QC value within limits for Pb 220.353 Recovery = 100.20%						
S 181.975 Axial†	731.5	1034.4 ug/L	7.66	1034.4 ppb	7.66	0.74%
QC value within limits for S 181.975 Axial Recovery = 103.44%						
Sb 206.836†	1457.3	517.27 ug/L	1.954	517.27 ppb	1.954	0.38%
QC value within limits for Sb 206.836 Recovery = 103.45%						
Se 196.026†	771.2	514.87 ug/L	0.489	514.87 ppb	0.489	0.09%
QC value within limits for Se 196.026 Recovery = 102.97%						
Si 251.611†	79558.6	2527.6 ug/L	24.40	2527.6 ppb	24.40	0.97%
QC value within limits for Si 251.611 Recovery = 101.10%						
Sn 189.927†	2847.4	505.25 ug/L	2.188	505.25 ppb	2.188	0.43%
QC value within limits for Sn 189.927 Recovery = 101.05%						
Sr 421.552†	75607.3	488.30 ug/L	3.980	488.30 ppb	3.980	0.81%
QC value within limits for Sr 421.552 Recovery = 97.66%						
Ti 334.940†	306058.0	492.83 ug/L	5.049	492.83 ppb	5.049	1.02%
QC value within limits for Ti 334.940 Recovery = 98.57%						
Tl 190.801†	1633.5	504.16 ug/L	0.698	504.16 ppb	0.698	0.14%
QC value within limits for Tl 190.801 Recovery = 100.83%						
U 409.014†	17164.6	504.66 ug/L	7.591	504.66 ppb	7.591	1.50%
QC value within limits for U 409.014 Recovery = 100.93%						
V 292.402†	72891.9	504.64 ug/L	4.860	504.64 ppb	4.860	0.96%
QC value within limits for V 292.402 Recovery = 100.93%						
Zn 213.857†	52937.0	496.34 ug/L	4.645	496.34 ppb	4.645	0.94%
QC value within limits for Zn 213.857 Recovery = 99.27%						
SiO2†	79538.0	5413.3 ug/L	13.61	5413.3 ppb	13.61	0.25%
QC value within limits for SiO2 Recovery = 101.23%						

All analyte(s) passed QC.

Sequence No.: 25
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/11/2010 18:01:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Rep#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5032.1	5032.1	99.9	%			18:03:44
1	Y RADIAL	5414.0	5414.0	99.72	%			18:03:44
1	Al 396.153Radial†	-15.3	-14.6	-11.291	ug/L	-11.291	ppb	18:03:44
1	Ca 317.933Radial†	17.7	-2.0	-3.2800	ug/L	-3.2800	ppb	18:04:04
1	Fe 238.204 Radial†	13.6	4.7	40.999	ug/L	40.999	ppb	18:04:04
1	K 766.490 Radial†	2764.5	176.1	32.254	ug/L	32.254	ppb	18:03:44
1	Mg 279.077 IEC†	0.7	-1.2	-39.898	ug/L	-39.898	ppb	18:04:04
1	Na 589.592 Radial†	-1075.7	204.0	61.089	ug/L	61.089	ppb	18:03:44
1	Sr 421.552†	41.1	60.7	0.3919	ug/L	0.3919	ppb	18:03:44
1	Sc 361.383	841942.6	841942.6	98.773	%			18:05:01
1	Y 371.029	716299.6	716299.6	99.119	%			18:05:01
1	Ag 328.068†	292.4	-62.0	-0.2711	ug/L	-0.2711	ppb	18:05:01
1	As 188.979†	-20.6	2.8	1.2194	ug/L	1.2194	ppb	18:05:21
1	B 249.677†	-432.2	194.3	4.3267	ug/L	4.3267	ppb	18:05:21
1	Ba 233.527†	-14.5	-3.3	-0.0244	ug/L	-0.0244	ppb	18:05:21
1	Be 313.107†	-4496.2	33.3	0.0129	ug/L	0.0129	ppb	18:05:01
1	Cd 226.502†	-196.1	5.5	0.0567	ug/L	0.0567	ppb	18:05:21
1	Co 228.616†	-79.0	-5.3	-0.1085	ug/L	-0.1085	ppb	18:05:21
1	Cr 267.716†	100.0	18.0	0.2021	ug/L	0.2021	ppb	18:05:21
1	Cu 324.752†	6346.0	12.6	0.0408	ug/L	0.0408	ppb	18:05:01
1	Mn 257.610†	417.3	-22.4	-0.0186	ug/L	-0.0186	ppb	18:05:21
1	Mo 202.031†	29.3	6.0	0.4237	ug/L	0.4237	ppb	18:05:21
1	Ni 231.604†	62.8	-4.4	-0.1101	ug/L	-0.1101	ppb	18:05:21
1	P 214.914†	215.4	-11.8	-7.2505	ug/L	-7.2505	ppb	18:05:21
1	Pb 220.353†	-64.2	-1.7	-0.2107	ug/L	-0.2107	ppb	18:05:21
1	S 181.975 Axial†	67.7	25.5	36.124	ug/L	36.124	ppb	18:05:21
1	Sb 206.836†	39.0	11.6	3.9684	ug/L	3.9684	ppb	18:05:21
1	Se 196.026†	-29.3	2.3	1.6428	ug/L	1.6428	ppb	18:05:21
1	Si 251.611†	551.3	7.7	0.2410	ug/L	0.2410	ppb	18:05:21
1	Sn 189.927†	5.1	-2.5	-0.4355	ug/L	-0.4355	ppb	18:05:21
1	Ti 334.940†	-1301.9	56.5	0.0945	ug/L	0.0945	ppb	18:05:01
1	Tl 190.801†	-29.2	3.3	1.0204	ug/L	1.0204	ppb	18:05:21
1	U 409.014†	-2040.2	-54.0	-1.5967	ug/L	-1.5967	ppb	18:05:01
1	V 292.402†	-1301.0	-7.4	-0.0547	ug/L	-0.0547	ppb	18:05:01
1	Zn 213.857†	634.9	22.6	0.2102	ug/L	0.2102	ppb	18:05:21
1	SiO2†	552.6	-12.2	-0.8472	ug/L	-0.8472	ppb	18:06:17
2	Sc Radial	5088.6	5088.6	101	%			18:04:09
2	Y RADIAL	5460.6	5460.6	100.6	%			18:04:09
2	Al 396.153Radial†	16.4	16.9	13.046	ug/L	13.046	ppb	18:04:09
2	Ca 317.933Radial†	18.1	-1.9	-3.0157	ug/L	-3.0157	ppb	18:04:30
2	Fe 238.204 Radial†	7.1	-1.9	-16.122	ug/L	-16.122	ppb	18:04:30
2	K 766.490 Radial†	2599.4	-18.0	-3.3445	ug/L	-3.3445	ppb	18:04:09
2	Mg 279.077 IEC†	5.9	3.9	131.67	ug/L	131.67	ppb	18:04:30
2	Na 589.592 Radial†	-1059.8	231.8	69.392	ug/L	69.392	ppb	18:04:09
2	Sr 421.552†	36.0	55.1	0.3561	ug/L	0.3561	ppb	18:04:09
2	Sc 361.383	827958.1	827958.1	97.133	%			18:05:27
2	Y 371.029	703295.6	703295.6	97.319	%			18:05:27
2	Ag 328.068†	285.1	-64.4	-0.3026	ug/L	-0.3026	ppb	18:05:27
2	As 188.979†	-19.3	3.8	1.6437	ug/L	1.6437	ppb	18:05:47
2	B 249.677†	-436.4	182.6	4.0715	ug/L	4.0715	ppb	18:05:47
2	Ba 233.527†	-12.6	-1.6	-0.0145	ug/L	-0.0145	ppb	18:05:47
2	Be 313.107†	-4441.1	13.2	0.0053	ug/L	0.0053	ppb	18:05:27
2	Cd 226.502†	-197.9	0.4	0.0053	ug/L	0.0053	ppb	18:05:47
2	Co 228.616†	-69.3	3.3	0.0670	ug/L	0.0670	ppb	18:05:47
2	Cr 267.716†	93.6	13.2	0.1465	ug/L	0.1465	ppb	18:05:47
2	Cu 324.752†	6334.7	109.4	0.3276	ug/L	0.3276	ppb	18:05:27
2	Mn 257.610†	419.5	-13.0	-0.0216	ug/L	-0.0216	ppb	18:05:47
2	Mo 202.031†	20.6	-2.5	-0.1779	ug/L	-0.1779	ppb	18:05:47
2	Ni 231.604†	67.7	1.7	0.0432	ug/L	0.0432	ppb	18:05:47

2	P 214.914†	220.5	-2.9	-1.8284 ug/L	-1.8284 ppb	18:05:47
2	Pb 220.353†	-48.4	13.5	1.6580 ug/L	1.6580 ppb	18:05:47
2	S 181.975 Axial†	55.3	13.9	19.705 ug/L	19.705 ppb	18:05:47
2	Sb 206.836†	41.8	15.1	5.1298 ug/L	5.1298 ppb	18:05:47
2	Se 196.026†	-37.8	-6.9	-4.4783 ug/L	-4.4783 ppb	18:05:47
2	Si 251.611†	528.5	-6.3	-0.1991 ug/L	-0.1991 ppb	18:05:47
2	Sn 189.927†	-2.9	-10.7	-1.8935 ug/L	-1.8935 ppb	18:05:47
2	Ti 334.940†	-1255.1	82.4	0.1225 ug/L	0.1225 ppb	18:05:27
2	Tl 190.801†	-31.5	0.4	0.1292 ug/L	0.1292 ppb	18:05:47
2	U 409.014†	-2026.4	-74.6	-2.2002 ug/L	-2.2002 ppb	18:05:27
2	V 292.402†	-1364.1	-94.7	-0.6482 ug/L	-0.6482 ppb	18:05:27
2	Zn 213.857†	617.7	15.7	0.1494 ug/L	0.1494 ppb	18:05:47
2	SiO2†	544.4	-11.2	-0.7600 ug/L	-0.7600 ppb	18:06:22
3	Sc Radial	4992.2	4992.2	99.1 %		18:04:35
3	Y RADIAL	5397.0	5397.0	99.40 %		18:04:35
3	Al 396.153Radial†	-1.3	-0.6	-0.4769 ug/L	-0.4769 ppb	18:04:35
3	Ca 317.933Radial†	15.3	-4.3	-6.9230 ug/L	-6.9230 ppb	18:04:55
3	Fe 238.204 Radial†	10.3	1.5	12.892 ug/L	12.892 ppb	18:04:55
3	K 766.490 Radial†	2660.8	93.6	17.140 ug/L	17.140 ppb	18:04:35
3	Mg 279.077 IEC†	-0.4	-2.4	-78.673 ug/L	-78.673 ppb	18:04:55
3	Na 589.592 Radial†	-1117.2	153.6	45.990 ug/L	45.990 ppb	18:04:35
3	Sr 421.552†	19.3	39.0	0.2517 ug/L	0.2517 ppb	18:04:35
3	Sc 361.383	835723.6	835723.6	98.044 %		18:05:52
3	Y 371.029	710110.9	710110.9	98.262 %		18:05:52
3	Ag 328.068†	317.7	-33.9	-0.1524 ug/L	-0.1524 ppb	18:05:52
3	As 188.979†	-23.8	-0.7	-0.2952 ug/L	-0.2952 ppb	18:06:12
3	B 249.677†	-447.7	175.3	3.9063 ug/L	3.9063 ppb	18:06:12
3	Ba 233.527†	-20.4	-9.4	-0.0743 ug/L	-0.0743 ppb	18:06:12
3	Be 313.107†	-4511.7	-16.3	-0.0064 ug/L	-0.0064 ppb	18:05:52
3	Cd 226.502†	-186.3	14.1	0.1550 ug/L	0.1550 ppb	18:06:12
3	Co 228.616†	-80.5	-7.4	-0.1528 ug/L	-0.1528 ppb	18:06:12
3	Cr 267.716†	99.4	18.1	0.2029 ug/L	0.2029 ppb	18:06:12
3	Cu 324.752†	6417.0	132.8	0.3989 ug/L	0.3989 ppb	18:05:52
3	Mn 257.610†	430.8	-5.4	-0.0014 ug/L	-0.0014 ppb	18:06:12
3	Mo 202.031†	17.9	-5.4	-0.3814 ug/L	-0.3814 ppb	18:06:12
3	Ni 231.604†	70.0	3.4	0.0845 ug/L	0.0845 ppb	18:06:12
3	P 214.914†	221.2	-4.3	-2.7203 ug/L	-2.7203 ppb	18:06:12
3	Pb 220.353†	-45.2	17.3	2.1165 ug/L	2.1165 ppb	18:06:12
3	S 181.975 Axial†	58.7	16.9	23.929 ug/L	23.929 ppb	18:06:12
3	Sb 206.836†	42.6	15.6	5.3268 ug/L	5.3268 ppb	18:06:12
3	Se 196.026†	-27.5	4.0	2.6010 ug/L	2.6010 ppb	18:06:12
3	Si 251.611†	541.0	1.3	0.0463 ug/L	0.0463 ppb	18:06:12
3	Sn 189.927†	7.3	-0.2	-0.0419 ug/L	-0.0419 ppb	18:06:12
3	Ti 334.940†	-1399.4	-52.8	-0.0785 ug/L	-0.0785 ppb	18:05:52
3	Tl 190.801†	-37.9	-5.8	-1.7945 ug/L	-1.7945 ppb	18:06:12
3	U 409.014†	-2040.8	-69.9	-2.0643 ug/L	-2.0643 ppb	18:05:52
3	V 292.402†	-1360.6	-78.1	-0.5460 ug/L	-0.5460 ppb	18:05:52
3	Zn 213.857†	617.9	10.0	0.0924 ug/L	0.0924 ppb	18:06:12
3	SiO2†	570.9	10.6	0.7314 ug/L	0.7314 ppb	18:06:27

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	835208.1	97.983	%	0.8220				0.84%
Sc Radial	5037.7	100	%	1.0				0.96%
Y 371.029	709902.0	98.234	%	0.9001				0.92%
Y RADIAL	5423.9	99.90	%	0.606				0.61%
Ag 328.068†	-53.5	-0.2420	ug/L	0.07922	-0.2420	ppb	0.07922	32.73%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	0.5	0.4259	ug/L	12.19337	0.4259	ppb	12.19337	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	2.0	0.8560	ug/L	1.01923	0.8560	ppb	1.01923	119.07%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	184.0	4.1015	ug/L	0.21183	4.1015	ppb	0.21183	5.16%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.8	-0.0377	ug/L	0.03202	-0.0377	ppb	0.03202	84.87%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	10.0	0.0039	ug/L	0.00973	0.0039	ppb	0.00973	247.36%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.8	-4.4062	ug/L	2.18357	-4.4062	ppb	2.18357	49.56%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†          6.7      0.0723 ug/L       0.07602      0.0723 ppb       0.07602 105.10%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†         -3.1     -0.0648 ug/L       0.11624     -0.0648 ppb       0.11624 179.45%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†         16.4      0.1838 ug/L       0.03237      0.1838 ppb       0.03237  17.61%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†         84.9      0.2558 ug/L       0.18958      0.2558 ppb       0.18958  74.12%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†   1.5      12.590 ug/L       28.5613      12.590 ppb       28.5613 226.86%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†   83.9      15.350 ug/L       17.8665      15.350 ppb       17.8665 116.40%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†      0.1      4.3650 ug/L     111.93789      4.3650 ppb     111.93789 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†        -13.6     -0.0139 ug/L       0.01092     -0.0139 ppb       0.01092  78.75%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†         -0.7     -0.0452 ug/L       0.41864     -0.0452 ppb       0.41864 927.03%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†  196.5      58.823 ug/L       11.8639      58.823 ppb       11.8639  20.17%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†          0.2      0.0059 ug/L       0.10255      0.0059 ppb       0.10255 >999.9%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†          -6.3     -3.9331 ug/L       2.90736     -3.9331 ppb       2.90736  73.92%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†          9.7      1.1879 ug/L       1.23277      1.1879 ppb       1.23277 103.77%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†    18.8      26.586 ug/L        8.5259      26.586 ppb        8.5259  32.07%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†         14.1      4.8083 ug/L       0.73402      4.8083 ppb       0.73402  15.27%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†         -0.2     -0.0782 ug/L       3.84063     -0.0782 ppb       3.84063 >999.9%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†          0.9      0.0294 ug/L       0.22052      0.0294 ppb       0.22052 750.90%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†         -4.5     -0.7903 ug/L       0.97541     -0.7903 ppb       0.97541 123.42%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†         51.6      0.3332 ug/L       0.07283      0.3332 ppb       0.07283  21.85%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†         28.7      0.0462 ug/L       0.10890      0.0462 ppb       0.10890 235.88%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†         -0.7     -0.2150 ug/L       1.43867     -0.2150 ppb       1.43867 669.30%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†         -66.2     -1.9537 ug/L       0.31659     -1.9537 ppb       0.31659  16.20%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†         -60.1     -0.4163 ug/L       0.31725     -0.4163 ppb       0.31725  76.21%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†         16.1      0.1507 ug/L       0.05891      0.1507 ppb       0.05891  39.10%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†               -4.3     -0.2919 ug/L       0.88728     -0.2919 ppb       0.88728 303.95%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 33
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 18:58:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5144.6	5144.6	102	%			18:59:55
1	Y RADIAL	5507.0	5507.0	101.4	%			18:59:55
1	Al 396.153Radial†	6406.2	6270.7	4813.1	ug/L	4813.1	ppb	18:59:55
1	Ca 317.933Radial†	3114.2	3028.3	4845.5	ug/L	4845.5	ppb	19:00:15
1	Fe 238.204 Radial†	592.9	571.4	4960.0	ug/L	4960.0	ppb	19:00:15
1	K 766.490 Radial†	29692.5	26471.4	4836.2	ug/L	4836.2	ppb	18:59:55
1	Mg 279.077 IEC†	157.5	152.2	5085.6	ug/L	5085.6	ppb	19:00:15
1	Na 589.592 Radial†	32930.9	33511.6	10034	ug/L	10034	ppb	18:59:55
1	Sr 421.552†	76540.8	74933.9	483.95	ug/L	483.95	ppb	18:59:55
1	Sc 361.383	849883.4	849883.4	99.705	%			19:01:12
1	Y 371.029	708700.0	708700.0	98.067	%			19:01:12
1	Ag 328.068†	109742.0	109708.7	508.27	ug/L	508.27	ppb	19:01:17
1	As 188.979†	1136.7	1163.7	506.32	ug/L	506.32	ppb	19:01:38
1	B 249.677†	21497.9	22193.3	492.83	ug/L	492.83	ppb	19:01:17
1	Ba 233.527†	63727.5	63927.5	500.34	ug/L	500.34	ppb	19:01:17
1	Be 313.107†	1322793.7	1331292.9	508.38	ug/L	508.38	ppb	19:01:12
1	Cd 226.502†	44865.2	45202.1	501.49	ug/L	501.49	ppb	19:01:17
1	Co 228.616†	24369.9	24516.6	501.95	ug/L	501.95	ppb	19:01:17
1	Cr 267.716†	44675.4	44724.3	500.63	ug/L	500.63	ppb	19:01:17
1	Cu 324.752†	171998.3	166095.0	496.65	ug/L	496.65	ppb	19:01:17
1	Mn 257.610†	451883.5	452775.7	502.29	ug/L	502.29	ppb	19:01:12
1	Mo 202.031†	7199.3	7196.9	509.04	ug/L	509.04	ppb	19:01:38
1	Ni 231.604†	20128.7	20120.3	500.70	ug/L	500.70	ppb	19:01:17
1	P 214.914†	4345.1	4128.1	2417.8	ug/L	2417.8	ppb	19:01:38
1	Pb 220.353†	4038.4	4113.7	505.38	ug/L	505.38	ppb	19:01:38
1	S 181.975 Axial†	822.5	781.9	1105.7	ug/L	1105.7	ppb	19:01:38
1	Sb 206.836†	1510.2	1486.8	527.58	ug/L	527.58	ppb	19:01:38
1	Se 196.026†	758.2	792.4	528.28	ug/L	528.28	ppb	19:01:38
1	Si 251.611†	80267.6	79954.6	2540.2	ug/L	2540.2	ppb	19:01:17
1	Sn 189.927†	2889.1	2890.0	512.77	ug/L	512.77	ppb	19:01:38
1	Ti 334.940†	304788.1	307064.4	494.45	ug/L	494.45	ppb	19:01:17
1	Tl 190.801†	1606.7	1644.3	507.52	ug/L	507.52	ppb	19:01:38
1	U 409.014†	15207.6	17264.2	507.60	ug/L	507.60	ppb	19:01:17
1	V 292.402†	71520.5	73041.8	505.76	ug/L	505.76	ppb	19:01:17
1	Zn 213.857†	53506.3	53044.3	497.36	ug/L	497.36	ppb	19:01:17
1	SiO2†	81243.4	80912.1	5506.9	ug/L	5506.9	ppb	19:02:45
2	Sc Radial	5054.1	5054.1	100	%			19:00:20
2	Y RADIAL	5400.1	5400.1	99.46	%			19:00:20
2	Al 396.153Radial†	6372.3	6349.2	4873.4	ug/L	4873.4	ppb	19:00:20
2	Ca 317.933Radial†	3116.2	3084.9	4936.1	ug/L	4936.1	ppb	19:00:40
2	Fe 238.204 Radial†	597.5	586.4	5090.1	ug/L	5090.1	ppb	19:00:40
2	K 766.490 Radial†	29643.8	26943.4	4922.6	ug/L	4922.6	ppb	19:00:20
2	Mg 279.077 IEC†	155.6	153.1	5115.5	ug/L	5115.5	ppb	19:00:40
2	Na 589.592 Radial†	32617.7	33776.9	10113	ug/L	10113	ppb	19:00:20
2	Sr 421.552†	76232.5	75968.6	490.64	ug/L	490.64	ppb	19:00:20
2	Sc 361.383	841500.4	841500.4	98.722	%			19:01:43
2	Y 371.029	701064.2	701064.2	97.011	%			19:01:43
2	Ag 328.068†	111194.9	112276.9	520.18	ug/L	520.18	ppb	19:01:48
2	As 188.979†	1140.0	1178.3	512.74	ug/L	512.74	ppb	19:02:08
2	B 249.677†	22053.5	22971.0	510.12	ug/L	510.12	ppb	19:01:48
2	Ba 233.527†	64584.2	65432.0	512.11	ug/L	512.11	ppb	19:01:48
2	Be 313.107†	1302730.2	1324186.3	505.70	ug/L	505.70	ppb	19:01:43
2	Cd 226.502†	45568.8	46363.0	514.37	ug/L	514.37	ppb	19:01:48
2	Co 228.616†	24775.4	25170.9	515.32	ug/L	515.32	ppb	19:01:48
2	Cr 267.716†	45418.1	45923.0	514.05	ug/L	514.05	ppb	19:01:48
2	Cu 324.752†	174409.6	170256.0	509.09	ug/L	509.09	ppb	19:01:48
2	Mn 257.610†	446399.5	451735.6	501.16	ug/L	501.16	ppb	19:01:43
2	Mo 202.031†	7199.9	7269.4	514.17	ug/L	514.17	ppb	19:02:08
2	Ni 231.604†	20501.0	20698.6	515.09	ug/L	515.09	ppb	19:01:48

2	P 214.914†	4332.4	4158.7	2433.7 ug/L	2433.7 ppb	19:02:08
2	Pb 220.353†	4018.7	4134.1	507.87 ug/L	507.87 ppb	19:02:08
2	S 181.975 Axial†	824.6	792.3	1120.3 ug/L	1120.3 ppb	19:02:08
2	Sb 206.836†	1507.9	1499.5	532.04 ug/L	532.04 ppb	19:02:08
2	Se 196.026†	748.5	790.2	527.29 ug/L	527.29 ppb	19:02:08
2	Si 251.611†	81375.3	81878.6	2601.4 ug/L	2601.4 ppb	19:01:48
2	Sn 189.927†	2860.0	2889.4	512.69 ug/L	512.69 ppb	19:02:08
2	Ti 334.940†	308906.0	314280.9	506.07 ug/L	506.07 ppb	19:01:48
2	Tl 190.801†	1603.9	1657.5	511.56 ug/L	511.56 ppb	19:02:08
2	U 409.014†	15380.3	17591.1	517.20 ug/L	517.20 ppb	19:01:48
2	V 292.402†	72630.9	74881.2	518.38 ug/L	518.38 ppb	19:01:48
2	Zn 213.857†	54302.8	54385.8	509.92 ug/L	509.92 ppb	19:01:48
2	SiO2†	81061.5	81539.5	5549.6 ug/L	5549.6 ppb	19:02:50
3	Sc Radial	5031.9	5031.9	99.9 %		19:00:45
3	Y RADIAL	5396.5	5396.5	99.39 %		19:00:45
3	Al 396.153Radial†	6345.2	6350.2	4874.7 ug/L	4874.7 ppb	19:00:45
3	Ca 317.933Radial†	3113.6	3095.9	4953.8 ug/L	4953.8 ppb	19:01:05
3	Fe 238.204 Radial†	589.4	580.9	5041.8 ug/L	5041.8 ppb	19:01:05
3	K 766.490 Radial†	29541.1	26971.1	4927.8 ug/L	4927.8 ppb	19:00:45
3	Mg 279.077 IEC†	155.5	153.7	5135.4 ug/L	5135.4 ppb	19:01:05
3	Na 589.592 Radial†	32332.6	33635.2	10071 ug/L	10071 ppb	19:00:45
3	Sr 421.552†	75829.5	75900.8	490.20 ug/L	490.20 ppb	19:00:45
3	Sc 361.383	857935.6	857935.6	100.65 %		19:02:14
3	Y 371.029	715236.9	715236.9	98.972 %		19:02:14
3	Ag 328.068†	110051.9	108983.5	504.95 ug/L	504.95 ppb	19:02:19
3	As 188.979†	1139.0	1155.2	502.68 ug/L	502.68 ppb	19:02:39
3	B 249.677†	21674.8	22166.7	492.24 ug/L	492.24 ppb	19:02:19
3	Ba 233.527†	63825.4	63424.9	496.41 ug/L	496.41 ppb	19:02:19
3	Be 313.107†	1327030.1	1323050.1	505.23 ug/L	505.23 ppb	19:02:14
3	Cd 226.502†	44870.2	44784.7	496.85 ug/L	496.85 ppb	19:02:19
3	Co 228.616†	24430.9	24347.8	498.48 ug/L	498.48 ppb	19:02:19
3	Cr 267.716†	44855.9	44483.1	497.93 ug/L	497.93 ppb	19:02:19
3	Cu 324.752†	172448.3	164923.0	493.15 ug/L	493.15 ppb	19:02:19
3	Mn 257.610†	453941.4	450566.5	499.85 ug/L	499.85 ppb	19:02:14
3	Mo 202.031†	7182.9	7112.8	503.10 ug/L	503.10 ppb	19:02:39
3	Ni 231.604†	20189.2	19991.0	497.48 ug/L	497.48 ppb	19:02:19
3	P 214.914†	4314.1	4056.4	2374.6 ug/L	2374.6 ppb	19:02:39
3	Pb 220.353†	4039.8	4077.1	500.88 ug/L	500.88 ppb	19:02:39
3	S 181.975 Axial†	823.9	775.6	1096.7 ug/L	1096.7 ppb	19:02:39
3	Sb 206.836†	1502.9	1465.3	519.99 ug/L	519.99 ppb	19:02:39
3	Se 196.026†	739.8	767.0	512.15 ug/L	512.15 ppb	19:02:39
3	Si 251.611†	80305.3	79236.5	2517.4 ug/L	2517.4 ppb	19:02:19
3	Sn 189.927†	2871.7	2845.5	504.91 ug/L	504.91 ppb	19:02:39
3	Ti 334.940†	305241.9	304646.2	490.56 ug/L	490.56 ppb	19:02:19
3	Tl 190.801†	1617.4	1639.8	506.11 ug/L	506.11 ppb	19:02:39
3	U 409.014†	15197.1	17110.6	503.07 ug/L	503.07 ppb	19:02:19
3	V 292.402†	71738.1	72584.8	502.54 ug/L	502.54 ppb	19:02:19
3	Zn 213.857†	53694.1	52727.3	494.38 ug/L	494.38 ppb	19:02:19
3	SiO2†	80175.4	79086.2	5382.5 ug/L	5382.5 ppb	19:02:55

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	849773.1	99.692	%	0.9641				0.97%
Sc Radial	5076.9	101	%	1.2				1.18%
Y 371.029	708333.7	98.016	%	0.9816				1.00%
Y RADIAL	5434.5	100.1	%	1.16				1.16%
Ag 328.068†	110323.1	511.13	ug/L	8.009	511.13	ppb	8.009	1.57%
QC value within limits for Ag 328.068 Recovery = 102.23%								
Al 396.153Radial†	6323.4	4853.7	ug/L	35.21	4853.7	ppb	35.21	0.73%
QC value within limits for Al 396.153Radial Recovery = 97.07%								
As 188.979†	1165.8	507.25	ug/L	5.095	507.25	ppb	5.095	1.00%
QC value within limits for As 188.979 Recovery = 101.45%								
B 249.677†	22443.7	498.40	ug/L	10.155	498.40	ppb	10.155	2.04%
QC value within limits for B 249.677 Recovery = 99.68%								
Ba 233.527†	64261.5	502.95	ug/L	8.173	502.95	ppb	8.173	1.63%
QC value within limits for Ba 233.527 Recovery = 100.59%								
Be 313.107†	1326176.4	506.44	ug/L	1.699	506.44	ppb	1.699	0.34%
QC value within limits for Be 313.107 Recovery = 101.29%								
Ca 317.933Radial†	3069.7	4911.8	ug/L	58.07	4911.8	ppb	58.07	1.18%

QC value within limits for Ca 317.933Radial Recovery = 98.24%

Cd 226.502†	45449.9	504.23 ug/L	9.079	504.23 ppb	9.079	1.80%
QC value within limits for Cd 226.502 Recovery = 100.85%						
Co 228.616†	24678.5	505.25 ug/L	8.893	505.25 ppb	8.893	1.76%
QC value within limits for Co 228.616 Recovery = 101.05%						
Cr 267.716†	45043.5	504.20 ug/L	8.631	504.20 ppb	8.631	1.71%
QC value within limits for Cr 267.716 Recovery = 100.84%						
Cu 324.752†	167091.3	499.63 ug/L	8.379	499.63 ppb	8.379	1.68%
QC value within limits for Cu 324.752 Recovery = 99.93%						
Fe 238.204 Radial†	579.6	5030.6 ug/L	65.79	5030.6 ppb	65.79	1.31%
QC value within limits for Fe 238.204 Radial Recovery = 100.61%						
K 766.490 Radial†	26795.3	4895.5 ug/L	51.48	4895.5 ppb	51.48	1.05%
QC value within limits for K 766.490 Radial Recovery = 97.91%						
Mg 279.077 IEC†	153.0	5112.2 ug/L	25.03	5112.2 ppb	25.03	0.49%
QC value within limits for Mg 279.077 IEC Recovery = 102.24%						
Mn 257.610†	451692.6	501.10 ug/L	1.222	501.10 ppb	1.222	0.24%
QC value within limits for Mn 257.610 Recovery = 100.22%						
Mo 202.031†	7193.0	508.77 ug/L	5.539	508.77 ppb	5.539	1.09%
QC value within limits for Mo 202.031 Recovery = 101.75%						
Na 589.592 Radial†	33641.2	10073 ug/L	39.7	10073 ppb	39.7	0.39%
QC value within limits for Na 589.592 Radial Recovery = 100.73%						
Ni 231.604†	20269.9	504.42 ug/L	9.377	504.42 ppb	9.377	1.86%
QC value within limits for Ni 231.604 Recovery = 100.88%						
P 214.914†	4114.4	2408.7 ug/L	30.57	2408.7 ppb	30.57	1.27%
QC value within limits for P 214.914 Recovery = 96.35%						
Pb 220.353†	4108.3	504.71 ug/L	3.545	504.71 ppb	3.545	0.70%
QC value within limits for Pb 220.353 Recovery = 100.94%						
S 181.975 Axial†	783.3	1107.6 ug/L	11.91	1107.6 ppb	11.91	1.08%
QC value greater than the upper limit for S 181.975 Axial Recovery = 110.76%						
Sb 206.836†	1483.9	526.54 ug/L	6.094	526.54 ppb	6.094	1.16%
QC value within limits for Sb 206.836 Recovery = 105.31%						
Se 196.026†	783.2	522.57 ug/L	9.039	522.57 ppb	9.039	1.73%
QC value within limits for Se 196.026 Recovery = 104.51%						
Si 251.611†	80356.6	2553.0 ug/L	43.45	2553.0 ppb	43.45	1.70%
QC value within limits for Si 251.611 Recovery = 102.12%						
Sn 189.927†	2875.0	510.13 ug/L	4.515	510.13 ppb	4.515	0.89%
QC value within limits for Sn 189.927 Recovery = 102.03%						
Sr 421.552†	75601.1	488.26 ug/L	3.738	488.26 ppb	3.738	0.77%
QC value within limits for Sr 421.552 Recovery = 97.65%						
Ti 334.940†	308663.8	497.03 ug/L	8.071	497.03 ppb	8.071	1.62%
QC value within limits for Ti 334.940 Recovery = 99.41%						
Tl 190.801†	1647.2	508.40 ug/L	2.826	508.40 ppb	2.826	0.56%
QC value within limits for Tl 190.801 Recovery = 101.68%						
U 409.014†	17322.0	509.29 ug/L	7.216	509.29 ppb	7.216	1.42%
QC value within limits for U 409.014 Recovery = 101.86%						
V 292.402†	73502.6	508.89 ug/L	8.370	508.89 ppb	8.370	1.64%
QC value within limits for V 292.402 Recovery = 101.78%						
Zn 213.857†	53385.8	500.55 ug/L	8.252	500.55 ppb	8.252	1.65%
QC value within limits for Zn 213.857 Recovery = 100.11%						
SiO2†	80512.6	5479.7 ug/L	86.82	5479.7 ppb	86.82	1.58%
QC value within limits for SiO2 Recovery = 102.47%						

QC Failed. Continue with analysis.

Sequence No.: 34
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/11/2010 19:05:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5140.9	5140.9	102	%			19:06:56
1	Y RADIAL	5525.1	5525.1	101.8	%			19:06:56
1	Al 396.153Radial†	-14.0	-13.1	-10.088	ug/L	-10.088	ppb	19:06:56
1	Ca 317.933Radial†	20.2	-0.0	-0.0067	ug/L	-0.0067	ppb	19:07:16
1	Fe 238.204 Radial†	8.6	-0.5	-4.3200	ug/L	-4.3200	ppb	19:07:16
1	K 766.490 Radial†	2641.6	-2.8	-0.5760	ug/L	-0.5760	ppb	19:06:56
1	Mg 279.077 IEC†	1.4	-0.6	-19.419	ug/L	-19.419	ppb	19:07:16
1	Na 589.592 Radial†	-966.2	334.1	100.04	ug/L	100.04	ppb	19:06:56
1	Sr 421.552†	9.0	28.3	0.1828	ug/L	0.1828	ppb	19:06:56
1	Sc 361.383	860728.5	860728.5	100.98	%			19:08:13
1	Y 371.029	729476.3	729476.3	100.94	%			19:08:13
1	Ag 328.068†	308.9	-52.1	-0.2434	ug/L	-0.2434	ppb	19:08:13
1	As 188.979†	-36.8	-12.9	-5.5758	ug/L	-5.5758	ppb	19:08:33
1	B 249.677†	-450.6	185.6	4.1364	ug/L	4.1364	ppb	19:08:33
1	Ba 233.527†	-23.0	-11.4	-0.0898	ug/L	-0.0898	ppb	19:08:33
1	Be 313.107†	-4540.4	88.9	0.0342	ug/L	0.0342	ppb	19:08:13
1	Cd 226.502†	-191.0	14.9	0.1665	ug/L	0.1665	ppb	19:08:33
1	Co 228.616†	-62.5	12.8	0.2617	ug/L	0.2617	ppb	19:08:33
1	Cr 267.716†	64.2	-19.7	-0.2208	ug/L	-0.2208	ppb	19:08:33
1	Cu 324.752†	6528.5	53.1	0.1579	ug/L	0.1579	ppb	19:08:13
1	Mn 257.610†	420.9	-28.0	-0.0308	ug/L	-0.0308	ppb	19:08:33
1	Mo 202.031†	24.0	0.1	0.0071	ug/L	0.0071	ppb	19:08:33
1	Ni 231.604†	72.4	3.7	0.0919	ug/L	0.0919	ppb	19:08:33
1	P 214.914†	227.2	-4.8	-2.9794	ug/L	-2.9794	ppb	19:08:33
1	Pb 220.353†	-63.9	0.1	0.0136	ug/L	0.0136	ppb	19:08:33
1	S 181.975 Axial†	93.5	49.6	70.188	ug/L	70.188	ppb	19:08:33
1	Sb 206.836†	42.4	14.1	4.8329	ug/L	4.8329	ppb	19:08:33
1	Se 196.026†	-31.3	1.0	0.6403	ug/L	0.6403	ppb	19:08:33
1	Si 251.611†	536.6	-19.1	-0.6071	ug/L	-0.6071	ppb	19:08:33
1	Sn 189.927†	10.7	2.9	0.5179	ug/L	0.5179	ppb	19:08:33
1	Ti 334.940†	-1306.8	80.4	0.1306	ug/L	0.1306	ppb	19:08:13
1	Tl 190.801†	-33.6	-0.4	-0.1358	ug/L	-0.1358	ppb	19:08:33
1	U 409.014†	-1988.7	42.1	1.2440	ug/L	1.2440	ppb	19:08:13
1	V 292.402†	-1366.9	-44.0	-0.2974	ug/L	-0.2974	ppb	19:08:13
1	Zn 213.857†	610.2	-15.9	-0.1509	ug/L	-0.1509	ppb	19:08:33
1	SiO2†	573.4	-3.8	-0.2598	ug/L	-0.2598	ppb	19:09:29
2	Sc Radial	5104.9	5104.9	101	%			19:07:21
2	Y RADIAL	5499.2	5499.2	101.3	%			19:07:21
2	Al 396.153Radial†	-21.9	-20.9	-16.126	ug/L	-16.126	ppb	19:07:21
2	Ca 317.933Radial†	18.2	-1.8	-2.9041	ug/L	-2.9041	ppb	19:07:41
2	Fe 238.204 Radial†	11.7	2.6	22.690	ug/L	22.690	ppb	19:07:41
2	K 766.490 Radial†	2658.0	31.6	5.7561	ug/L	5.7561	ppb	19:07:21
2	Mg 279.077 IEC†	5.0	3.0	100.96	ug/L	100.96	ppb	19:07:41
2	Na 589.592 Radial†	-1056.1	238.8	71.492	ug/L	71.492	ppb	19:07:21
2	Sr 421.552†	-9.0	10.6	0.0684	ug/L	0.0684	ppb	19:07:21
2	Sc 361.383	855326.4	855326.4	100.34	%			19:08:38
2	Y 371.029	724039.3	724039.3	100.19	%			19:08:38
2	Ag 328.068†	243.8	-115.0	-0.5270	ug/L	-0.5270	ppb	19:08:38
2	As 188.979†	-20.9	2.8	1.2258	ug/L	1.2258	ppb	19:08:58
2	B 249.677†	-448.2	185.2	4.1253	ug/L	4.1253	ppb	19:08:58
2	Ba 233.527†	-23.1	-11.6	-0.0913	ug/L	-0.0913	ppb	19:08:58
2	Be 313.107†	-4542.2	58.7	0.0224	ug/L	0.0224	ppb	19:08:38
2	Cd 226.502†	-202.2	2.6	0.0269	ug/L	0.0269	ppb	19:08:58
2	Co 228.616†	-64.2	10.7	0.2186	ug/L	0.2186	ppb	19:08:58
2	Cr 267.716†	72.9	-10.6	-0.1206	ug/L	-0.1206	ppb	19:08:58
2	Cu 324.752†	6447.0	12.7	0.0375	ug/L	0.0375	ppb	19:08:38
2	Mn 257.610†	408.7	-37.5	-0.0432	ug/L	-0.0432	ppb	19:08:58
2	Mo 202.031†	19.6	-4.2	-0.2942	ug/L	-0.2942	ppb	19:08:58
2	Ni 231.604†	84.0	15.8	0.3931	ug/L	0.3931	ppb	19:08:58

2	P 214.914†	225.8	-4.9	-3.0264 ug/L	-3.0264 ppb	19:08:58
2	Pb 220.353†	-77.8	-14.2	-1.7419 ug/L	-1.7419 ppb	19:08:58
2	S 181.975 Axial†	91.8	48.5	68.627 ug/L	68.627 ppb	19:08:58
2	Sb 206.836†	40.3	12.3	4.1838 ug/L	4.1838 ppb	19:08:58
2	Se 196.026†	-27.7	4.4	2.8931 ug/L	2.8931 ppb	19:08:58
2	Si 251.611†	508.7	-43.5	-1.3814 ug/L	-1.3814 ppb	19:08:58
2	Sn 189.927†	3.2	-4.5	-0.7906 ug/L	-0.7906 ppb	19:08:58
2	Ti 334.940†	-1386.3	-7.0	-0.0213 ug/L	-0.0213 ppb	19:08:38
2	Tl 190.801†	-34.3	-1.3	-0.4094 ug/L	-0.4094 ppb	19:08:58
2	U 409.014†	-1909.2	109.0	3.2133 ug/L	3.2133 ppb	19:08:38
2	V 292.402†	-1402.5	-88.0	-0.6001 ug/L	-0.6001 ppb	19:08:38
2	Zn 213.857†	610.6	-11.7	-0.1157 ug/L	-0.1157 ppb	19:08:58
2	SiO2†	574.0	0.3	0.0304 ug/L	0.0304 ppb	19:09:34
3	Sc Radial	5111.0	5111.0	102 %		19:07:46
3	Y RADIAL	5546.4	5546.4	102.2 %		19:07:46
3	Al 396.153Radial†	-15.3	-14.5	-11.128 ug/L	-11.128 ppb	19:07:46
3	Ca 317.933Radial†	14.0	-6.0	-9.6274 ug/L	-9.6274 ppb	19:08:06
3	Fe 238.204 Radial†	8.1	-1.0	-8.2299 ug/L	-8.2299 ppb	19:08:06
3	K 766.490 Radial†	2696.4	66.3	12.117 ug/L	12.117 ppb	19:07:46
3	Mg 279.077 IEC†	3.9	1.9	64.399 ug/L	64.399 ppb	19:08:06
3	Na 589.592 Radial†	-983.0	312.0	93.413 ug/L	93.413 ppb	19:07:46
3	Sr 421.552†	31.8	50.9	0.3287 ug/L	0.3287 ppb	19:07:46
3	Sc 361.383	844303.3	844303.3	99.050 %		19:09:03
3	Y 371.029	716469.9	716469.9	99.142 %		19:09:03
3	Ag 328.068†	416.8	62.8	0.2860 ug/L	0.2860 ppb	19:09:03
3	As 188.979†	-20.6	2.9	1.2376 ug/L	1.2376 ppb	19:09:23
3	B 249.677†	-487.9	139.3	3.1061 ug/L	3.1061 ppb	19:09:23
3	Ba 233.527†	-11.6	-0.3	-0.0033 ug/L	-0.0033 ppb	19:09:23
3	Be 313.107†	-4518.4	23.6	0.0094 ug/L	0.0094 ppb	19:09:03
3	Cd 226.502†	-187.4	14.9	0.1663 ug/L	0.1663 ppb	19:09:23
3	Co 228.616†	-74.8	-0.8	-0.0182 ug/L	-0.0182 ppb	19:09:23
3	Cr 267.716†	50.2	-32.6	-0.3646 ug/L	-0.3646 ppb	19:09:23
3	Cu 324.752†	6342.6	-8.8	-0.0264 ug/L	-0.0264 ppb	19:09:03
3	Mn 257.610†	421.8	-19.0	-0.0246 ug/L	-0.0246 ppb	19:09:23
3	Mo 202.031†	17.2	-6.3	-0.4465 ug/L	-0.4465 ppb	19:09:23
3	Ni 231.604†	78.5	11.3	0.2817 ug/L	0.2817 ppb	19:09:23
3	P 214.914†	201.2	-26.7	-16.326 ug/L	-16.326 ppb	19:09:23
3	Pb 220.353†	-43.1	19.8	2.4268 ug/L	2.4268 ppb	19:09:23
3	S 181.975 Axial†	86.7	44.6	63.063 ug/L	63.063 ppb	19:09:23
3	Sb 206.836†	41.3	13.8	4.7140 ug/L	4.7140 ppb	19:09:23
3	Se 196.026†	-35.7	-4.0	-2.6278 ug/L	-2.6278 ppb	19:09:23
3	Si 251.611†	527.6	-17.8	-0.5611 ug/L	-0.5611 ppb	19:09:23
3	Sn 189.927†	6.7	-0.9	-0.1535 ug/L	-0.1535 ppb	19:09:23
3	Ti 334.940†	-1253.1	109.4	0.1703 ug/L	0.1703 ppb	19:09:03
3	Tl 190.801†	-35.7	-3.2	-0.9833 ug/L	-0.9833 ppb	19:09:23
3	U 409.014†	-2013.6	-21.3	-0.6257 ug/L	-0.6257 ppb	19:09:03
3	V 292.402†	-1352.1	-55.3	-0.3831 ug/L	-0.3831 ppb	19:09:03
3	Zn 213.857†	607.1	-7.3	-0.0701 ug/L	-0.0701 ppb	19:09:23
3	SiO2†	563.6	-2.6	-0.1675 ug/L	-0.1675 ppb	19:09:39

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	853452.7	100.12	%	0.982				0.98%
Sc Radial	5118.9	102	%	0.4				0.38%
Y 371.029	723328.5	100.09	%	0.904				0.90%
Y RADIAL	5523.6	101.7	%	0.44				0.43%
Ag 328.068†	-34.7	-0.1615	ug/L	0.41266	-0.1615	ppb	0.41266	255.58%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-16.1	-12.447	ug/L	3.2278	-12.447	ppb	3.2278	25.93%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.4	-1.0375	ug/L	3.93034	-1.0375	ppb	3.93034	378.84%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	170.0	3.7893	ug/L	0.59168	3.7893	ppb	0.59168	15.61%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-7.8	-0.0615	ug/L	0.05038	-0.0615	ppb	0.05038	81.95%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	57.1	0.0220	ug/L	0.01238	0.0220	ppb	0.01238	56.33%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.6	-4.1794	ug/L	4.93552	-4.1794	ppb	4.93552	118.09%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              10.8      0.1199 ug/L       0.08057      0.1199 ppb       0.08057  67.20%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               7.6      0.1540 ug/L       0.15071      0.1540 ppb       0.15071  97.85%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -20.9     -0.2353 ug/L       0.12266     -0.2353 ppb       0.12266  52.13%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              19.0      0.0563 ug/L       0.09362      0.0563 ppb       0.09362 166.19%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.4      3.3800 ug/L      16.83669      3.3800 ppb      16.83669 498.13%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        31.7      5.7658 ug/L       6.34665      5.7658 ppb       6.34665 110.07%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           1.5     48.647 ug/L       61.7173      48.647 ppb       61.7173 126.87%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -28.2     -0.0329 ug/L       0.00948     -0.0329 ppb       0.00948  28.85%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -3.5     -0.2445 ug/L       0.23086     -0.2445 ppb       0.23086  94.41%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      295.0      88.317 ug/L       14.9431      88.317 ppb       14.9431  16.92%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              10.3      0.2556 ug/L       0.15228      0.2556 ppb       0.15228  59.59%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -12.1     -7.4439 ug/L       7.69203     -7.4439 ppb       7.69203 103.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               1.9      0.2329 ug/L       2.09299      0.2329 ppb       2.09299 898.85%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         47.5      67.293 ug/L        3.7453      67.293 ppb        3.7453   5.57%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              13.4      4.5769 ug/L       0.34560      4.5769 ppb       0.34560   7.55%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.5      0.3019 ug/L       2.77596      0.3019 ppb       2.77596 919.57%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -26.8     -0.8499 ug/L       0.46092     -0.8499 ppb       0.46092  54.23%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.8     -0.1421 ug/L       0.65432     -0.1421 ppb       0.65432 460.51%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              29.9      0.1933 ug/L       0.13045      0.1933 ppb       0.13045  67.49%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              60.9      0.0932 ug/L       0.10112      0.0932 ppb       0.10112 108.48%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -1.7     -0.5095 ug/L       0.43252     -0.5095 ppb       0.43252  84.89%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               43.3      1.2772 ug/L       1.91972      1.2772 ppb       1.91972 150.31%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -62.4     -0.4269 ug/L       0.15602     -0.4269 ppb       0.15602  36.55%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -11.7     -0.1123 ug/L       0.04052     -0.1123 ppb       0.04052  36.09%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    -2.0     -0.1323 ug/L       0.14825     -0.1323 ppb       0.14825 112.04%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 44
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 20:14:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5237.6	5237.6	104	%			20:16:38
1	Y RADIAL	5568.0	5568.0	102.6	%			20:16:38
1	Al 396.153Radial†	6326.0	6082.2	4668.0	ug/L	4668.0	ppb	20:16:38
1	Ca 317.933Radial†	3176.9	3034.4	4855.3	ug/L	4855.3	ppb	20:16:58
1	Fe 238.204 Radial†	596.5	564.6	4901.0	ug/L	4901.0	ppb	20:16:58
1	K 766.490 Radial†	29542.8	25811.4	4715.5	ug/L	4715.5	ppb	20:16:38
1	Mg 279.077 IEC†	163.7	155.4	5193.6	ug/L	5193.6	ppb	20:16:58
1	Na 589.592 Radial†	32100.0	32140.5	9623.2	ug/L	9623.2	ppb	20:16:38
1	Sr 421.552†	76092.0	73172.2	472.58	ug/L	472.58	ppb	20:16:38
1	Sc 361.383	867661.4	867661.4	101.79	%			20:17:55
1	Y 371.029	722396.9	722396.9	99.963	%			20:17:55
1	Ag 328.068†	112559.6	110221.6	510.63	ug/L	510.63	ppb	20:18:01
1	As 188.979†	1153.6	1157.0	503.46	ug/L	503.46	ppb	20:18:21
1	B 249.677†	22332.3	22571.3	501.25	ug/L	501.25	ppb	20:18:01
1	Ba 233.527†	65622.0	64479.0	504.65	ug/L	504.65	ppb	20:18:01
1	Be 313.107†	1343717.7	1324665.2	505.88	ug/L	505.88	ppb	20:17:55
1	Cd 226.502†	46013.6	45408.3	503.79	ug/L	503.79	ppb	20:18:01
1	Co 228.616†	25080.3	24713.8	505.95	ug/L	505.95	ppb	20:18:01
1	Cr 267.716†	45949.9	45058.4	504.37	ug/L	504.37	ppb	20:18:01
1	Cu 324.752†	176616.6	167097.5	499.64	ug/L	499.64	ppb	20:18:01
1	Mn 257.610†	460294.6	451752.5	501.15	ug/L	501.15	ppb	20:17:55
1	Mo 202.031†	7267.3	7115.7	503.29	ug/L	503.29	ppb	20:18:21
1	Ni 231.604†	20697.9	20265.8	504.32	ug/L	504.32	ppb	20:18:01
1	P 214.914†	4345.6	4039.3	2362.8	ug/L	2362.8	ppb	20:18:21
1	Pb 220.353†	4069.5	4061.2	498.90	ug/L	498.90	ppb	20:18:21
1	S 181.975 Axial†	768.1	711.6	1006.2	ug/L	1006.2	ppb	20:18:21
1	Sb 206.836†	1505.7	1451.3	515.15	ug/L	515.15	ppb	20:18:21
1	Se 196.026†	758.4	777.1	518.17	ug/L	518.17	ppb	20:18:21
1	Si 251.611†	83045.4	81034.0	2574.6	ug/L	2574.6	ppb	20:18:01
1	Sn 189.927†	2903.5	2844.8	504.77	ug/L	504.77	ppb	20:18:21
1	Ti 334.940†	318042.2	313821.9	505.32	ug/L	505.32	ppb	20:17:55
1	Tl 190.801†	1622.6	1626.9	502.20	ug/L	502.20	ppb	20:18:21
1	U 409.014†	15598.2	17335.5	509.71	ug/L	509.71	ppb	20:18:01
1	V 292.402†	73736.4	73749.0	510.51	ug/L	510.51	ppb	20:18:01
1	Zn 213.857†	55050.9	53462.2	501.29	ug/L	501.29	ppb	20:18:01
1	SiO2†	80857.2	78863.2	5367.3	ug/L	5367.3	ppb	20:19:28
2	Sc Radial	5100.6	5100.6	101	%			20:17:03
2	Y RADIAL	5471.6	5471.6	100.8	%			20:17:03
2	Al 396.153Radial†	6444.4	6362.6	4884.3	ug/L	4884.3	ppb	20:17:03
2	Ca 317.933Radial†	3213.8	3152.9	5045.0	ug/L	5045.0	ppb	20:17:23
2	Fe 238.204 Radial†	607.2	590.6	5125.7	ug/L	5125.7	ppb	20:17:23
2	K 766.490 Radial†	29669.9	26700.1	4878.2	ug/L	4878.2	ppb	20:17:03
2	Mg 279.077 IEC†	159.9	156.0	5210.7	ug/L	5210.7	ppb	20:17:23
2	Na 589.592 Radial†	32097.4	32967.2	9870.8	ug/L	9870.8	ppb	20:17:03
2	Sr 421.552†	76711.0	75748.9	489.22	ug/L	489.22	ppb	20:17:03
2	Sc 361.383	870941.8	870941.8	102.18	%			20:18:27
2	Y 371.029	726536.0	726536.0	100.54	%			20:18:27
2	Ag 328.068†	112058.8	109314.9	506.51	ug/L	506.51	ppb	20:18:32
2	As 188.979†	1154.9	1153.9	502.18	ug/L	502.18	ppb	20:18:52
2	B 249.677†	22133.4	22294.0	495.07	ug/L	495.07	ppb	20:18:32
2	Ba 233.527†	65126.9	63751.7	498.97	ug/L	498.97	ppb	20:18:32
2	Be 313.107†	1343579.8	1319558.2	503.93	ug/L	503.93	ppb	20:18:27
2	Cd 226.502†	45566.2	44800.1	497.01	ug/L	497.01	ppb	20:18:32
2	Co 228.616†	24857.4	24402.8	499.58	ug/L	499.58	ppb	20:18:32
2	Cr 267.716†	45745.5	44688.2	500.23	ug/L	500.23	ppb	20:18:32
2	Cu 324.752†	175848.4	165692.1	495.45	ug/L	495.45	ppb	20:18:32
2	Mn 257.610†	459636.9	449405.7	498.57	ug/L	498.57	ppb	20:18:27
2	Mo 202.031†	7284.2	7105.4	502.58	ug/L	502.58	ppb	20:18:52
2	Ni 231.604†	20535.3	20030.1	498.45	ug/L	498.45	ppb	20:18:32

2	P 214.914†	4369.0	4046.1	2367.7 ug/L	2367.7 ppb	20:18:52
2	Pb 220.353†	4094.4	4070.6	500.08 ug/L	500.08 ppb	20:18:52
2	S 181.975 Axial†	764.3	705.0	996.83 ug/L	996.83 ppb	20:18:52
2	Sb 206.836†	1517.5	1457.2	517.15 ug/L	517.15 ppb	20:18:52
2	Se 196.026†	746.7	762.8	509.69 ug/L	509.69 ppb	20:18:52
2	Si 251.611†	82414.0	80108.8	2545.2 ug/L	2545.2 ppb	20:18:32
2	Sn 189.927†	2910.4	2840.8	504.09 ug/L	504.09 ppb	20:18:52
2	Ti 334.940†	318495.5	313088.7	504.17 ug/L	504.17 ppb	20:18:27
2	Tl 190.801†	1612.4	1610.9	497.33 ug/L	497.33 ppb	20:18:52
2	U 409.014†	15408.1	17091.7	502.50 ug/L	502.50 ppb	20:18:32
2	V 292.402†	73264.0	73013.8	505.43 ug/L	505.43 ppb	20:18:32
2	Zn 213.857†	54613.2	52830.2	495.33 ug/L	495.33 ppb	20:18:32
2	SiO2†	81830.8	79516.8	5411.9 ug/L	5411.9 ppb	20:19:34
3	Sc Radial	5163.6	5163.6	103 %		20:17:28
3	Y RADIAL	5511.9	5511.9	101.5 %		20:17:28
3	Al 396.153Radial†	6562.2	6399.8	4913.2 ug/L	4913.2 ppb	20:17:28
3	Ca 317.933Radial†	3156.0	3057.8	4892.7 ug/L	4892.7 ppb	20:17:48
3	Fe 238.204 Radial†	599.8	576.0	5000.0 ug/L	5000.0 ppb	20:17:48
3	K 766.490 Radial†	30113.7	26775.4	4892.1 ug/L	4892.1 ppb	20:17:28
3	Mg 279.077 IEC†	159.1	153.2	5119.7 ug/L	5119.7 ppb	20:17:48
3	Na 589.592 Radial†	32409.5	32884.7	9846.1 ug/L	9846.1 ppb	20:17:28
3	Sr 421.552†	77800.5	75887.1	490.11 ug/L	490.11 ppb	20:17:28
3	Sc 361.383	876143.8	876143.8	102.79 %		20:18:58
3	Y 371.029	730772.1	730772.1	101.12 %		20:18:58
3	Ag 328.068†	112227.5	108827.8	504.22 ug/L	504.22 ppb	20:19:03
3	As 188.979†	1153.1	1145.5	498.52 ug/L	498.52 ppb	20:19:23
3	B 249.677†	22316.8	22343.8	496.20 ug/L	496.20 ppb	20:19:03
3	Ba 233.527†	65218.5	63462.3	496.70 ug/L	496.70 ppb	20:19:03
3	Be 313.107†	1358883.1	1326639.2	506.64 ug/L	506.64 ppb	20:18:58
3	Cd 226.502†	45661.0	44627.5	495.11 ug/L	495.11 ppb	20:19:03
3	Co 228.616†	24868.4	24269.1	496.83 ug/L	496.83 ppb	20:19:03
3	Cr 267.716†	45734.4	44411.6	497.13 ug/L	497.13 ppb	20:19:03
3	Cu 324.752†	175653.1	164480.3	491.82 ug/L	491.82 ppb	20:19:03
3	Mn 257.610†	463730.4	450717.2	500.02 ug/L	500.02 ppb	20:18:58
3	Mo 202.031†	7277.1	7056.2	499.10 ug/L	499.10 ppb	20:19:23
3	Ni 231.604†	20556.1	19931.0	495.99 ug/L	495.99 ppb	20:19:03
3	P 214.914†	4334.9	3987.6	2332.8 ug/L	2332.8 ppb	20:19:23
3	Pb 220.353†	4067.2	4020.4	493.94 ug/L	493.94 ppb	20:19:23
3	S 181.975 Axial†	769.1	705.3	997.17 ug/L	997.17 ppb	20:19:23
3	Sb 206.836†	1520.9	1451.8	515.11 ug/L	515.11 ppb	20:19:23
3	Se 196.026†	758.7	770.1	513.99 ug/L	513.99 ppb	20:19:23
3	Si 251.611†	82320.0	79538.4	2527.0 ug/L	2527.0 ppb	20:19:03
3	Sn 189.927†	2894.4	2808.3	498.31 ug/L	498.31 ppb	20:19:23
3	Ti 334.940†	321187.4	313856.9	505.39 ug/L	505.39 ppb	20:18:58
3	Tl 190.801†	1626.9	1615.7	498.82 ug/L	498.82 ppb	20:19:23
3	U 409.014†	15782.8	17366.6	510.63 ug/L	510.63 ppb	20:19:03
3	V 292.402†	73404.6	72724.8	503.44 ug/L	503.44 ppb	20:19:03
3	Zn 213.857†	54674.9	52572.9	492.93 ug/L	492.93 ppb	20:19:03
3	SiO2†	81900.4	79109.0	5384.1 ug/L	5384.1 ppb	20:19:39

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	871582.3	102.25	%	0.502				0.49%
Sc Radial	5167.3	103	%	1.4				1.33%
Y 371.029	726568.3	100.54	%	0.579				0.58%
Y RADIAL	5517.2	101.6	%	0.89				0.88%
Ag 328.068†	109454.8	507.12	ug/L	3.250	507.12	ppb	3.250	0.64%
QC value within limits for Ag 328.068 Recovery = 101.42%								
Al 396.153Radial†	6281.5	4821.8	ug/L	134.00	4821.8	ppb	134.00	2.78%
QC value within limits for Al 396.153Radial Recovery = 96.44%								
As 188.979†	1152.1	501.39	ug/L	2.564	501.39	ppb	2.564	0.51%
QC value within limits for As 188.979 Recovery = 100.28%								
B 249.677†	22403.0	497.51	ug/L	3.295	497.51	ppb	3.295	0.66%
QC value within limits for B 249.677 Recovery = 99.50%								
Ba 233.527†	63897.7	500.11	ug/L	4.095	500.11	ppb	4.095	0.82%
QC value within limits for Ba 233.527 Recovery = 100.02%								
Be 313.107†	1323620.8	505.48	ug/L	1.394	505.48	ppb	1.394	0.28%
QC value within limits for Be 313.107 Recovery = 101.10%								
Ca 317.933Radial†	3081.7	4931.0	ug/L	100.47	4931.0	ppb	100.47	2.04%

QC value within limits for Ca 317.933Radial Recovery = 98.62%

Cd 226.502†	44945.3	498.63 ug/L	4.562	498.63 ppb	4.562	0.91%
QC value within limits for Cd 226.502 Recovery = 99.73%						
Co 228.616†	24461.9	500.79 ug/L	4.675	500.79 ppb	4.675	0.93%
QC value within limits for Co 228.616 Recovery = 100.16%						
Cr 267.716†	44719.4	500.58 ug/L	3.632	500.58 ppb	3.632	0.73%
QC value within limits for Cr 267.716 Recovery = 100.12%						
Cu 324.752†	165756.6	495.64 ug/L	3.914	495.64 ppb	3.914	0.79%
QC value within limits for Cu 324.752 Recovery = 99.13%						
Fe 238.204 Radial†	577.1	5008.9 ug/L	112.62	5008.9 ppb	112.62	2.25%
QC value within limits for Fe 238.204 Radial Recovery = 100.18%						
K 766.490 Radial†	26429.0	4828.6 ug/L	98.24	4828.6 ppb	98.24	2.03%
QC value within limits for K 766.490 Radial Recovery = 96.57%						
Mg 279.077 IEC†	154.9	5174.6 ug/L	48.39	5174.6 ppb	48.39	0.94%
QC value within limits for Mg 279.077 IEC Recovery = 103.49%						
Mn 257.610†	450625.1	499.91 ug/L	1.292	499.91 ppb	1.292	0.26%
QC value within limits for Mn 257.610 Recovery = 99.98%						
Mo 202.031†	7092.4	501.66 ug/L	2.247	501.66 ppb	2.247	0.45%
QC value within limits for Mo 202.031 Recovery = 100.33%						
Na 589.592 Radial†	32664.1	9780.0 ug/L	136.34	9780.0 ppb	136.34	1.39%
QC value within limits for Na 589.592 Radial Recovery = 97.80%						
Ni 231.604†	20075.6	499.58 ug/L	4.280	499.58 ppb	4.280	0.86%
QC value within limits for Ni 231.604 Recovery = 99.92%						
P 214.914†	4024.3	2354.4 ug/L	18.92	2354.4 ppb	18.92	0.80%
QC value within limits for P 214.914 Recovery = 94.18%						
Pb 220.353†	4050.7	497.64 ug/L	3.260	497.64 ppb	3.260	0.66%
QC value within limits for Pb 220.353 Recovery = 99.53%						
S 181.975 Axial†	707.3	1000.1 ug/L	5.29	1000.1 ppb	5.29	0.53%
QC value within limits for S 181.975 Axial Recovery = 100.01%						
Sb 206.836†	1453.4	515.81 ug/L	1.168	515.81 ppb	1.168	0.23%
QC value within limits for Sb 206.836 Recovery = 103.16%						
Se 196.026†	770.0	513.95 ug/L	4.241	513.95 ppb	4.241	0.83%
QC value within limits for Se 196.026 Recovery = 102.79%						
Si 251.611†	80227.1	2548.9 ug/L	24.01	2548.9 ppb	24.01	0.94%
QC value within limits for Si 251.611 Recovery = 101.96%						
Sn 189.927†	2831.3	502.39 ug/L	3.552	502.39 ppb	3.552	0.71%
QC value within limits for Sn 189.927 Recovery = 100.48%						
Sr 421.552†	74936.1	483.97 ug/L	9.876	483.97 ppb	9.876	2.04%
QC value within limits for Sr 421.552 Recovery = 96.79%						
Ti 334.940†	313589.2	504.96 ug/L	0.688	504.96 ppb	0.688	0.14%
QC value within limits for Ti 334.940 Recovery = 100.99%						
Tl 190.801†	1617.8	499.45 ug/L	2.496	499.45 ppb	2.496	0.50%
QC value within limits for Tl 190.801 Recovery = 99.89%						
U 409.014†	17264.6	507.61 ug/L	4.452	507.61 ppb	4.452	0.88%
QC value within limits for U 409.014 Recovery = 101.52%						
V 292.402†	73162.5	506.46 ug/L	3.643	506.46 ppb	3.643	0.72%
QC value within limits for V 292.402 Recovery = 101.29%						
Zn 213.857†	52955.1	496.52 ug/L	4.303	496.52 ppb	4.303	0.87%
QC value within limits for Zn 213.857 Recovery = 99.30%						
SiO2†	79163.0	5387.8 ug/L	22.53	5387.8 ppb	22.53	0.42%
QC value within limits for SiO2 Recovery = 100.75%						

All analyte(s) passed QC.

Sequence No.: 45
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/11/2010 20:21:48
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4981.7	4981.7	98.9	%			20:23:40
1	Y RADIAL	5295.3	5295.3	97.53	%			20:23:40
1	Al 396.153Radial†	-4.9	-4.3	-3.2854	ug/L	-3.2854	ppb	20:23:40
1	Ca 317.933Radial†	19.6	0.1	0.0805	ug/L	0.0805	ppb	20:24:00
1	Fe 238.204 Radial†	13.4	4.7	40.430	ug/L	40.430	ppb	20:24:00
1	K 766.490 Radial†	2785.7	225.5	41.360	ug/L	41.360	ppb	20:23:40
1	Mg 279.077 IEC†	2.1	0.2	7.2814	ug/L	7.2814	ppb	20:24:00
1	Na 589.592 Radial†	-1289.9	-23.4	-6.9958	ug/L	-6.9958	ppb	20:23:40
1	Sr 421.552†	10.0	29.6	0.1915	ug/L	0.1915	ppb	20:23:40
1	Sc 361.383	853011.8	853011.8	100.07	%			20:24:57
1	Y 371.029	723886.8	723886.8	100.17	%			20:24:57
1	Ag 328.068†	282.6	-75.6	-0.3395	ug/L	-0.3395	ppb	20:24:57
1	As 188.979†	-21.7	1.9	0.8546	ug/L	0.8546	ppb	20:25:17
1	B 249.677†	-380.9	251.2	5.5967	ug/L	5.5967	ppb	20:25:17
1	Ba 233.527†	-25.7	-14.2	-0.1109	ug/L	-0.1109	ppb	20:25:17
1	Be 313.107†	-4509.8	78.8	0.0307	ug/L	0.0307	ppb	20:24:57
1	Cd 226.502†	-186.6	17.6	0.1918	ug/L	0.1918	ppb	20:25:17
1	Co 228.616†	-80.1	-5.3	-0.1117	ug/L	-0.1117	ppb	20:25:17
1	Cr 267.716†	87.4	4.1	0.0446	ug/L	0.0446	ppb	20:25:17
1	Cu 324.752†	6367.1	-49.7	-0.1478	ug/L	-0.1478	ppb	20:24:57
1	Mn 257.610†	476.5	31.3	0.0389	ug/L	0.0389	ppb	20:25:17
1	Mo 202.031†	16.0	-7.7	-0.5414	ug/L	-0.5414	ppb	20:25:17
1	Ni 231.604†	80.1	12.1	0.3006	ug/L	0.3006	ppb	20:25:17
1	P 214.914†	214.8	-15.2	-9.3120	ug/L	-9.3120	ppb	20:25:17
1	Pb 220.353†	-51.2	12.2	1.4860	ug/L	1.4860	ppb	20:25:17
1	S 181.975 Axial†	52.8	9.7	13.798	ug/L	13.798	ppb	20:25:17
1	Sb 206.836†	34.7	6.7	2.2837	ug/L	2.2837	ppb	20:25:17
1	Se 196.026†	-34.8	-2.8	-1.6559	ug/L	-1.6559	ppb	20:25:17
1	Si 251.611†	727.1	176.1	5.6142	ug/L	5.6142	ppb	20:25:17
1	Sn 189.927†	2.6	-5.1	-0.9025	ug/L	-0.9025	ppb	20:25:17
1	Ti 334.940†	-1201.4	174.0	0.2786	ug/L	0.2786	ppb	20:24:57
1	Tl 190.801†	-34.5	-1.6	-0.4844	ug/L	-0.4844	ppb	20:25:17
1	U 409.014†	-1933.6	79.4	2.3382	ug/L	2.3382	ppb	20:24:57
1	V 292.402†	-1403.3	-92.6	-0.6421	ug/L	-0.6421	ppb	20:24:57
1	Zn 213.857†	620.0	-0.7	-0.0121	ug/L	-0.0121	ppb	20:25:17
1	SiO2†	689.5	117.4	8.0227	ug/L	8.0227	ppb	20:26:13
2	Sc Radial	5227.5	5227.5	104	%			20:24:05
2	Y RADIAL	5639.0	5639.0	103.9	%			20:24:05
2	Al 396.153Radial†	-20.4	-19.0	-14.640	ug/L	-14.640	ppb	20:24:05
2	Ca 317.933Radial†	15.4	-4.9	-7.8400	ug/L	-7.8400	ppb	20:24:25
2	Fe 238.204 Radial†	9.4	0.1	1.2286	ug/L	1.2286	ppb	20:24:25
2	K 766.490 Radial†	2616.4	-70.0	-12.827	ug/L	-12.827	ppb	20:24:05
2	Mg 279.077 IEC†	-1.9	-3.8	-126.32	ug/L	-126.32	ppb	20:24:25
2	Na 589.592 Radial†	-1307.7	20.8	6.2401	ug/L	6.2401	ppb	20:24:05
2	Sr 421.552†	48.0	65.7	0.4245	ug/L	0.4245	ppb	20:24:05
2	Sc 361.383	864825.1	864825.1	101.46	%			20:25:22
2	Y 371.029	733859.7	733859.7	101.55	%			20:25:22
2	Ag 328.068†	374.8	11.4	0.0484	ug/L	0.0484	ppb	20:25:22
2	As 188.979†	-20.5	3.4	1.4687	ug/L	1.4687	ppb	20:25:42
2	B 249.677†	-382.8	254.6	5.6754	ug/L	5.6754	ppb	20:25:42
2	Ba 233.527†	0.6	12.0	0.0928	ug/L	0.0928	ppb	20:25:42
2	Be 313.107†	-4504.8	145.3	0.0557	ug/L	0.0557	ppb	20:25:22
2	Cd 226.502†	-187.1	19.7	0.2197	ug/L	0.2197	ppb	20:25:42
2	Co 228.616†	-78.9	-3.1	-0.0634	ug/L	-0.0634	ppb	20:25:42
2	Cr 267.716†	86.4	1.9	0.0190	ug/L	0.0190	ppb	20:25:42
2	Cu 324.752†	6350.3	-153.1	-0.4600	ug/L	-0.4600	ppb	20:25:22
2	Mn 257.610†	473.6	21.9	0.0296	ug/L	0.0296	ppb	20:25:42
2	Mo 202.031†	23.1	-0.9	-0.0637	ug/L	-0.0637	ppb	20:25:42
2	Ni 231.604†	77.5	8.5	0.2108	ug/L	0.2108	ppb	20:25:42

2	P 214.914†	218.5	-14.5	-8.7715 ug/L	-8.7715 ppb	20:25:42
2	Pb 220.353†	-60.3	3.9	0.4776 ug/L	0.4776 ppb	20:25:42
2	S 181.975 Axial†	51.2	7.5	10.617 ug/L	10.617 ppb	20:25:42
2	Sb 206.836†	30.5	2.1	0.7130 ug/L	0.7130 ppb	20:25:42
2	Se 196.026†	-27.5	4.9	3.1416 ug/L	3.1416 ppb	20:25:42
2	Si 251.611†	704.9	144.3	4.5957 ug/L	4.5957 ppb	20:25:42
2	Sn 189.927†	2.7	-5.0	-0.8897 ug/L	-0.8897 ppb	20:25:42
2	Ti 334.940†	-1294.8	98.3	0.1661 ug/L	0.1661 ppb	20:25:22
2	Tl 190.801†	-36.8	-3.4	-1.0369 ug/L	-1.0369 ppb	20:25:42
2	U 409.014†	-1905.9	133.1	3.9266 ug/L	3.9266 ppb	20:25:22
2	V 292.402†	-1383.5	-53.9	-0.3641 ug/L	-0.3641 ppb	20:25:22
2	Zn 213.857†	614.4	-14.7	-0.1399 ug/L	-0.1399 ppb	20:25:42
2	SiO2†	700.1	118.4	8.0796 ug/L	8.0796 ppb	20:26:18
3	Sc Radial	5262.0	5262.0	105 %		20:24:30
3	Y RADIAL	5649.7	5649.7	104.1 %		20:24:30
3	Al 396.153Radial†	-18.3	-16.9	-12.989 ug/L	-12.989 ppb	20:24:30
3	Ca 317.933Radial†	15.0	-5.5	-8.7462 ug/L	-8.7462 ppb	20:24:50
3	Fe 238.204 Radial†	8.9	-0.4	-3.1283 ug/L	-3.1283 ppb	20:24:50
3	K 766.490 Radial†	2725.7	18.1	3.3111 ug/L	3.3111 ppb	20:24:30
3	Mg 279.077 IEC†	-2.0	-3.8	-128.50 ug/L	-128.50 ppb	20:24:50
3	Na 589.592 Radial†	-1272.7	62.6	18.739 ug/L	18.739 ppb	20:24:30
3	Sr 421.552†	9.2	28.3	0.1832 ug/L	0.1832 ppb	20:24:30
3	Sc 361.383	855729.8	855729.8	100.39 %		20:25:47
3	Y 371.029	728817.4	728817.4	100.85 %		20:25:47
3	Ag 328.068†	295.2	-63.9	-0.2973 ug/L	-0.2973 ppb	20:25:47
3	As 188.979†	-13.8	9.9	4.2994 ug/L	4.2994 ppb	20:26:07
3	B 249.677†	-390.3	243.0	5.4171 ug/L	5.4171 ppb	20:26:07
3	Ba 233.527†	0.2	11.6	0.0898 ug/L	0.0898 ppb	20:26:07
3	Be 313.107†	-4415.2	187.3	0.0716 ug/L	0.0716 ppb	20:25:47
3	Cd 226.502†	-191.0	13.8	0.1541 ug/L	0.1541 ppb	20:26:07
3	Co 228.616†	-51.2	23.6	0.4829 ug/L	0.4829 ppb	20:26:07
3	Cr 267.716†	90.7	7.1	0.0785 ug/L	0.0785 ppb	20:26:07
3	Cu 324.752†	6404.0	-33.1	-0.0999 ug/L	-0.0999 ppb	20:25:47
3	Mn 257.610†	472.1	25.4	0.0330 ug/L	0.0330 ppb	20:26:07
3	Mo 202.031†	20.0	-3.7	-0.2653 ug/L	-0.2653 ppb	20:26:07
3	Ni 231.604†	90.0	21.7	0.5401 ug/L	0.5401 ppb	20:26:07
3	P 214.914†	221.6	-9.2	-5.5903 ug/L	-5.5903 ppb	20:26:07
3	Pb 220.353†	-58.9	4.7	0.5729 ug/L	0.5729 ppb	20:26:07
3	S 181.975 Axial†	49.2	6.0	8.4500 ug/L	8.4500 ppb	20:26:07
3	Sb 206.836†	40.1	12.0	4.1074 ug/L	4.1074 ppb	20:26:07
3	Se 196.026†	-28.5	3.6	2.2897 ug/L	2.2897 ppb	20:26:07
3	Si 251.611†	670.7	117.6	3.7486 ug/L	3.7486 ppb	20:26:07
3	Sn 189.927†	4.3	-3.4	-0.6029 ug/L	-0.6029 ppb	20:26:07
3	Ti 334.940†	-1330.3	49.4	0.0885 ug/L	0.0885 ppb	20:25:47
3	Tl 190.801†	-43.8	-10.8	-3.3221 ug/L	-3.3221 ppb	20:26:07
3	U 409.014†	-1976.6	42.7	1.2606 ug/L	1.2606 ppb	20:25:47
3	V 292.402†	-1350.4	-35.5	-0.2457 ug/L	-0.2457 ppb	20:25:47
3	Zn 213.857†	618.1	-4.6	-0.0463 ug/L	-0.0463 ppb	20:26:07
3	SiO2†	723.9	149.4	10.203 ug/L	10.203 ppb	20:26:23

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	857855.5	100.64	%	0.726				0.72%
Sc Radial	5157.1	102	%	3.0				2.96%
Y 371.029	728854.7	100.86	%	0.690				0.68%
Y RADIAL	5528.0	101.8	%	3.71				3.65%
Ag 328.068†	-42.7	-0.1961	ug/L	0.21281	-0.1961	ppb	0.21281	108.50%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.4	-10.305	ug/L	6.1349	-10.305	ppb	6.1349	59.53%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	5.1	2.2076	ug/L	1.83740	2.2076	ppb	1.83740	83.23%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	249.6	5.5631	ug/L	0.13240	5.5631	ppb	0.13240	2.38%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	3.1	0.0239	ug/L	0.11674	0.0239	ppb	0.11674	489.17%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	137.1	0.0526	ug/L	0.02061	0.0526	ppb	0.02061	39.15%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.4	-5.5019	ug/L	4.85568	-5.5019	ppb	4.85568	88.25%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	17.0	0.1885 ug/L	0.03294	0.1885 ppb	0.03294	17.47%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	5.1	0.1026 ug/L	0.33023	0.1026 ppb	0.33023	321.83%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	4.4	0.0474 ug/L	0.02986	0.0474 ppb	0.02986	63.03%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-78.7	-0.2359 ug/L	0.19558	-0.2359 ppb	0.19558	82.91%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.5	12.843 ug/L	23.9896	12.843 ppb	23.9896	186.79%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	57.9	10.615 ug/L	27.8222	10.615 ppb	27.8222	262.11%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-2.5	-82.515 ug/L	77.7739	-82.515 ppb	77.7739	94.25%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	26.2	0.0338 ug/L	0.00474	0.0338 ppb	0.00474	14.01%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-4.1	-0.2901 ug/L	0.23983	-0.2901 ppb	0.23983	82.66%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	20.0	5.9945 ug/L	12.86916	5.9945 ppb	12.86916	214.68%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	14.1	0.3505 ug/L	0.17027	0.3505 ppb	0.17027	48.58%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-13.0	-7.8912 ug/L	2.01093	-7.8912 ppb	2.01093	25.48%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	6.9	0.8455 ug/L	0.55672	0.8455 ppb	0.55672	65.84%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	7.7	10.955 ug/L	2.6900	10.955 ppb	2.6900	24.55%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	7.0	2.3680 ug/L	1.69880	2.3680 ppb	1.69880	71.74%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.9	1.2585 ug/L	2.55959	1.2585 ppb	2.55959	203.39%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	146.0	4.6528 ug/L	0.93413	4.6528 ppb	0.93413	20.08%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-4.5	-0.7984 ug/L	0.16938	-0.7984 ppb	0.16938	21.22%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	41.2	0.2664 ug/L	0.13700	0.2664 ppb	0.13700	51.43%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	107.2	0.1777 ug/L	0.09559	0.1777 ppb	0.09559	53.78%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-5.3	-1.6145 ug/L	1.50442	-1.6145 ppb	1.50442	93.18%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	85.1	2.5085 ug/L	1.34114	2.5085 ppb	1.34114	53.46%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-60.7	-0.4173 ug/L	0.20345	-0.4173 ppb	0.20345	48.75%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-6.7	-0.0661 ug/L	0.06615	-0.0661 ppb	0.06615	100.13%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	128.4	8.7686 ug/L	1.24294	8.7686 ppb	1.24294	14.17%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 55
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 21:31:45
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5066.2	5066.2	101	%			21:33:37
1	Y RADIAL	5441.3	5441.3	100.2	%			21:33:37
1	Al 396.153Radial†	6383.7	6345.5	4871.0	ug/L	4871.0	ppb	21:33:37
1	Ca 317.933Radial†	3196.5	3157.3	5052.0	ug/L	5052.0	ppb	21:33:57
1	Fe 238.204 Radial†	606.4	593.8	5153.7	ug/L	5153.7	ppb	21:33:57
1	K 766.490 Radial†	29519.1	26749.0	4887.1	ug/L	4887.1	ppb	21:33:37
1	Mg 279.077 IEC†	159.7	156.8	5238.6	ug/L	5238.6	ppb	21:33:57
1	Na 589.592 Radial†	32360.9	33444.2	10014	ug/L	10014	ppb	21:33:37
1	Sr 421.552†	76677.6	76229.8	492.32	ug/L	492.32	ppb	21:33:37
1	Sc 361.383	875346.8	875346.8	102.69	%			21:34:55
1	Y 371.029	729099.0	729099.0	100.89	%			21:34:55
1	Ag 328.068†	112658.0	109346.5	506.66	ug/L	506.66	ppb	21:35:00
1	As 188.979†	1155.9	1149.2	500.10	ug/L	500.10	ppb	21:35:20
1	B 249.677†	22100.4	22152.9	491.91	ug/L	491.91	ppb	21:35:00
1	Ba 233.527†	65674.8	63964.4	500.63	ug/L	500.63	ppb	21:35:00
1	Be 313.107†	1358475.6	1327446.2	506.92	ug/L	506.92	ppb	21:34:55
1	Cd 226.502†	46031.0	45028.3	499.54	ug/L	499.54	ppb	21:35:00
1	Co 228.616†	25094.9	24511.7	501.83	ug/L	501.83	ppb	21:35:00
1	Cr 267.716†	46050.2	44759.7	501.03	ug/L	501.03	ppb	21:35:00
1	Cu 324.752†	176802.3	165754.9	495.64	ug/L	495.64	ppb	21:35:00
1	Mn 257.610†	464878.2	452245.7	501.72	ug/L	501.72	ppb	21:34:55
1	Mo 202.031†	7356.8	7140.2	505.04	ug/L	505.04	ppb	21:35:20
1	Ni 231.604†	20781.9	20169.1	501.91	ug/L	501.91	ppb	21:35:00
1	P 214.914†	4397.3	4052.2	2371.3	ug/L	2371.3	ppb	21:35:20
1	Pb 220.353†	4137.2	4092.1	502.72	ug/L	502.72	ppb	21:35:20
1	S 181.975 Axial†	783.5	720.0	1018.0	ug/L	1018.0	ppb	21:35:20
1	Sb 206.836†	1520.7	1452.9	515.75	ug/L	515.75	ppb	21:35:20
1	Se 196.026†	761.9	773.9	516.93	ug/L	516.93	ppb	21:35:20
1	Si 251.611†	82585.4	79869.8	2537.5	ug/L	2537.5	ppb	21:35:00
1	Sn 189.927†	2923.7	2839.3	503.84	ug/L	503.84	ppb	21:35:20
1	Ti 334.940†	314313.7	307447.9	495.07	ug/L	495.07	ppb	21:35:00
1	Tl 190.801†	1641.5	1631.3	503.54	ug/L	503.54	ppb	21:35:20
1	U 409.014†	15737.1	17336.2	509.70	ug/L	509.70	ppb	21:35:00
1	V 292.402†	73799.0	73174.0	506.58	ug/L	506.58	ppb	21:35:00
1	Zn 213.857†	54975.2	52913.7	496.10	ug/L	496.10	ppb	21:35:00
1	SiO2†	82106.4	79382.2	5402.6	ug/L	5402.6	ppb	21:36:27
2	Sc Radial	5209.2	5209.2	103	%			21:34:02
2	Y RADIAL	5586.2	5586.2	102.9	%			21:34:02
2	Al 396.153Radial†	6435.7	6221.5	4775.4	ug/L	4775.4	ppb	21:34:02
2	Ca 317.933Radial†	3194.7	3068.3	4909.6	ug/L	4909.6	ppb	21:34:22
2	Fe 238.204 Radial†	606.3	577.2	5009.9	ug/L	5009.9	ppb	21:34:22
2	K 766.490 Radial†	29846.0	26259.5	4797.5	ug/L	4797.5	ppb	21:34:02
2	Mg 279.077 IEC†	161.3	154.0	5145.9	ug/L	5145.9	ppb	21:34:22
2	Na 589.592 Radial†	32639.6	32830.4	9829.8	ug/L	9829.8	ppb	21:34:02
2	Sr 421.552†	77456.0	74889.6	483.67	ug/L	483.67	ppb	21:34:02
2	Sc 361.383	871437.5	871437.5	102.23	%			21:35:26
2	Y 371.029	726898.8	726898.8	100.59	%			21:35:26
2	Ag 328.068†	112636.2	109817.3	508.79	ug/L	508.79	ppb	21:35:31
2	As 188.979†	1165.3	1163.5	506.26	ug/L	506.26	ppb	21:35:51
2	B 249.677†	22161.1	22308.8	495.40	ug/L	495.40	ppb	21:35:31
2	Ba 233.527†	65521.6	64101.4	501.70	ug/L	501.70	ppb	21:35:31
2	Be 313.107†	1352406.9	1327444.5	506.92	ug/L	506.92	ppb	21:35:26
2	Cd 226.502†	45917.3	45118.2	500.55	ug/L	500.55	ppb	21:35:31
2	Co 228.616†	25042.2	24569.8	503.02	ug/L	503.02	ppb	21:35:31
2	Cr 267.716†	45965.9	44878.3	502.35	ug/L	502.35	ppb	21:35:31
2	Cu 324.752†	176633.0	166361.7	497.45	ug/L	497.45	ppb	21:35:31
2	Mn 257.610†	462563.7	452012.6	501.45	ug/L	501.45	ppb	21:35:26
2	Mo 202.031†	7318.1	7134.5	504.63	ug/L	504.63	ppb	21:35:51
2	Ni 231.604†	20700.4	20180.2	502.19	ug/L	502.19	ppb	21:35:31

2	P 214.914†	4371.4	4046.0	2367.3 ug/L	2367.3 ppb	21:35:51
2	Pb 220.353†	4092.2	4066.2	499.53 ug/L	499.53 ppb	21:35:51
2	S 181.975 Axial†	783.5	723.4	1022.8 ug/L	1022.8 ppb	21:35:51
2	Sb 206.836†	1502.5	1441.8	511.94 ug/L	511.94 ppb	21:35:51
2	Se 196.026†	760.7	776.1	517.90 ug/L	517.90 ppb	21:35:51
2	Si 251.611†	82471.6	80119.2	2545.5 ug/L	2545.5 ppb	21:35:31
2	Sn 189.927†	2912.3	2841.0	504.11 ug/L	504.11 ppb	21:35:51
2	Ti 334.940†	313626.5	308148.8	496.19 ug/L	496.19 ppb	21:35:31
2	Tl 190.801†	1627.1	1624.4	501.40 ug/L	501.40 ppb	21:35:51
2	U 409.014†	15756.8	17424.2	512.31 ug/L	512.31 ppb	21:35:31
2	V 292.402†	73580.2	73282.3	507.34 ug/L	507.34 ppb	21:35:31
2	Zn 213.857†	54868.9	53049.9	497.39 ug/L	497.39 ppb	21:35:31
2	SiO2†	81589.1	79234.8	5392.6 ug/L	5392.6 ppb	21:36:32
3	Sc Radial	5107.5	5107.5	101 %		21:34:27
3	Y RADIAL	5450.1	5450.1	100.4 %		21:34:27
3	Al 396.153Radial†	6461.6	6370.9	4890.3 ug/L	4890.3 ppb	21:34:27
3	Ca 317.933Radial†	3182.0	3117.3	4987.9 ug/L	4987.9 ppb	21:34:47
3	Fe 238.204 Radial†	609.7	592.2	5140.4 ug/L	5140.4 ppb	21:34:47
3	K 766.490 Radial†	29867.9	26855.4	4906.5 ug/L	4906.5 ppb	21:34:27
3	Mg 279.077 IEC†	158.8	154.6	5165.8 ug/L	5165.8 ppb	21:34:47
3	Na 589.592 Radial†	32598.1	33417.6	10006 ug/L	10006 ppb	21:34:27
3	Sr 421.552†	77241.7	76169.0	491.93 ug/L	491.93 ppb	21:34:27
3	Sc 361.383	862911.4	862911.4	101.23 %		21:35:57
3	Y 371.029	720012.6	720012.6	99.633 %		21:35:57
3	Ag 328.068†	111990.9	110268.5	510.92 ug/L	510.92 ppb	21:36:02
3	As 188.979†	1158.0	1167.5	508.03 ug/L	508.03 ppb	21:36:22
3	B 249.677†	22120.2	22482.5	499.25 ug/L	499.25 ppb	21:36:02
3	Ba 233.527†	65127.9	64345.8	503.62 ug/L	503.62 ppb	21:36:02
3	Be 313.107†	1339368.0	1327635.0	507.00 ug/L	507.00 ppb	21:35:57
3	Cd 226.502†	45605.2	45253.7	502.05 ug/L	502.05 ppb	21:36:02
3	Co 228.616†	24961.4	24732.0	506.35 ug/L	506.35 ppb	21:36:02
3	Cr 267.716†	45778.0	45137.0	505.25 ug/L	505.25 ppb	21:36:02
3	Cu 324.752†	175415.1	166865.7	498.96 ug/L	498.96 ppb	21:36:02
3	Mn 257.610†	458190.1	452162.8	501.63 ug/L	501.63 ppb	21:35:57
3	Mo 202.031†	7356.7	7243.3	512.33 ug/L	512.33 ppb	21:36:22
3	Ni 231.604†	20654.1	20334.5	506.03 ug/L	506.03 ppb	21:36:02
3	P 214.914†	4407.0	4123.4	2414.3 ug/L	2414.3 ppb	21:36:22
3	Pb 220.353†	4130.7	4143.7	509.06 ug/L	509.06 ppb	21:36:22
3	S 181.975 Axial†	778.8	726.3	1026.9 ug/L	1026.9 ppb	21:36:22
3	Sb 206.836†	1531.5	1484.9	527.05 ug/L	527.05 ppb	21:36:22
3	Se 196.026†	764.5	787.2	525.51 ug/L	525.51 ppb	21:36:22
3	Si 251.611†	81919.7	80371.2	2553.4 ug/L	2553.4 ppb	21:36:02
3	Sn 189.927†	2946.5	2903.0	515.10 ug/L	515.10 ppb	21:36:22
3	Ti 334.940†	311769.7	309345.7	498.13 ug/L	498.13 ppb	21:36:02
3	Tl 190.801†	1641.6	1654.5	510.64 ug/L	510.64 ppb	21:36:22
3	U 409.014†	15648.5	17469.4	513.63 ug/L	513.63 ppb	21:36:02
3	V 292.402†	73224.0	73641.5	509.89 ug/L	509.89 ppb	21:36:02
3	Zn 213.857†	54598.3	53312.9	499.84 ug/L	499.84 ppb	21:36:02
3	SiO2†	82326.4	80751.7	5495.9 ug/L	5495.9 ppb	21:36:37

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	869898.5	102.05	%	0.746				0.73%
Sc Radial	5127.6	102	%	1.5				1.44%
Y 371.029	725336.8	100.37	%	0.656				0.65%
Y RADIAL	5492.5	101.2	%	1.50				1.48%
Ag 328.068†	109810.7	508.79	ug/L	2.126	508.79	ppb	2.126	0.42%
QC value within limits for Ag 328.068 Recovery = 101.76%								
Al 396.153Radial†	6312.6	4845.5	ug/L	61.53	4845.5	ppb	61.53	1.27%
QC value within limits for Al 396.153Radial Recovery = 96.91%								
As 188.979†	1160.1	504.79	ug/L	4.162	504.79	ppb	4.162	0.82%
QC value within limits for As 188.979 Recovery = 100.96%								
B 249.677†	22314.7	495.52	ug/L	3.670	495.52	ppb	3.670	0.74%
QC value within limits for B 249.677 Recovery = 99.10%								
Ba 233.527†	64137.2	501.98	ug/L	1.512	501.98	ppb	1.512	0.30%
QC value within limits for Ba 233.527 Recovery = 100.40%								
Be 313.107†	1327508.5	506.95	ug/L	0.045	506.95	ppb	0.045	0.01%
QC value within limits for Be 313.107 Recovery = 101.39%								
Ca 317.933Radial†	3114.3	4983.1	ug/L	71.31	4983.1	ppb	71.31	1.43%

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   QC value within limits for Ca 317.933Radial  Recovery = 99.66%
Cd 226.502†          45133.4      500.71 ug/L         1.260      500.71 ppb          1.260   0.25%
   QC value within limits for Cd 226.502  Recovery = 100.14%
Co 228.616†          24604.5      503.73 ug/L         2.343      503.73 ppb          2.343   0.47%
   QC value within limits for Co 228.616  Recovery = 100.75%
Cr 267.716†          44925.0      502.88 ug/L         2.159      502.88 ppb          2.159   0.43%
   QC value within limits for Cr 267.716  Recovery = 100.58%
Cu 324.752†         166327.4      497.35 ug/L         1.661      497.35 ppb          1.661   0.33%
   QC value within limits for Cu 324.752  Recovery = 99.47%
Fe 238.204 Radial†     587.7      5101.3 ug/L        79.42      5101.3 ppb         79.42   1.56%
   QC value within limits for Fe 238.204 Radial  Recovery = 102.03%
K 766.490 Radial†    26621.3      4863.7 ug/L        58.18      4863.7 ppb         58.18   1.20%
   QC value within limits for K 766.490 Radial  Recovery = 97.27%
Mg 279.077 IEC†        155.1      5183.4 ug/L        48.79      5183.4 ppb         48.79   0.94%
   QC value within limits for Mg 279.077 IEC  Recovery = 103.67%
Mn 257.610†         452140.4      501.60 ug/L         0.138      501.60 ppb          0.138   0.03%
   QC value within limits for Mn 257.610  Recovery = 100.32%
Mo 202.031†          7172.7       507.34 ug/L         4.332      507.34 ppb          4.332   0.85%
   QC value within limits for Mo 202.031  Recovery = 101.47%
Na 589.592 Radial†   33230.7      9949.7 ug/L       103.88      9949.7 ppb        103.88   1.04%
   QC value within limits for Na 589.592 Radial  Recovery = 99.50%
Ni 231.604†          20227.9      503.37 ug/L         2.300      503.37 ppb          2.300   0.46%
   QC value within limits for Ni 231.604  Recovery = 100.67%
P 214.914†            4073.9      2384.3 ug/L        26.06      2384.3 ppb         26.06   1.09%
   QC value within limits for P 214.914  Recovery = 95.37%
Pb 220.353†           4100.7       503.77 ug/L         4.850      503.77 ppb          4.850   0.96%
   QC value within limits for Pb 220.353  Recovery = 100.75%
S 181.975 Axial†       723.2      1022.6 ug/L         4.48      1022.6 ppb          4.48   0.44%
   QC value within limits for S 181.975 Axial  Recovery = 102.26%
Sb 206.836†           1459.9       518.24 ug/L         7.859      518.24 ppb          7.859   1.52%
   QC value within limits for Sb 206.836  Recovery = 103.65%
Se 196.026†            779.1       520.11 ug/L         4.699      520.11 ppb          4.699   0.90%
   QC value within limits for Se 196.026  Recovery = 104.02%
Si 251.611†          80120.1      2545.5 ug/L         7.94      2545.5 ppb          7.94   0.31%
   QC value within limits for Si 251.611  Recovery = 101.82%
Sn 189.927†           2861.1       507.68 ug/L         6.424      507.68 ppb          6.424   1.27%
   QC value within limits for Sn 189.927  Recovery = 101.54%
Sr 421.552†          75762.8      489.31 ug/L         4.888      489.31 ppb          4.888   1.00%
   QC value within limits for Sr 421.552  Recovery = 97.86%
Ti 334.940†         308314.1      496.46 ug/L         1.545      496.46 ppb          1.545   0.31%
   QC value within limits for Ti 334.940  Recovery = 99.29%
Tl 190.801†           1636.7       505.19 ug/L         4.835      505.19 ppb          4.835   0.96%
   QC value within limits for Tl 190.801  Recovery = 101.04%
U 409.014†           17409.9      511.88 ug/L         1.997      511.88 ppb          1.997   0.39%
   QC value within limits for U 409.014  Recovery = 102.38%
V 292.402†           73366.0      507.94 ug/L         1.731      507.94 ppb          1.731   0.34%
   QC value within limits for V 292.402  Recovery = 101.59%
Zn 213.857†          53092.1      497.78 ug/L         1.902      497.78 ppb          1.902   0.38%
   QC value within limits for Zn 213.857  Recovery = 99.56%
SiO2†                79789.6      5430.4 ug/L        56.96      5430.4 ppb         56.96   1.05%
   QC value within limits for SiO2  Recovery = 101.55%
All analyte(s) passed QC.
```

Sequence No.: 56
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/11/2010 21:38:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5036.0	5036.0	100	%			21:40:39
1	Y RADIAL	5431.9	5431.9	100.0	%			21:40:39
1	Al 396.153Radial†	-25.1	-24.4	-18.838	ug/L	-18.838	ppb	21:40:39
1	Ca 317.933Radial†	14.8	-5.0	-7.9749	ug/L	-7.9749	ppb	21:40:59
1	Fe 238.204 Radial†	10.4	1.5	13.342	ug/L	13.342	ppb	21:40:59
1	K 766.490 Radial†	2643.8	53.3	9.7766	ug/L	9.7766	ppb	21:40:39
1	Mg 279.077 IEC†	0.2	-1.7	-55.846	ug/L	-55.846	ppb	21:40:59
1	Na 589.592 Radial†	-1324.6	-44.0	-13.176	ug/L	-13.176	ppb	21:40:39
1	Sr 421.552†	9.8	29.3	0.1892	ug/L	0.1892	ppb	21:40:39
1	Sc 361.383	858553.8	858553.8	100.72	%			21:41:56
1	Y 371.029	729508.5	729508.5	100.95	%			21:41:56
1	Ag 328.068†	269.3	-90.6	-0.4159	ug/L	-0.4159	ppb	21:41:56
1	As 188.979†	-17.3	6.4	2.7976	ug/L	2.7976	ppb	21:42:16
1	B 249.677†	-478.0	157.3	3.5058	ug/L	3.5058	ppb	21:42:16
1	Ba 233.527†	-11.0	0.4	0.0038	ug/L	0.0038	ppb	21:42:16
1	Be 313.107†	-4505.6	112.1	0.0431	ug/L	0.0431	ppb	21:41:56
1	Cd 226.502†	-182.1	23.3	0.2576	ug/L	0.2576	ppb	21:42:16
1	Co 228.616†	-77.9	-2.6	-0.0542	ug/L	-0.0542	ppb	21:42:16
1	Cr 267.716†	78.4	-5.4	-0.0617	ug/L	-0.0617	ppb	21:42:16
1	Cu 324.752†	6455.0	-3.5	-0.0115	ug/L	-0.0115	ppb	21:41:56
1	Mn 257.610†	416.7	-31.2	-0.0308	ug/L	-0.0308	ppb	21:42:16
1	Mo 202.031†	23.6	-0.3	-0.0213	ug/L	-0.0213	ppb	21:42:16
1	Ni 231.604†	76.2	7.7	0.1912	ug/L	0.1912	ppb	21:42:16
1	P 214.914†	219.4	-12.0	-7.3778	ug/L	-7.3778	ppb	21:42:16
1	Pb 220.353†	-52.5	11.2	1.3690	ug/L	1.3690	ppb	21:42:16
1	S 181.975 Axial†	46.6	3.3	4.6507	ug/L	4.6507	ppb	21:42:16
1	Sb 206.836†	35.8	7.6	2.6108	ug/L	2.6108	ppb	21:42:16
1	Se 196.026†	-31.9	0.3	0.2340	ug/L	0.2340	ppb	21:42:16
1	Si 251.611†	551.4	-3.1	-0.0972	ug/L	-0.0972	ppb	21:42:16
1	Sn 189.927†	5.8	-1.9	-0.3375	ug/L	-0.3375	ppb	21:42:16
1	Ti 334.940†	-1272.6	111.0	0.1811	ug/L	0.1811	ppb	21:41:56
1	Tl 190.801†	-32.4	0.7	0.2110	ug/L	0.2110	ppb	21:42:16
1	U 409.014†	-1913.0	112.3	3.3118	ug/L	3.3118	ppb	21:41:56
1	V 292.402†	-1329.0	-9.8	-0.0639	ug/L	-0.0639	ppb	21:41:56
1	Zn 213.857†	601.6	-23.0	-0.2196	ug/L	-0.2196	ppb	21:42:16
1	SiO2†	583.4	7.5	0.5136	ug/L	0.5136	ppb	21:43:12
2	Sc Radial	5141.4	5141.4	102	%			21:41:04
2	Y RADIAL	5519.8	5519.8	101.7	%			21:41:04
2	Al 396.153Radial†	-16.9	-15.9	-12.212	ug/L	-12.212	ppb	21:41:04
2	Ca 317.933Radial†	15.3	-4.8	-7.7466	ug/L	-7.7466	ppb	21:41:24
2	Fe 238.204 Radial†	9.1	-0.0	-0.0300	ug/L	-0.0300	ppb	21:41:24
2	K 766.490 Radial†	2551.3	-91.5	-16.772	ug/L	-16.772	ppb	21:41:04
2	Mg 279.077 IEC†	0.9	-1.0	-33.471	ug/L	-33.471	ppb	21:41:24
2	Na 589.592 Radial†	-1307.5	-0.1	-0.0182	ug/L	-0.0182	ppb	21:41:04
2	Sr 421.552†	13.1	32.4	0.2092	ug/L	0.2092	ppb	21:41:04
2	Sc 361.383	896670.4	896670.4	105.19	%			21:42:21
2	Y 371.029	762390.0	762390.0	105.50	%			21:42:21
2	Ag 328.068†	330.5	-43.8	-0.2068	ug/L	-0.2068	ppb	21:42:21
2	As 188.979†	-16.9	7.6	3.2850	ug/L	3.2850	ppb	21:42:41
2	B 249.677†	-488.9	167.1	3.7232	ug/L	3.7232	ppb	21:42:41
2	Ba 233.527†	-10.9	1.1	0.0081	ug/L	0.0081	ppb	21:42:41
2	Be 313.107†	-4505.2	302.6	0.1157	ug/L	0.1157	ppb	21:42:21
2	Cd 226.502†	-207.8	6.6	0.0743	ug/L	0.0743	ppb	21:42:41
2	Co 228.616†	-60.9	16.8	0.3409	ug/L	0.3409	ppb	21:42:41
2	Cr 267.716†	94.2	6.3	0.0682	ug/L	0.0682	ppb	21:42:41
2	Cu 324.752†	6372.1	-354.7	-1.0640	ug/L	-1.0640	ppb	21:42:21
2	Mn 257.610†	411.7	-53.5	-0.0580	ug/L	-0.0580	ppb	21:42:41
2	Mo 202.031†	10.6	-13.7	-0.9656	ug/L	-0.9656	ppb	21:42:41
2	Ni 231.604†	74.7	3.0	0.0754	ug/L	0.0754	ppb	21:42:41

2	P 214.914†	209.1	-31.1	-18.822 ug/L	-18.822 ppb	21:42:41
2	Pb 220.353†	-59.8	6.5	0.7931 ug/L	0.7931 ppb	21:42:41
2	S 181.975 Axial†	48.2	2.8	3.9710 ug/L	3.9710 ppb	21:42:41
2	Sb 206.836†	38.0	8.2	2.7546 ug/L	2.7546 ppb	21:42:41
2	Se 196.026†	-29.1	4.4	2.8147 ug/L	2.8147 ppb	21:42:41
2	Si 251.611†	579.5	0.5	0.0265 ug/L	0.0265 ppb	21:42:41
2	Sn 189.927†	-1.9	-9.4	-1.6725 ug/L	-1.6725 ppb	21:42:41
2	Ti 334.940†	-1333.2	107.1	0.1718 ug/L	0.1718 ppb	21:42:21
2	Tl 190.801†	-27.4	6.8	2.1005 ug/L	2.1005 ppb	21:42:41
2	U 409.014†	-1904.9	200.8	5.9222 ug/L	5.9222 ppb	21:42:21
2	V 292.402†	-1385.1	-7.0	-0.0518 ug/L	-0.0518 ppb	21:42:21
2	Zn 213.857†	615.9	-34.7	-0.3274 ug/L	-0.3274 ppb	21:42:41
2	SiO2†	587.0	-13.7	-0.9059 ug/L	-0.9059 ppb	21:43:17
3	Sc Radial	5157.0	5157.0	102 %		21:41:29
3	Y RADIAL	5520.8	5520.8	101.7 %		21:41:29
3	Al 396.153Radial†	-10.6	-9.7	-7.5096 ug/L	-7.5096 ppb	21:41:29
3	Ca 317.933Radial†	18.5	-1.7	-2.7649 ug/L	-2.7649 ppb	21:41:49
3	Fe 238.204 Radial†	11.2	2.1	17.749 ug/L	17.749 ppb	21:41:49
3	K 766.490 Radial†	2676.0	22.7	4.1773 ug/L	4.1773 ppb	21:41:29
3	Mg 279.077 IEC†	5.8	3.7	123.88 ug/L	123.88 ppb	21:41:49
3	Na 589.592 Radial†	-1401.1	-87.6	-26.223 ug/L	-26.223 ppb	21:41:29
3	Sr 421.552†	-16.2	3.7	0.0241 ug/L	0.0241 ppb	21:41:29
3	Sc 361.383	850118.4	850118.4	99.733 %		21:42:46
3	Y 371.029	721245.4	721245.4	99.803 %		21:42:46
3	Ag 328.068†	281.8	-75.4	-0.3458 ug/L	-0.3458 ppb	21:42:46
3	As 188.979†	-16.6	7.0	3.0346 ug/L	3.0346 ppb	21:43:06
3	B 249.677†	-490.9	139.7	3.1121 ug/L	3.1121 ppb	21:43:06
3	Ba 233.527†	4.0	15.4	0.1193 ug/L	0.1193 ppb	21:43:06
3	Be 313.107†	-4454.2	119.2	0.0456 ug/L	0.0456 ppb	21:42:46
3	Cd 226.502†	-185.5	18.1	0.1995 ug/L	0.1995 ppb	21:43:06
3	Co 228.616†	-76.9	-2.5	-0.0501 ug/L	-0.0501 ppb	21:43:06
3	Cr 267.716†	82.0	-1.0	-0.0132 ug/L	-0.0132 ppb	21:43:06
3	Cu 324.752†	6398.6	3.5	0.0104 ug/L	0.0104 ppb	21:42:46
3	Mn 257.610†	440.0	-3.7	-0.0071 ug/L	-0.0071 ppb	21:43:06
3	Mo 202.031†	28.8	5.1	0.3645 ug/L	0.3645 ppb	21:43:06
3	Ni 231.604†	77.2	9.4	0.2344 ug/L	0.2344 ppb	21:43:06
3	P 214.914†	215.4	-13.8	-8.4896 ug/L	-8.4896 ppb	21:43:06
3	Pb 220.353†	-69.1	-5.9	-0.7282 ug/L	-0.7282 ppb	21:43:06
3	S 181.975 Axial†	48.0	5.2	7.3212 ug/L	7.3212 ppb	21:43:06
3	Sb 206.836†	44.2	16.4	5.6220 ug/L	5.6220 ppb	21:43:06
3	Se 196.026†	-40.8	-8.9	-5.6819 ug/L	-5.6819 ppb	21:43:06
3	Si 251.611†	570.1	21.2	0.6694 ug/L	0.6694 ppb	21:43:06
3	Sn 189.927†	4.5	-3.1	-0.5560 ug/L	-0.5560 ppb	21:43:06
3	Ti 334.940†	-1325.8	45.2	0.0616 ug/L	0.0616 ppb	21:42:46
3	Tl 190.801†	-37.8	-5.0	-1.5435 ug/L	-1.5435 ppb	21:43:06
3	U 409.014†	-1942.5	63.9	1.8840 ug/L	1.8840 ppb	21:42:46
3	V 292.402†	-1407.9	-102.0	-0.6875 ug/L	-0.6875 ppb	21:42:46
3	Zn 213.857†	625.0	6.4	0.0577 ug/L	0.0577 ppb	21:43:06
3	SiO2†	555.9	-14.3	-0.9848 ug/L	-0.9848 ppb	21:43:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	868447.5	101.88	%	2.910				2.86%
Sc Radial	5111.5	102	%	1.3				1.29%
Y 371.029	737714.6	102.08	%	3.012				2.95%
Y RADIAL	5490.8	101.1	%	0.94				0.93%
Ag 328.068†	-70.0	-0.3228	ug/L	0.10644	-0.3228	ppb	0.10644	32.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-16.7	-12.853	ug/L	5.6914	-12.853	ppb	5.6914	44.28%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.0	3.0391	ug/L	0.24372	3.0391	ppb	0.24372	8.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	154.7	3.4470	ug/L	0.30976	3.4470	ppb	0.30976	8.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.6	0.0438	ug/L	0.06550	0.0438	ppb	0.06550	149.68%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	178.0	0.0681	ug/L	0.04121	0.0681	ppb	0.04121	60.49%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.9	-6.1622	ug/L	2.94432	-6.1622	ppb	2.94432	47.78%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	16.0	0.1771 ug/L	0.09368	0.1771 ppb	0.09368	52.89%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	3.9	0.0789 ug/L	0.22693	0.0789 ppb	0.22693	287.67%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-0.0	-0.0022 ug/L	0.06563	-0.0022 ppb	0.06563	>999.9%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-118.2	-0.3550 ug/L	0.61409	-0.3550 ppb	0.61409	172.97%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.2	10.354 ug/L	9.2586	10.354 ppb	9.2586	89.42%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-5.2	-0.9394 ug/L	13.99436	-0.9394 ppb	13.99436	>999.9%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.3	11.521 ug/L	97.9465	11.521 ppb	97.9465	850.15%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-29.4	-0.0320 ug/L	0.02543	-0.0320 ppb	0.02543	79.57%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-2.9	-0.2075 ug/L	0.68432	-0.2075 ppb	0.68432	329.86%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-43.9	-13.139 ug/L	13.1026	-13.139 ppb	13.1026	99.72%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	6.7	0.1670 ug/L	0.08223	0.1670 ppb	0.08223	49.24%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-19.0	-11.563 ug/L	6.3108	-11.563 ppb	6.3108	54.58%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	3.9	0.4780 ug/L	1.08353	0.4780 ppb	1.08353	226.69%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	3.8	5.3143 ug/L	1.77095	5.3143 ppb	1.77095	33.32%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	10.7	3.6625 ug/L	1.69854	3.6625 ppb	1.69854	46.38%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-1.4	-0.8777 ug/L	4.35607	-0.8777 ppb	4.35607	496.28%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	6.2	0.1995 ug/L	0.41157	0.1995 ppb	0.41157	206.25%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-4.8	-0.8553 ug/L	0.71607	-0.8553 ppb	0.71607	83.72%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	21.8	0.1408 ug/L	0.10158	0.1408 ppb	0.10158	72.14%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	87.8	0.1382 ug/L	0.06650	0.1382 ppb	0.06650	48.13%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	0.8	0.2560 ug/L	1.82240	0.2560 ppb	1.82240	711.87%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	125.7	3.7060 ug/L	2.04774	3.7060 ppb	2.04774	55.25%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	-39.6	-0.2677 ug/L	0.36359	-0.2677 ppb	0.36359	135.80%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-17.1	-0.1631 ug/L	0.19868	-0.1631 ppb	0.19868	121.84%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-6.8	-0.4590 ug/L	0.84325	-0.4590 ppb	0.84325	183.71%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 66
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 22:48:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5079.6	5079.6	101	%			22:50:15
1	Y RADIAL	5389.7	5389.7	99.27	%			22:50:15
1	Al 396.153Radial†	6424.9	6369.6	4889.6	ug/L	4889.6	ppb	22:50:15
1	Ca 317.933Radial†	3212.7	3165.0	5064.3	ug/L	5064.3	ppb	22:50:35
1	Fe 238.204 Radial†	616.0	601.8	5222.8	ug/L	5222.8	ppb	22:50:35
1	K 766.490 Radial†	29984.7	27133.3	4957.4	ug/L	4957.4	ppb	22:50:15
1	Mg 279.077 IEC†	159.7	156.4	5224.5	ug/L	5224.5	ppb	22:50:35
1	Na 589.592 Radial†	32827.0	33821.3	10127	ug/L	10127	ppb	22:50:15
1	Sr 421.552†	77561.5	76905.0	496.69	ug/L	496.69	ppb	22:50:15
1	Sc 361.383	869829.9	869829.9	102.05	%			22:51:33
1	Y 371.029	724813.4	724813.4	100.30	%			22:51:33
1	Ag 328.068†	112256.4	109648.7	508.08	ug/L	508.08	ppb	22:51:38
1	As 188.979†	1168.9	1169.1	508.75	ug/L	508.75	ppb	22:51:58
1	B 249.677†	21933.1	22125.4	491.29	ug/L	491.29	ppb	22:51:38
1	Ba 233.527†	65369.0	64070.4	501.47	ug/L	501.47	ppb	22:51:38
1	Be 313.107†	1354071.0	1331520.0	508.47	ug/L	508.47	ppb	22:51:33
1	Cd 226.502†	45934.7	45218.2	501.64	ug/L	501.64	ppb	22:51:38
1	Co 228.616†	25026.0	24599.2	503.62	ug/L	503.62	ppb	22:51:38
1	Cr 267.716†	45970.3	44965.7	503.33	ug/L	503.33	ppb	22:51:38
1	Cu 324.752†	175429.1	165501.2	494.88	ug/L	494.88	ppb	22:51:38
1	Mn 257.610†	463526.8	453792.6	503.45	ug/L	503.45	ppb	22:51:33
1	Mo 202.031†	7299.5	7129.5	504.29	ug/L	504.29	ppb	22:51:58
1	Ni 231.604†	20709.0	20226.1	503.33	ug/L	503.33	ppb	22:51:38
1	P 214.914†	4370.4	4053.0	2372.0	ug/L	2372.0	ppb	22:51:58
1	Pb 220.353†	4106.8	4087.9	502.19	ug/L	502.19	ppb	22:51:58
1	S 181.975 Axial†	768.6	710.2	1004.1	ug/L	1004.1	ppb	22:51:58
1	Sb 206.836†	1518.9	1460.5	518.37	ug/L	518.37	ppb	22:51:58
1	Se 196.026†	760.2	777.0	519.14	ug/L	519.14	ppb	22:51:58
1	Si 251.611†	82253.8	80054.9	2543.4	ug/L	2543.4	ppb	22:51:38
1	Sn 189.927†	2909.9	2843.9	504.65	ug/L	504.65	ppb	22:51:58
1	Ti 334.940†	312356.6	307471.3	495.11	ug/L	495.11	ppb	22:51:38
1	Tl 190.801†	1628.5	1628.7	502.72	ug/L	502.72	ppb	22:51:58
1	U 409.014†	15741.1	17437.2	512.67	ug/L	512.67	ppb	22:51:38
1	V 292.402†	73659.6	73493.1	508.74	ug/L	508.74	ppb	22:51:38
1	Zn 213.857†	54822.5	53103.5	497.88	ug/L	497.88	ppb	22:51:38
1	SiO2†	81679.8	79471.2	5408.7	ug/L	5408.7	ppb	22:53:05
2	Sc Radial	5126.2	5126.2	102	%			22:50:40
2	Y RADIAL	5453.9	5453.9	100.5	%			22:50:40
2	Al 396.153Radial†	6467.9	6353.8	4877.1	ug/L	4877.1	ppb	22:50:40
2	Ca 317.933Radial†	3210.7	3134.0	5014.6	ug/L	5014.6	ppb	22:51:00
2	Fe 238.204 Radial†	615.3	595.5	5168.6	ug/L	5168.6	ppb	22:51:00
2	K 766.490 Radial†	29977.3	26855.5	4906.5	ug/L	4906.5	ppb	22:50:40
2	Mg 279.077 IEC†	161.7	157.0	5244.3	ug/L	5244.3	ppb	22:51:00
2	Na 589.592 Radial†	33137.8	33830.6	10129	ug/L	10129	ppb	22:50:40
2	Sr 421.552†	77856.0	76494.8	494.04	ug/L	494.04	ppb	22:50:40
2	Sc 361.383	864920.1	864920.1	101.47	%			22:52:04
2	Y 371.029	721286.8	721286.8	99.809	%			22:52:04
2	Ag 328.068†	113153.8	111157.7	515.04	ug/L	515.04	ppb	22:52:09
2	As 188.979†	1176.2	1182.8	514.67	ug/L	514.67	ppb	22:52:29
2	B 249.677†	22081.8	22393.9	497.26	ug/L	497.26	ppb	22:52:09
2	Ba 233.527†	66001.5	65057.4	509.18	ug/L	509.18	ppb	22:52:09
2	Be 313.107†	1345862.7	1330963.1	508.28	ug/L	508.28	ppb	22:52:04
2	Cd 226.502†	46354.3	45887.3	509.08	ug/L	509.08	ppb	22:52:09
2	Co 228.616†	25269.5	24978.3	511.38	ug/L	511.38	ppb	22:52:09
2	Cr 267.716†	46342.6	45588.4	510.30	ug/L	510.30	ppb	22:52:09
2	Cu 324.752†	176991.5	168016.9	502.40	ug/L	502.40	ppb	22:52:09
2	Mn 257.610†	460670.0	453555.7	503.18	ug/L	503.18	ppb	22:52:04
2	Mo 202.031†	7347.9	7217.8	510.53	ug/L	510.53	ppb	22:52:29
2	Ni 231.604†	20861.9	20491.9	509.94	ug/L	509.94	ppb	22:52:09

2	P 214.914†	4411.4	4117.7	2410.0 ug/L	2410.0 ppb	22:52:29
2	Pb 220.353†	4134.5	4138.0	508.34 ug/L	508.34 ppb	22:52:29
2	S 181.975 Axial†	777.6	723.4	1022.8 ug/L	1022.8 ppb	22:52:29
2	Sb 206.836†	1524.0	1474.0	523.23 ug/L	523.23 ppb	22:52:29
2	Se 196.026†	772.7	793.5	529.65 ug/L	529.65 ppb	22:52:29
2	Si 251.611†	82963.5	81211.9	2580.2 ug/L	2580.2 ppb	22:52:09
2	Sn 189.927†	2939.7	2889.4	512.70 ug/L	512.70 ppb	22:52:29
2	Ti 334.940†	314944.4	311759.2	502.01 ug/L	502.01 ppb	22:52:09
2	Tl 190.801†	1647.8	1656.8	511.34 ug/L	511.34 ppb	22:52:29
2	U 409.014†	15606.3	17392.0	511.33 ug/L	511.33 ppb	22:52:09
2	V 292.402†	74135.2	74371.6	514.83 ug/L	514.83 ppb	22:52:09
2	Zn 213.857†	55314.7	53893.6	505.30 ug/L	505.30 ppb	22:52:09
2	SiO2†	82861.2	81089.9	5519.0 ug/L	5519.0 ppb	22:53:10
3	Sc Radial	4979.8	4979.8	98.9 %		22:51:05
3	Y RADIAL	5339.0	5339.0	98.33 %		22:51:05
3	Al 396.153Radial†	6320.0	6391.1	4906.0 ug/L	4906.0 ppb	22:51:05
3	Ca 317.933Radial†	3194.3	3210.1	5136.5 ug/L	5136.5 ppb	22:51:25
3	Fe 238.204 Radial†	611.6	609.6	5290.4 ug/L	5290.4 ppb	22:51:25
3	K 766.490 Radial†	29506.6	27245.4	4977.9 ug/L	4977.9 ppb	22:51:05
3	Mg 279.077 IEC†	158.4	158.2	5286.1 ug/L	5286.1 ppb	22:51:25
3	Na 589.592 Radial†	32402.2	34043.8	10193 ug/L	10193 ppb	22:51:05
3	Sr 421.552†	76218.3	77087.4	497.86 ug/L	497.86 ppb	22:51:05
3	Sc 361.383	869477.7	869477.7	102.00 %		22:52:35
3	Y 371.029	723745.4	723745.4	100.15 %		22:52:35
3	Ag 328.068†	113071.7	110492.6	512.00 ug/L	512.00 ppb	22:52:40
3	As 188.979†	1162.3	1163.1	506.17 ug/L	506.17 ppb	22:53:00
3	B 249.677†	22328.5	22521.7	500.10 ug/L	500.10 ppb	22:52:40
3	Ba 233.527†	66096.7	64809.7	507.25 ug/L	507.25 ppb	22:52:40
3	Be 313.107†	1354396.0	1332376.2	508.81 ug/L	508.81 ppb	22:52:35
3	Cd 226.502†	46314.7	45609.0	505.98 ug/L	505.98 ppb	22:52:40
3	Co 228.616†	25237.0	24815.9	508.05 ug/L	508.05 ppb	22:52:40
3	Cr 267.716†	46299.4	45306.6	507.15 ug/L	507.15 ppb	22:52:40
3	Cu 324.752†	177407.6	167510.5	500.89 ug/L	500.89 ppb	22:52:40
3	Mn 257.610†	464762.2	455187.8	505.00 ug/L	505.00 ppb	22:52:35
3	Mo 202.031†	7342.6	7174.7	507.49 ug/L	507.49 ppb	22:53:00
3	Ni 231.604†	20871.1	20393.2	507.49 ug/L	507.49 ppb	22:52:40
3	P 214.914†	4385.3	4069.3	2380.6 ug/L	2380.6 ppb	22:53:00
3	Pb 220.353†	4133.4	4115.5	505.58 ug/L	505.58 ppb	22:53:00
3	S 181.975 Axial†	777.3	719.0	1016.6 ug/L	1016.6 ppb	22:53:00
3	Sb 206.836†	1516.3	1458.6	517.85 ug/L	517.85 ppb	22:53:00
3	Se 196.026†	758.0	775.2	518.20 ug/L	518.20 ppb	22:53:00
3	Si 251.611†	83161.4	80977.3	2572.8 ug/L	2572.8 ppb	22:52:40
3	Sn 189.927†	2938.1	2872.7	509.76 ug/L	509.76 ppb	22:53:00
3	Ti 334.940†	315694.6	310867.8	500.58 ug/L	500.58 ppb	22:52:40
3	Tl 190.801†	1638.4	1639.1	505.94 ug/L	505.94 ppb	22:53:00
3	U 409.014†	15879.4	17579.0	516.84 ug/L	516.84 ppb	22:52:40
3	V 292.402†	74064.2	73919.0	511.69 ug/L	511.69 ppb	22:52:40
3	Zn 213.857†	55358.9	53651.2	503.02 ug/L	503.02 ppb	22:52:40
3	SiO2†	82943.0	80742.0	5495.3 ug/L	5495.3 ppb	22:53:15

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	868075.9	101.84	%	0.321				0.32%
Sc Radial	5061.9	101	%	1.5				1.48%
Y 371.029	723281.8	100.08	%	0.250				0.25%
Y RADIAL	5394.2	99.35	%	1.061				1.07%
Ag 328.068†	110433.0	511.71	ug/L	3.487	511.71	ppb	3.487	0.68%
QC value within limits for Ag 328.068 Recovery = 102.34%								
Al 396.153Radial†	6371.5	4890.9	ug/L	14.49	4890.9	ppb	14.49	0.30%
QC value within limits for Al 396.153Radial Recovery = 97.82%								
As 188.979†	1171.7	509.86	ug/L	4.360	509.86	ppb	4.360	0.86%
QC value within limits for As 188.979 Recovery = 101.97%								
B 249.677†	22347.0	496.21	ug/L	4.499	496.21	ppb	4.499	0.91%
QC value within limits for B 249.677 Recovery = 99.24%								
Ba 233.527†	64645.8	505.97	ug/L	4.014	505.97	ppb	4.014	0.79%
QC value within limits for Ba 233.527 Recovery = 101.19%								
Be 313.107†	1331619.7	508.52	ug/L	0.271	508.52	ppb	0.271	0.05%
QC value within limits for Be 313.107 Recovery = 101.70%								
Ca 317.933Radial†	3169.7	5071.8	ug/L	61.31	5071.8	ppb	61.31	1.21%

QC value within limits for Ca 317.933Radial Recovery = 101.44%

Cd 226.502†	45571.5	505.57 ug/L	3.734	505.57 ppb	3.734	0.74%
QC value within limits for Cd 226.502 Recovery = 101.11%						
Co 228.616†	24797.8	507.68 ug/L	3.894	507.68 ppb	3.894	0.77%
QC value within limits for Co 228.616 Recovery = 101.54%						
Cr 267.716†	45286.9	506.93 ug/L	3.490	506.93 ppb	3.490	0.69%
QC value within limits for Cr 267.716 Recovery = 101.39%						
Cu 324.752†	167009.5	499.39 ug/L	3.978	499.39 ppb	3.978	0.80%
QC value within limits for Cu 324.752 Recovery = 99.88%						
Fe 238.204 Radial†	602.3	5227.3 ug/L	61.00	5227.3 ppb	61.00	1.17%
QC value within limits for Fe 238.204 Radial Recovery = 104.55%						
K 766.490 Radial†	27078.1	4947.3 ug/L	36.78	4947.3 ppb	36.78	0.74%
QC value within limits for K 766.490 Radial Recovery = 98.95%						
Mg 279.077 IEC†	157.2	5251.6 ug/L	31.44	5251.6 ppb	31.44	0.60%
QC value within limits for Mg 279.077 IEC Recovery = 105.03%						
Mn 257.610†	454178.7	503.87 ug/L	0.983	503.87 ppb	0.983	0.20%
QC value within limits for Mn 257.610 Recovery = 100.77%						
Mo 202.031†	7174.0	507.44 ug/L	3.117	507.44 ppb	3.117	0.61%
QC value within limits for Mo 202.031 Recovery = 101.49%						
Na 589.592 Radial†	33898.6	10150 ug/L	37.7	10150 ppb	37.7	0.37%
QC value within limits for Na 589.592 Radial Recovery = 101.50%						
Ni 231.604†	20370.4	506.92 ug/L	3.344	506.92 ppb	3.344	0.66%
QC value within limits for Ni 231.604 Recovery = 101.38%						
P 214.914†	4080.0	2387.5 ug/L	19.95	2387.5 ppb	19.95	0.84%
QC value within limits for P 214.914 Recovery = 95.50%						
Pb 220.353†	4113.8	505.37 ug/L	3.079	505.37 ppb	3.079	0.61%
QC value within limits for Pb 220.353 Recovery = 101.07%						
S 181.975 Axial†	717.5	1014.5 ug/L	9.50	1014.5 ppb	9.50	0.94%
QC value within limits for S 181.975 Axial Recovery = 101.45%						
Sb 206.836†	1464.4	519.81 ug/L	2.969	519.81 ppb	2.969	0.57%
QC value within limits for Sb 206.836 Recovery = 103.96%						
Se 196.026†	781.9	522.33 ug/L	6.358	522.33 ppb	6.358	1.22%
QC value within limits for Se 196.026 Recovery = 104.47%						
Si 251.611†	80748.1	2565.5 ug/L	19.44	2565.5 ppb	19.44	0.76%
QC value within limits for Si 251.611 Recovery = 102.62%						
Sn 189.927†	2868.7	509.04 ug/L	4.076	509.04 ppb	4.076	0.80%
QC value within limits for Sn 189.927 Recovery = 101.81%						
Sr 421.552†	76829.1	496.19 ug/L	1.960	496.19 ppb	1.960	0.39%
QC value within limits for Sr 421.552 Recovery = 99.24%						
Ti 334.940†	310032.7	499.23 ug/L	3.642	499.23 ppb	3.642	0.73%
QC value within limits for Ti 334.940 Recovery = 99.85%						
Tl 190.801†	1641.5	506.67 ug/L	4.357	506.67 ppb	4.357	0.86%
QC value within limits for Tl 190.801 Recovery = 101.33%						
U 409.014†	17469.4	513.61 ug/L	2.874	513.61 ppb	2.874	0.56%
QC value within limits for U 409.014 Recovery = 102.72%						
V 292.402†	73927.9	511.75 ug/L	3.043	511.75 ppb	3.043	0.59%
QC value within limits for V 292.402 Recovery = 102.35%						
Zn 213.857†	53549.4	502.07 ug/L	3.803	502.07 ppb	3.803	0.76%
QC value within limits for Zn 213.857 Recovery = 100.41%						
SiO2†	80434.4	5474.4 ug/L	58.06	5474.4 ppb	58.06	1.06%
QC value within limits for SiO2 Recovery = 102.37%						

All analyte(s) passed QC.

Sequence No.: 67
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/11/2010 22:55:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Rep1#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5176.0	5176.0	103	%			22:57:17
1	Y RADIAL	5549.0	5549.0	102.2	%			22:57:17
1	Al 396.153Radial†	-7.0	-6.1	-4.7088	ug/L	-4.7088	ppb	22:57:17
1	Ca 317.933Radial†	25.5	5.1	8.1193	ug/L	8.1193	ppb	22:57:37
1	Fe 238.204 Radial†	8.2	-0.9	-7.9800	ug/L	-7.9800	ppb	22:57:37
1	K 766.490 Radial†	2872.1	203.9	37.406	ug/L	37.406	ppb	22:57:17
1	Mg 279.077 IEC†	0.2	-1.7	-56.871	ug/L	-56.871	ppb	22:57:37
1	Na 589.592 Radial†	-1369.8	-52.1	-15.593	ug/L	-15.593	ppb	22:57:17
1	Sr 421.552†	25.8	44.6	0.2880	ug/L	0.2880	ppb	22:57:17
1	Sc 361.383	882577.1	882577.1	103.54	%			22:58:34
1	Y 371.029	747252.0	747252.0	103.40	%			22:58:34
1	Ag 328.068†	406.5	34.6	0.1559	ug/L	0.1559	ppb	22:58:39
1	As 188.979†	-18.0	6.2	2.6961	ug/L	2.6961	ppb	22:58:59
1	B 249.677†	-447.7	199.5	4.4490	ug/L	4.4490	ppb	22:58:59
1	Ba 233.527†	-0.4	11.0	0.0858	ug/L	0.0858	ppb	22:58:59
1	Be 313.107†	-4454.0	283.7	0.1085	ug/L	0.1085	ppb	22:58:39
1	Cd 226.502†	-177.9	32.3	0.3591	ug/L	0.3591	ppb	22:58:59
1	Co 228.616†	-88.7	-11.0	-0.2264	ug/L	-0.2264	ppb	22:58:59
1	Cr 267.716†	81.9	-4.2	-0.0473	ug/L	-0.0473	ppb	22:58:59
1	Cu 324.752†	6341.0	-288.0	-0.8625	ug/L	-0.8625	ppb	22:58:39
1	Mn 257.610†	490.3	28.6	0.0332	ug/L	0.0332	ppb	22:58:59
1	Mo 202.031†	15.3	-8.9	-0.6306	ug/L	-0.6306	ppb	22:58:59
1	Ni 231.604†	77.0	6.5	0.1608	ug/L	0.1608	ppb	22:58:59
1	P 214.914†	211.7	-25.4	-15.358	ug/L	-15.358	ppb	22:58:59
1	Pb 220.353†	-74.1	-8.2	-1.0056	ug/L	-1.0056	ppb	22:58:59
1	S 181.975 Axial†	46.6	2.0	2.8781	ug/L	2.8781	ppb	22:58:59
1	Sb 206.836†	33.2	4.1	1.3879	ug/L	1.3879	ppb	22:58:59
1	Se 196.026†	-30.6	2.4	1.5296	ug/L	1.5296	ppb	22:58:59
1	Si 251.611†	572.3	2.3	0.0814	ug/L	0.0814	ppb	22:58:59
1	Sn 189.927†	1.2	-6.5	-1.1515	ug/L	-1.1515	ppb	22:58:59
1	Ti 334.940†	-1307.4	111.8	0.1851	ug/L	0.1851	ppb	22:58:39
1	Tl 190.801†	-30.5	3.4	1.0374	ug/L	1.0374	ppb	22:58:59
1	U 409.014†	-2033.9	47.2	1.3945	ug/L	1.3945	ppb	22:58:34
1	V 292.402†	-1342.3	13.3	0.0837	ug/L	0.0837	ppb	22:58:39
1	Zn 213.857†	604.8	-36.2	-0.3412	ug/L	-0.3412	ppb	22:58:59
.1	SiO2†	642.5	48.9	3.3509	ug/L	3.3509	ppb	23:00:05
2	Sc Radial	5278.9	5278.9	105	%			22:57:42
2	Y RADIAL	5667.0	5667.0	104.4	%			22:57:42
2	Al 396.153Radial†	-9.2	-8.1	-6.2517	ug/L	-6.2517	ppb	22:57:42
2	Ca 317.933Radial†	18.9	-1.8	-2.8339	ug/L	-2.8339	ppb	22:58:02
2	Fe 238.204 Radial†	14.4	4.9	42.006	ug/L	42.006	ppb	22:58:02
2	K 766.490 Radial†	2740.5	23.9	4.3928	ug/L	4.3928	ppb	22:57:42
2	Mg 279.077 IEC†	-2.0	-3.8	-127.27	ug/L	-127.27	ppb	22:58:02
2	Na 589.592 Radial†	-1361.1	-17.9	-5.3478	ug/L	-5.3478	ppb	22:57:42
2	Sr 421.552†	-9.2	10.8	0.0696	ug/L	0.0696	ppb	22:57:42
2	Sc 361.383	869443.9	869443.9	102.00	%			22:59:04
2	Y 371.029	736966.7	736966.7	101.98	%			22:59:04
2	Ag 328.068†	386.0	20.4	0.1054	ug/L	0.1054	ppb	22:59:09
2	As 188.979†	-12.8	11.1	4.8225	ug/L	4.8225	ppb	22:59:29
2	B 249.677†	-461.1	179.8	4.0034	ug/L	4.0034	ppb	22:59:29
2	Ba 233.527†	7.5	18.8	0.1480	ug/L	0.1480	ppb	22:59:29
2	Be 313.107†	-4488.7	184.7	0.0706	ug/L	0.0706	ppb	22:59:09
2	Cd 226.502†	-198.7	9.3	0.0990	ug/L	0.0990	ppb	22:59:29
2	Co 228.616†	-76.8	-0.6	-0.0142	ug/L	-0.0142	ppb	22:59:29
2	Cr 267.716†	98.6	13.4	0.1498	ug/L	0.1498	ppb	22:59:29
2	Cu 324.752†	6443.6	-94.9	-0.2827	ug/L	-0.2827	ppb	22:59:09
2	Mn 257.610†	492.6	38.1	0.0521	ug/L	0.0521	ppb	22:59:29
2	Mo 202.031†	20.2	-3.9	-0.2746	ug/L	-0.2746	ppb	22:59:29
2	Ni 231.604†	78.9	9.4	0.2348	ug/L	0.2348	ppb	22:59:29

2	P 214.914†	209.8	-24.2	-14.789 ug/L	-14.789 ppb	22:59:29
2	Pb 220.353†	-59.9	4.6	0.5563 ug/L	0.5563 ppb	22:59:29
2	S 181.975 Axial†	47.7	3.8	5.3736 ug/L	5.3736 ppb	22:59:29
2	Sb 206.836†	38.3	9.6	3.2680 ug/L	3.2680 ppb	22:59:29
2	Se 196.026†	-30.0	2.6	1.8303 ug/L	1.8303 ppb	22:59:29
2	Si 251.611†	581.4	19.5	0.6251 ug/L	0.6251 ppb	22:59:29
2	Sn 189.927†	4.4	-3.4	-0.5994 ug/L	-0.5994 ppb	22:59:29
2	Ti 334.940†	-1323.3	77.1	0.1334 ug/L	0.1334 ppb	22:59:09
2	Tl 190.801†	-39.1	-5.5	-1.6930 ug/L	-1.6930 ppb	22:59:29
2	U 409.014†	-1983.2	67.3	1.9794 ug/L	1.9794 ppb	22:59:04
2	V 292.402†	-1362.9	-26.5	-0.1900 ug/L	-0.1900 ppb	22:59:09
2	Zn 213.857†	618.2	-14.2	-0.1390 ug/L	-0.1390 ppb	22:59:29
2	SiO2†	596.3	12.9	0.8906 ug/L	0.8906 ppb	23:00:10
3	Sc Radial	5283.7	5283.7	105 %		22:58:07
3	Y RADIAL	5664.1	5664.1	104.3 %		22:58:07
3	Al 396.153Radial†	-26.5	-24.6	-18.945 ug/L	-18.945 ppb	22:58:07
3	Ca 317.933Radial†	11.0	-9.3	-14.855 ug/L	-14.855 ppb	22:58:27
3	Fe 238.204 Radial†	11.2	1.8	15.484 ug/L	15.484 ppb	22:58:27
3	K 766.490 Radial†	2750.3	30.9	5.6781 ug/L	5.6781 ppb	22:58:07
3	Mg 279.077 IEC†	5.4	3.2	107.93 ug/L	107.93 ppb	22:58:27
3	Na 589.592 Radial†	-1389.9	-44.1	-13.198 ug/L	-13.198 ppb	22:58:07
3	Sr 421.552†	-25.9	-5.2	-0.0334 ug/L	-0.0334 ppb	22:58:07
3	Sc 361.383	882211.9	882211.9	103.50 %		22:59:35
3	Y 371.029	746007.1	746007.1	103.23 %		22:59:35
3	Ag 328.068†	319.6	-49.2	-0.2222 ug/L	-0.2222 ppb	22:59:40
3	As 188.979†	-20.1	4.2	1.8464 ug/L	1.8464 ppb	23:00:00
3	B 249.677†	-468.9	178.8	3.9857 ug/L	3.9857 ppb	23:00:00
3	Ba 233.527†	-1.5	10.0	0.0792 ug/L	0.0792 ppb	23:00:00
3	Be 313.107†	-4449.7	286.0	0.1093 ug/L	0.1093 ppb	22:59:40
3	Cd 226.502†	-184.3	26.0	0.2875 ug/L	0.2875 ppb	23:00:00
3	Co 228.616†	-86.2	-8.6	-0.1781 ug/L	-0.1781 ppb	23:00:00
3	Cr 267.716†	108.9	22.0	0.2454 ug/L	0.2454 ppb	23:00:00
3	Cu 324.752†	6332.4	-293.9	-0.8793 ug/L	-0.8793 ppb	22:59:40
3	Mn 257.610†	502.4	40.5	0.0423 ug/L	0.0423 ppb	23:00:00
3	Mo 202.031†	13.0	-11.1	-0.7839 ug/L	-0.7839 ppb	23:00:00
3	Ni 231.604†	72.2	1.8	0.0441 ug/L	0.0441 ppb	23:00:00
3	P 214.914†	217.0	-20.3	-12.226 ug/L	-12.226 ppb	23:00:00
3	Pb 220.353†	-59.0	6.3	0.7700 ug/L	0.7700 ppb	23:00:00
3	S 181.975 Axial†	40.7	-3.6	-5.1486 ug/L	-5.1486 ppb	23:00:00
3	Sb 206.836†	38.5	9.3	3.1362 ug/L	3.1362 ppb	23:00:00
3	Se 196.026†	-24.7	8.1	5.2687 ug/L	5.2687 ppb	23:00:00
3	Si 251.611†	574.4	4.5	0.1531 ug/L	0.1531 ppb	23:00:00
3	Sn 189.927†	-2.3	-9.9	-1.7616 ug/L	-1.7616 ppb	23:00:00
3	Ti 334.940†	-1337.2	82.5	0.1212 ug/L	0.1212 ppb	22:59:40
3	Tl 190.801†	-40.6	-6.4	-1.9568 ug/L	-1.9568 ppb	23:00:00
3	U 409.014†	-1990.8	88.1	2.5956 ug/L	2.5956 ppb	22:59:35
3	V 292.402†	-1299.4	54.3	0.3632 ug/L	0.3632 ppb	22:59:40
3	Zn 213.857†	621.5	-19.8	-0.1877 ug/L	-0.1877 ppb	23:00:00
3	SiO2†	595.3	3.5	0.2626 ug/L	0.2626 ppb	23:00:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	878077.7	103.01	%	0.877				0.85%
Sc Radial	5246.2	104	%	1.2				1.16%
Y 371.029	743408.6	102.87	%	0.777				0.76%
Y RADIAL	5626.7	103.6	%	1.24				1.20%
Ag 328.068†	1.9	0.0130	ug/L	0.20529	0.0130	ppb	0.20529	>999.9%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.0	-9.9686	ug/L	7.81226	-9.9686	ppb	7.81226	78.37%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	7.2	3.1217	ug/L	1.53300	3.1217	ppb	1.53300	49.11%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	186.0	4.1460	ug/L	0.26249	4.1460	ppb	0.26249	6.33%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	13.3	0.1043	ug/L	0.03793	0.1043	ppb	0.03793	36.35%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	251.4	0.0961	ug/L	0.02208	0.0961	ppb	0.02208	22.97%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.0	-3.1898	ug/L	11.49121	-3.1898	ppb	11.49121	360.25%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              22.5      0.2485 ug/L       0.13437      0.2485 ppb       0.13437  54.07%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -6.7     -0.1396 ug/L       0.11120     -0.1396 ppb       0.11120  79.68%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              10.4      0.1160 ug/L       0.14926      0.1160 ppb       0.14926 128.68%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -225.6     -0.6748 ug/L       0.33974     -0.6748 ppb       0.33974  50.34%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.9      16.503 ug/L       25.0087      16.503 ppb       25.0087 151.54%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†         86.2      15.826 ug/L       18.7001      15.826 ppb       18.7001 118.16%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.8     -25.405 ug/L      120.7158     -25.405 ppb      120.7158 475.17%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              35.7      0.0425 ug/L       0.00947      0.0425 ppb       0.00947  22.27%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -8.0     -0.5631 ug/L       0.26133     -0.5631 ppb       0.26133  46.41%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -38.0     -11.380 ug/L        5.3591     -11.380 ppb        5.3591  47.09%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               5.9      0.1466 ug/L       0.09618      0.1466 ppb       0.09618  65.61%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -23.3     -14.124 ug/L        1.6683     -14.124 ppb        1.6683  11.81%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               0.9      0.1069 ug/L       0.96934      0.1069 ppb       0.96934 906.74%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          0.7      1.0344 ug/L       5.49808      1.0344 ppb       5.49808 531.54%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.7      2.5973 ug/L       1.04948      2.5973 ppb       1.04948  40.41%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               4.4      2.8762 ug/L       2.07738      2.8762 ppb       2.07738  72.23%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               8.8      0.2865 ug/L       0.29536      0.2865 ppb       0.29536 103.08%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -6.6     -1.1708 ug/L       0.58132     -1.1708 ppb       0.58132  49.65%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              16.7      0.1080 ug/L       0.16414      0.1080 ppb       0.16414 151.93%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              90.5      0.1466 ug/L       0.03396      0.1466 ppb       0.03396  23.17%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -2.8     -0.8708 ug/L       1.65785     -0.8708 ppb       1.65785 190.38%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               67.5      1.9898 ug/L       0.60061      1.9898 ppb       0.60061  30.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               13.7      0.0857 ug/L       0.27657      0.0857 ppb       0.27657 322.90%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -23.4     -0.2226 ug/L       0.10550     -0.2226 ppb       0.10550  47.39%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    21.8      1.5014 ug/L       1.63225      1.5014 ppb       1.63225 108.72%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 76
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/11/2010 23:59:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5171.4	5171.4	103	%			00:00:53
1	Y RADIAL	5504.9	5504.9	101.4	%			00:00:53
1	Al 396.153Radial†	6468.8	6299.2	4835.4	ug/L	4835.4	ppb	00:00:53
1	Ca 317.933Radial†	3277.9	3171.9	5075.3	ug/L	5075.3	ppb	00:01:13
1	Fe 238.204 Radial†	630.7	605.2	5252.3	ug/L	5252.3	ppb	00:01:13
1	K 766.490 Radial†	30222.9	26837.2	4903.0	ug/L	4903.0	ppb	00:00:53
1	Mg 279.077 IEC†	163.6	157.4	5257.8	ug/L	5257.8	ppb	00:01:13
1	Na 589.592 Radial†	34025.6	34410.4	10303	ug/L	10303	ppb	00:00:53
1	Sr 421.552†	78867.7	76811.2	496.08	ug/L	496.08	ppb	00:00:53
1	Sc 361.383	885814.6	885814.6	103.92	%			00:02:11
1	Y 371.029	736563.1	736563.1	101.92	%			00:02:11
1	Ag 328.068†	112966.0	108346.5	502.08	ug/L	502.08	ppb	00:02:16
1	As 188.979†	1170.9	1150.3	500.69	ug/L	500.69	ppb	00:02:36
1	B 249.677†	21966.9	21770.1	483.38	ug/L	483.38	ppb	00:02:16
1	Ba 233.527†	66106.4	63624.0	497.97	ug/L	497.97	ppb	00:02:16
1	Be 313.107†	1384368.1	1336729.4	510.49	ug/L	510.49	ppb	00:02:11
1	Cd 226.502†	46498.1	44948.1	498.64	ug/L	498.64	ppb	00:02:16
1	Co 228.616†	25255.0	24376.9	499.03	ug/L	499.03	ppb	00:02:16
1	Cr 267.716†	46300.8	44470.9	497.80	ug/L	497.80	ppb	00:02:16
1	Cu 324.752†	176249.6	163188.5	487.98	ug/L	487.98	ppb	00:02:16
1	Mn 257.610†	475068.5	456702.0	506.67	ug/L	506.67	ppb	00:02:11
1	Mo 202.031†	7401.7	7098.8	502.12	ug/L	502.12	ppb	00:02:36
1	Ni 231.604†	20860.6	20005.7	497.84	ug/L	497.84	ppb	00:02:16
1	P 214.914†	4468.2	4069.7	2383.7	ug/L	2383.7	ppb	00:02:36
1	Pb 220.353†	4173.0	4078.9	501.08	ug/L	501.08	ppb	00:02:36
1	S 181.975 Axial†	798.9	725.8	1026.2	ug/L	1026.2	ppb	00:02:36
1	Sb 206.836†	1542.5	1456.4	516.87	ug/L	516.87	ppb	00:02:36
1	Se 196.026†	775.0	777.8	519.74	ug/L	519.74	ppb	00:02:36
1	Si 251.611†	83038.7	79355.7	2521.2	ug/L	2521.2	ppb	00:02:16
1	Sn 189.927†	2972.1	2852.4	506.15	ug/L	506.15	ppb	00:02:36
1	Ti 334.940†	328133.2	317129.2	510.68	ug/L	510.68	ppb	00:02:11
1	Tl 190.801†	1656.5	1626.8	502.30	ug/L	502.30	ppb	00:02:36
1	U 409.014†	15652.4	17073.6	501.95	ug/L	501.95	ppb	00:02:16
1	V 292.402†	74171.3	72682.9	503.14	ug/L	503.14	ppb	00:02:16
1	Zn 213.857†	55289.5	52583.5	493.00	ug/L	493.00	ppb	00:02:16
1	SiO2†	82534.3	78849.1	5366.3	ug/L	5366.3	ppb	00:03:44
2	Sc Radial	5097.9	5097.9	101	%			00:01:18
2	Y RADIAL	5437.9	5437.9	100.2	%			00:01:18
2	Al 396.153Radial†	6436.9	6358.5	4880.7	ug/L	4880.7	ppb	00:01:18
2	Ca 317.933Radial†	3244.0	3184.4	5095.3	ug/L	5095.3	ppb	00:01:38
2	Fe 238.204 Radial†	623.9	607.4	5271.6	ug/L	5271.6	ppb	00:01:38
2	K 766.490 Radial†	29994.1	27035.7	4939.3	ug/L	4939.3	ppb	00:01:18
2	Mg 279.077 IEC†	165.0	161.1	5382.1	ug/L	5382.1	ppb	00:01:38
2	Na 589.592 Radial†	33544.4	34413.1	10304	ug/L	10304	ppb	00:01:18
2	Sr 421.552†	78187.3	77247.1	498.89	ug/L	498.89	ppb	00:01:18
2	Sc 361.383	869801.0	869801.0	102.04	%			00:02:42
2	Y 371.029	724270.0	724270.0	100.22	%			00:02:42
2	Ag 328.068†	113175.2	110552.8	512.28	ug/L	512.28	ppb	00:02:47
2	As 188.979†	1175.5	1175.6	511.60	ug/L	511.60	ppb	00:03:07
2	B 249.677†	22113.2	22302.6	495.22	ug/L	495.22	ppb	00:02:47
2	Ba 233.527†	66099.5	64788.4	507.08	ug/L	507.08	ppb	00:02:47
2	Be 313.107†	1357609.0	1335031.4	509.84	ug/L	509.84	ppb	00:02:42
2	Cd 226.502†	46619.3	45890.6	509.10	ug/L	509.10	ppb	00:02:47
2	Co 228.616†	25319.2	24887.3	509.50	ug/L	509.50	ppb	00:02:47
2	Cr 267.716†	46458.5	45445.7	508.71	ug/L	508.71	ppb	00:02:47
2	Cu 324.752†	176893.0	166941.5	499.19	ug/L	499.19	ppb	00:02:47
2	Mn 257.610†	466029.2	456260.0	506.18	ug/L	506.18	ppb	00:02:42
2	Mo 202.031†	7416.1	7244.0	512.39	ug/L	512.39	ppb	00:03:07
2	Ni 231.604†	20974.0	20486.4	509.81	ug/L	509.81	ppb	00:02:47

2	P 214.914†	4450.5	4131.6	2419.2 ug/L	2419.2 ppb	00:03:07
2	Pb 220.353†	4167.5	4147.5	509.51 ug/L	509.51 ppb	00:03:07
2	S 181.975 Axial†	786.9	728.2	1029.5 ug/L	1029.5 ppb	00:03:07
2	Sb 206.836†	1547.7	1488.8	528.34 ug/L	528.34 ppb	00:03:07
2	Se 196.026†	776.4	792.9	529.57 ug/L	529.57 ppb	00:03:07
2	Si 251.611†	83070.1	80857.6	2568.9 ug/L	2568.9 ppb	00:02:47
2	Sn 189.927†	2969.6	2902.5	515.03 ug/L	515.03 ppb	00:03:07
2	Ti 334.940†	321752.0	316688.9	509.95 ug/L	509.95 ppb	00:02:42
2	Tl 190.801†	1670.1	1669.5	515.34 ug/L	515.34 ppb	00:03:07
2	U 409.014†	15898.9	17592.5	517.23 ug/L	517.23 ppb	00:02:47
2	V 292.402†	74312.2	74135.1	513.23 ug/L	513.23 ppb	00:02:47
2	Zn 213.857†	55432.8	53703.4	503.50 ug/L	503.50 ppb	00:02:47
2	SiO2†	82790.6	80562.5	5483.0 ug/L	5483.0 ppb	00:03:49
3	Sc Radial	5270.9	5270.9	105 %		00:01:43
3	Y RADIAL	5614.5	5614.5	103.4 %		00:01:43
3	Al 396.153Radial†	6648.6	6352.1	4875.9 ug/L	4875.9 ppb	00:01:43
3	Ca 317.933Radial†	3221.5	3057.7	4892.7 ug/L	4892.7 ppb	00:02:03
3	Fe 238.204 Radial†	623.0	586.3	5089.3 ug/L	5089.3 ppb	00:02:03
3	K 766.490 Radial†	30804.9	26837.9	4903.2 ug/L	4903.2 ppb	00:01:43
3	Mg 279.077 IEC†	165.6	156.2	5220.6 ug/L	5220.6 ppb	00:02:03
3	Na 589.592 Radial†	34698.7	34428.3	10308 ug/L	10308 ppb	00:01:43
3	Sr 421.552†	80835.6	77242.2	498.86 ug/L	498.86 ppb	00:01:43
3	Sc 361.383	871664.6	871664.6	102.26 %		00:03:13
3	Y 371.029	726041.6	726041.6	100.47 %		00:03:13
3	Ag 328.068†	113985.2	111107.7	514.78 ug/L	514.78 ppb	00:03:18
3	As 188.979†	1172.4	1170.1	509.21 ug/L	509.21 ppb	00:03:38
3	B 249.677†	22353.4	22491.2	499.43 ug/L	499.43 ppb	00:03:18
3	Ba 233.527†	66445.0	64987.7	508.64 ug/L	508.64 ppb	00:03:18
3	Be 313.107†	1362122.5	1336600.7	510.44 ug/L	510.44 ppb	00:03:13
3	Cd 226.502†	46771.9	45942.2	509.70 ug/L	509.70 ppb	00:03:18
3	Co 228.616†	25498.7	25009.8	512.00 ug/L	512.00 ppb	00:03:18
3	Cr 267.716†	46716.4	45600.6	510.43 ug/L	510.43 ppb	00:03:18
3	Cu 324.752†	178604.5	168244.6	503.07 ug/L	503.07 ppb	00:03:18
3	Mn 257.610†	467051.8	456283.6	506.19 ug/L	506.19 ppb	00:03:13
3	Mo 202.031†	7377.6	7190.8	508.61 ug/L	508.61 ppb	00:03:38
3	Ni 231.604†	21019.8	20487.2	509.83 ug/L	509.83 ppb	00:03:18
3	P 214.914†	4440.1	4112.1	2406.5 ug/L	2406.5 ppb	00:03:38
3	Pb 220.353†	4152.4	4123.9	506.62 ug/L	506.62 ppb	00:03:38
3	S 181.975 Axial†	777.0	716.8	1013.5 ug/L	1013.5 ppb	00:03:38
3	Sb 206.836†	1549.0	1486.9	527.57 ug/L	527.57 ppb	00:03:38
3	Se 196.026†	771.4	786.4	524.77 ug/L	524.77 ppb	00:03:38
3	Si 251.611†	83713.6	81312.8	2583.4 ug/L	2583.4 ppb	00:03:18
3	Sn 189.927†	2960.7	2887.6	512.37 ug/L	512.37 ppb	00:03:38
3	Ti 334.940†	322420.5	316668.5	509.90 ug/L	509.90 ppb	00:03:13
3	Tl 190.801†	1649.6	1646.0	508.11 ug/L	508.11 ppb	00:03:38
3	U 409.014†	16116.1	17771.5	522.53 ug/L	522.53 ppb	00:03:18
3	V 292.402†	74729.8	74387.7	514.93 ug/L	514.93 ppb	00:03:18
3	Zn 213.857†	55793.4	53939.9	505.75 ug/L	505.75 ppb	00:03:18
3	SiO2†	84213.5	81780.4	5566.2 ug/L	5566.2 ppb	00:03:54

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	875760.1	102.74	%	1.027				1.00%
Sc Radial	5180.1	103	%	1.7				1.68%
Y 371.029	728958.3	100.87	%	0.920				0.91%
Y RADIAL	5519.1	101.7	%	1.64				1.62%
Ag 328.068†	110002.3	509.71	ug/L	6.724	509.71	ppb	6.724	1.32%
QC value within limits for Ag 328.068 Recovery = 101.94%								
Al 396.153Radial†	6336.6	4864.0	ug/L	24.87	4864.0	ppb	24.87	0.51%
QC value within limits for Al 396.153Radial Recovery = 97.28%								
As 188.979†	1165.3	507.16	ug/L	5.735	507.16	ppb	5.735	1.13%
QC value within limits for As 188.979 Recovery = 101.43%								
B 249.677†	22188.0	492.67	ug/L	8.324	492.67	ppb	8.324	1.69%
QC value within limits for B 249.677 Recovery = 98.53%								
Ba 233.527†	64466.7	504.56	ug/L	5.762	504.56	ppb	5.762	1.14%
QC value within limits for Ba 233.527 Recovery = 100.91%								
Be 313.107†	1336120.5	510.26	ug/L	0.361	510.26	ppb	0.361	0.07%
QC value within limits for Be 313.107 Recovery = 102.05%								
Ca 317.933Radial†	3138.0	5021.1	ug/L	111.68	5021.1	ppb	111.68	2.22%

QC value within limits for Ca 317.933Radial Recovery = 100.42%

Cd 226.502†	45593.7	505.81 ug/L	6.221	505.81 ppb	6.221	1.23%
QC value within limits for Cd 226.502 Recovery = 101.16%						
Co 228.616†	24758.0	506.85 ug/L	6.882	506.85 ppb	6.882	1.36%
QC value within limits for Co 228.616 Recovery = 101.37%						
Cr 267.716†	45172.4	505.65 ug/L	6.851	505.65 ppb	6.851	1.35%
QC value within limits for Cr 267.716 Recovery = 101.13%						
Cu 324.752†	166124.9	496.75 ug/L	7.840	496.75 ppb	7.840	1.58%
QC value within limits for Cu 324.752 Recovery = 99.35%						
Fe 238.204 Radial†	599.6	5204.4 ug/L	100.17	5204.4 ppb	100.17	1.92%
QC value within limits for Fe 238.204 Radial Recovery = 104.09%						
K 766.490 Radial†	26903.6	4915.2 ug/L	20.92	4915.2 ppb	20.92	0.43%
QC value within limits for K 766.490 Radial Recovery = 98.30%						
Mg 279.077 IEC†	158.2	5286.8 ug/L	84.58	5286.8 ppb	84.58	1.60%
QC value within limits for Mg 279.077 IEC Recovery = 105.74%						
Mn 257.610†	456415.2	506.35 ug/L	0.281	506.35 ppb	0.281	0.06%
QC value within limits for Mn 257.610 Recovery = 101.27%						
Mo 202.031†	7177.8	507.71 ug/L	5.191	507.71 ppb	5.191	1.02%
QC value within limits for Mo 202.031 Recovery = 101.54%						
Na 589.592 Radial†	34417.2	10305 ug/L	2.9	10305 ppb	2.9	0.03%
QC value within limits for Na 589.592 Radial Recovery = 103.05%						
Ni 231.604†	20326.4	505.83 ug/L	6.912	505.83 ppb	6.912	1.37%
QC value within limits for Ni 231.604 Recovery = 101.17%						
P 214.914†	4104.5	2403.1 ug/L	17.97	2403.1 ppb	17.97	0.75%
QC value within limits for P 214.914 Recovery = 96.12%						
Pb 220.353†	4116.8	505.74 ug/L	4.283	505.74 ppb	4.283	0.85%
QC value within limits for Pb 220.353 Recovery = 101.15%						
S 181.975 Axial†	723.6	1023.1 ug/L	8.46	1023.1 ppb	8.46	0.83%
QC value within limits for S 181.975 Axial Recovery = 102.31%						
Sb 206.836†	1477.4	524.26 ug/L	6.409	524.26 ppb	6.409	1.22%
QC value within limits for Sb 206.836 Recovery = 104.85%						
Se 196.026†	785.7	524.69 ug/L	4.915	524.69 ppb	4.915	0.94%
QC value within limits for Se 196.026 Recovery = 104.94%						
Si 251.611†	80508.7	2557.8 ug/L	32.57	2557.8 ppb	32.57	1.27%
QC value within limits for Si 251.611 Recovery = 102.31%						
Sn 189.927†	2880.8	511.18 ug/L	4.560	511.18 ppb	4.560	0.89%
QC value within limits for Sn 189.927 Recovery = 102.24%						
Sr 421.552†	77100.1	497.95 ug/L	1.617	497.95 ppb	1.617	0.32%
QC value within limits for Sr 421.552 Recovery = 99.59%						
Ti 334.940†	316828.8	510.18 ug/L	0.434	510.18 ppb	0.434	0.09%
QC value within limits for Ti 334.940 Recovery = 102.04%						
Tl 190.801†	1647.5	508.58 ug/L	6.530	508.58 ppb	6.530	1.28%
QC value within limits for Tl 190.801 Recovery = 101.72%						
U 409.014†	17479.2	513.91 ug/L	10.685	513.91 ppb	10.685	2.08%
QC value within limits for U 409.014 Recovery = 102.78%						
V 292.402†	73735.2	510.44 ug/L	6.375	510.44 ppb	6.375	1.25%
QC value within limits for V 292.402 Recovery = 102.09%						
Zn 213.857†	53408.9	500.75 ug/L	6.805	500.75 ppb	6.805	1.36%
QC value within limits for Zn 213.857 Recovery = 100.15%						
SiO2†	80397.3	5471.8 ug/L	100.38	5471.8 ppb	100.38	1.83%
QC value within limits for SiO2 Recovery = 102.32%						

All analyte(s) passed QC.

Sequence No.: 77
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/12/2010 00:06:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4856.1	4856.1	96.4	%			00:07:55
1	Y RADIAL	5198.1	5198.1	95.74	%			00:07:55
1	Al 396.153Radial†	2.4	3.2	2.4705	ug/L	2.4705	ppb	00:07:55
1	Ca 317.933Radial†	14.8	-4.5	-7.1219	ug/L	-7.1219	ppb	00:08:15
1	Fe 238.204 Radial†	14.5	6.1	53.223	ug/L	53.223	ppb	00:08:15
1	K 766.490 Radial†	2783.9	296.5	54.379	ug/L	54.379	ppb	00:07:55
1	Mg 279.077 IEC†	3.9	2.1	71.426	ug/L	71.426	ppb	00:08:15
1	Na 589.592 Radial†	-1291.8	-59.0	-17.677	ug/L	-17.677	ppb	00:07:55
1	Sr 421.552†	29.1	49.7	0.3209	ug/L	0.3209	ppb	00:07:55
1	Sc 361.383	894686.7	894686.7	104.96	%			00:09:12
1	Y 371.029	757293.5	757293.5	104.79	%			00:09:12
1	Ag 328.068†	396.2	19.5	0.1031	ug/L	0.1031	ppb	00:09:17
1	As 188.979†	-18.9	5.6	2.4376	ug/L	2.4376	ppb	00:09:37
1	B 249.677†	-498.0	157.4	3.5032	ug/L	3.5032	ppb	00:09:37
1	Ba 233.527†	-25.7	-13.1	-0.0999	ug/L	-0.0999	ppb	00:09:37
1	Be 313.107†	-4578.0	223.7	0.0858	ug/L	0.0858	ppb	00:09:17
1	Cd 226.502†	-185.3	27.6	0.3017	ug/L	0.3017	ppb	00:09:37
1	Co 228.616†	-61.7	15.9	0.3215	ug/L	0.3215	ppb	00:09:37
1	Cr 267.716†	95.8	8.0	0.0888	ug/L	0.0888	ppb	00:09:37
1	Cu 324.752†	6435.2	-281.2	-0.8414	ug/L	-0.8414	ppb	00:09:17
1	Mn 257.610†	471.8	4.6	0.0082	ug/L	0.0082	ppb	00:09:37
1	Mo 202.031†	14.8	-9.6	-0.6780	ug/L	-0.6780	ppb	00:09:37
1	Ni 231.604†	68.2	-3.0	-0.0741	ug/L	-0.0741	ppb	00:09:37
1	P 214.914†	215.3	-24.8	-15.019	ug/L	-15.019	ppb	00:09:37
1	Pb 220.353†	-60.4	5.8	0.7027	ug/L	0.7027	ppb	00:09:37
1	S 181.975 Axial†	47.9	2.6	3.7238	ug/L	3.7238	ppb	00:09:37
1	Sb 206.836†	37.4	7.7	2.6143	ug/L	2.6143	ppb	00:09:37
1	Se 196.026†	-33.3	0.3	0.3294	ug/L	0.3294	ppb	00:09:37
1	Si 251.611†	550.1	-26.4	-0.8309	ug/L	-0.8309	ppb	00:09:37
1	Sn 189.927†	3.2	-4.6	-0.8184	ug/L	-0.8184	ppb	00:09:37
1	Ti 334.940†	-1287.2	148.2	0.2293	ug/L	0.2293	ppb	00:09:17
1	Tl 190.801†	-31.9	2.4	0.7458	ug/L	0.7458	ppb	00:09:37
1	U 409.014†	-1889.2	211.7	6.2388	ug/L	6.2388	ppb	00:09:12
1	V 292.402†	-1336.2	36.7	0.2452	ug/L	0.2452	ppb	00:09:17
1	Zn 213.857†	625.3	-24.5	-0.2357	ug/L	-0.2357	ppb	00:09:37
1	SiO2†	554.3	-43.6	-2.9567	ug/L	-2.9567	ppb	00:10:43
2	Sc Radial	5145.7	5145.7	102	%			00:08:20
2	Y RADIAL	5534.4	5534.4	101.9	%			00:08:20
2	Al 396.153Radial†	-12.7	-11.8	-9.1278	ug/L	-9.1278	ppb	00:08:20
2	Ca 317.933Radial†	17.0	-3.2	-5.0466	ug/L	-5.0466	ppb	00:08:40
2	Fe 238.204 Radial†	13.0	3.8	33.312	ug/L	33.312	ppb	00:08:40
2	K 766.490 Radial†	2788.1	138.1	25.327	ug/L	25.327	ppb	00:08:20
2	Mg 279.077 IEC†	2.2	0.3	9.7783	ug/L	9.7783	ppb	00:08:40
2	Na 589.592 Radial†	-1375.4	-65.4	-19.594	ug/L	-19.594	ppb	00:08:20
2	Sr 421.552†	4.9	24.3	0.1570	ug/L	0.1570	ppb	00:08:20
2	Sc 361.383	877558.5	877558.5	102.95	%			00:09:42
2	Y 371.029	742412.1	742412.1	102.73	%			00:09:42
2	Ag 328.068†	416.9	47.0	0.2229	ug/L	0.2229	ppb	00:09:47
2	As 188.979†	-23.8	0.5	0.2213	ug/L	0.2213	ppb	00:10:07
2	B 249.677†	-511.3	135.2	3.0105	ug/L	3.0105	ppb	00:10:07
2	Ba 233.527†	-10.1	1.6	0.0131	ug/L	0.0131	ppb	00:10:07
2	Be 313.107†	-4609.7	107.8	0.0415	ug/L	0.0415	ppb	00:09:47
2	Cd 226.502†	-207.1	3.0	0.0302	ug/L	0.0302	ppb	00:10:07
2	Co 228.616†	-77.8	-0.9	-0.0188	ug/L	-0.0188	ppb	00:10:07
2	Cr 267.716†	70.6	-14.6	-0.1649	ug/L	-0.1649	ppb	00:10:07
2	Cu 324.752†	6486.9	-111.3	-0.3333	ug/L	-0.3333	ppb	00:09:47
2	Mn 257.610†	469.3	11.0	0.0155	ug/L	0.0155	ppb	00:10:07
2	Mo 202.031†	28.1	3.5	0.2527	ug/L	0.2527	ppb	00:10:07
2	Ni 231.604†	69.4	-0.6	-0.0146	ug/L	-0.0146	ppb	00:10:07

2	P 214.914†	213.5	-22.5	-13.714 ug/L	-13.714 ppb	00:10:07
2	Pb 220.353†	-64.0	1.2	0.1460 ug/L	0.1460 ppb	00:10:07
2	S 181.975 Axial†	53.1	8.5	12.086 ug/L	12.086 ppb	00:10:07
2	Sb 206.836†	38.8	9.7	3.3179 ug/L	3.3179 ppb	00:10:07
2	Se 196.026†	-31.2	1.8	1.2356 ug/L	1.2356 ppb	00:10:07
2	Si 251.611†	533.7	-32.1	-1.0244 ug/L	-1.0244 ppb	00:10:07
2	Sn 189.927†	1.2	-6.5	-1.1499 ug/L	-1.1499 ppb	00:10:07
2	Ti 334.940†	-1293.5	118.1	0.1871 ug/L	0.1871 ppb	00:09:47
2	Tl 190.801†	-37.2	-3.3	-1.0095 ug/L	-1.0095 ppb	00:10:07
2	U 409.014†	-1926.4	140.5	4.1407 ug/L	4.1407 ppb	00:09:42
2	V 292.402†	-1384.0	-34.6	-0.2296 ug/L	-0.2296 ppb	00:09:47
2	Zn 213.857†	622.6	-15.5	-0.1493 ug/L	-0.1493 ppb	00:10:07
2	SiO2†	560.9	-26.9	-1.8422 ug/L	-1.8422 ppb	00:10:48
3	Sc Radial	5153.8	5153.8	102 %		00:08:45
3	Y RADIAL	5526.8	5526.8	101.8 %		00:08:45
3	Al 396.153Radial†	-11.2	-10.3	-7.9427 ug/L	-7.9427 ppb	00:08:45
3	Ca 317.933Radial†	18.2	-2.0	-3.2424 ug/L	-3.2424 ppb	00:09:05
3	Fe 238.204 Radial†	9.6	0.5	4.5530 ug/L	4.5530 ppb	00:09:05
3	K 766.490 Radial†	2800.9	146.4	26.850 ug/L	26.850 ppb	00:08:45
3	Mg 279.077 IEC†	1.7	-0.2	-7.8287 ug/L	-7.8287 ppb	00:09:05
3	Na 589.592 Radial†	-1378.0	-65.8	-19.707 ug/L	-19.707 ppb	00:08:45
3	Sr 421.552†	25.4	44.3	0.2861 ug/L	0.2861 ppb	00:08:45
3	Sc 361.383	877479.9	877479.9	102.94 %		00:10:13
3	Y 371.029	743999.9	743999.9	102.95 %		00:10:13
3	Ag 328.068†	316.4	-50.6	-0.2330 ug/L	-0.2330 ppb	00:10:18
3	As 188.979†	-18.7	5.5	2.3747 ug/L	2.3747 ppb	00:10:38
3	B 249.677†	-524.9	121.9	2.7169 ug/L	2.7169 ppb	00:10:38
3	Ba 233.527†	-1.9	9.6	0.0752 ug/L	0.0752 ppb	00:10:38
3	Be 313.107†	-4567.3	148.6	0.0571 ug/L	0.0571 ppb	00:10:18
3	Cd 226.502†	-185.7	23.8	0.2633 ug/L	0.2633 ppb	00:10:38
3	Co 228.616†	-72.2	4.5	0.0925 ug/L	0.0925 ppb	00:10:38
3	Cr 267.716†	86.3	0.5	0.0054 ug/L	0.0054 ppb	00:10:38
3	Cu 324.752†	6508.6	-89.6	-0.2687 ug/L	-0.2687 ppb	00:10:18
3	Mn 257.610†	452.9	-4.9	-0.0047 ug/L	-0.0047 ppb	00:10:38
3	Mo 202.031†	25.2	0.8	0.0558 ug/L	0.0558 ppb	00:10:38
3	Ni 231.604†	63.6	-6.2	-0.1533 ug/L	-0.1533 ppb	00:10:38
3	P 214.914†	225.3	-11.0	-6.6683 ug/L	-6.6683 ppb	00:10:38
3	Pb 220.353†	-46.8	17.9	2.1910 ug/L	2.1910 ppb	00:10:38
3	S 181.975 Axial†	45.5	1.2	1.7422 ug/L	1.7422 ppb	00:10:38
3	Sb 206.836†	37.6	8.6	2.9519 ug/L	2.9519 ppb	00:10:38
3	Se 196.026†	-24.6	8.1	5.2503 ug/L	5.2503 ppb	00:10:38
3	Si 251.611†	550.7	-15.5	-0.4939 ug/L	-0.4939 ppb	00:10:38
3	Sn 189.927†	9.5	1.5	0.2723 ug/L	0.2723 ppb	00:10:38
3	Ti 334.940†	-1284.6	126.6	0.2035 ug/L	0.2035 ppb	00:10:18
3	Tl 190.801†	-34.4	-0.5	-0.1640 ug/L	-0.1640 ppb	00:10:38
3	U 409.014†	-2005.9	63.0	1.8583 ug/L	1.8583 ppb	00:10:13
3	V 292.402†	-1341.1	7.0	0.0510 ug/L	0.0510 ppb	00:10:18
3	Zn 213.857†	630.0	-8.2	-0.0767 ug/L	-0.0767 ppb	00:10:38
3	SiO2†	569.2	-18.7	-1.2790 ug/L	-1.2790 ppb	00:10:53

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	883241.7	103.62	%	1.163				1.12%
Sc Radial	5051.9	100	%	3.4				3.36%
Y 371.029	747901.8	103.49	%	1.131				1.09%
Y RADIAL	5419.7	99.82	%	3.536				3.54%
Ag 328.068†	5.3	0.0310	ug/L	0.23634	0.0310	ppb	0.23634	762.39%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-6.3	-4.8667	ug/L	6.38175	-4.8667	ppb	6.38175	131.13%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.9	1.6779	ug/L	1.26183	1.6779	ppb	1.26183	75.20%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	138.2	3.0769	ug/L	0.39729	3.0769	ppb	0.39729	12.91%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-0.6	-0.0039	ug/L	0.08877	-0.0039	ppb	0.08877	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	160.1	0.0615	ug/L	0.02246	0.0615	ppb	0.02246	36.54%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.2	-5.1370	ug/L	1.94135	-5.1370	ppb	1.94135	37.79%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	18.1	0.1984 ug/L	0.14693	0.1984 ppb	0.14693	74.05%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	6.5	0.1317 ug/L	0.17354	0.1317 ppb	0.17354	131.76%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-2.0	-0.0235 ug/L	0.12932	-0.0235 ppb	0.12932	549.13%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-160.7	-0.4811 ug/L	0.31364	-0.4811 ppb	0.31364	65.19%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	3.5	30.363 ug/L	24.4687	30.363 ppb	24.4687	80.59%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	193.6	35.519 ug/L	16.3513	35.519 ppb	16.3513	46.04%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	0.7	24.459 ug/L	41.6168	24.459 ppb	41.6168	170.15%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	3.6	0.0063 ug/L	0.01020	0.0063 ppb	0.01020	160.90%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	-1.8	-0.1232 ug/L	0.49044	-0.1232 ppb	0.49044	398.18%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	-63.4	-18.993 ug/L	1.1406	-18.993 ppb	1.1406	6.01%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	-3.2	-0.0807 ug/L	0.06957	-0.0807 ppb	0.06957	86.26%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-19.4	-11.800 ug/L	4.4921	-11.800 ppb	4.4921	38.07%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	8.3	1.0132 ug/L	1.05727	1.0132 ppb	1.05727	104.35%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	4.1	5.8506 ug/L	5.49002	5.8506 ppb	5.49002	93.84%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	8.7	2.9614 ug/L	0.35191	2.9614 ppb	0.35191	11.88%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	3.4	2.2718 ug/L	2.61899	2.2718 ppb	2.61899	115.28%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	-24.6	-0.7831 ug/L	0.26849	-0.7831 ppb	0.26849	34.29%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-3.2	-0.5654 ug/L	0.74407	-0.5654 ppb	0.74407	131.61%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	39.4	0.2547 ug/L	0.08635	0.2547 ppb	0.08635	33.90%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	131.0	0.2066 ug/L	0.02128	0.2066 ppb	0.02128	10.30%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	-0.5	-0.1426 ug/L	0.87784	-0.1426 ppb	0.87784	615.62%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	138.4	4.0793 ug/L	2.19090	4.0793 ppb	2.19090	53.71%
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	3.0	0.0222 ug/L	0.23871	0.0222 ppb	0.23871	>999.9%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-16.1	-0.1539 ug/L	0.07959	-0.1539 ppb	0.07959	51.71%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-29.7	-2.0260 ug/L	0.85383	-2.0260 ppb	0.85383	42.14%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 78
Sample ID: 1202004426|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 86
Date Collected: 1/12/2010 00:13:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004426|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5219.3	5219.3	104	%			00:14:57
1	Y RADIAL	5648.7	5648.7	104.0	%			00:14:57
1	Al 396.153Radial†	25.3	25.1	19.297	ug/L	19.297	ppb	00:14:57
1	Ca 317.933Radial†	23.6	2.9	4.7061	ug/L	4.7061	ppb	00:15:17
1	Fe 238.204 Radial†	16.9	7.4	64.115	ug/L	64.115	ppb	00:15:17
1	K 766.490 Radial†	2598.3	-83.5	-15.334	ug/L	-15.334	ppb	00:14:57
1	Mg 279.077 IEC†	-0.2	-2.1	-70.998	ug/L	-70.998	ppb	00:15:17
1	Na 589.592 Radial†	-1234.1	89.8	26.902	ug/L	26.902	ppb	00:14:57
1	Sr 421.552†	17.4	36.3	0.2346	ug/L	0.2346	ppb	00:14:57
1	Sc 361.383	857634.7	857634.7	100.61	%			00:16:13
1	Y 371.029	725814.9	725814.9	100.44	%			00:16:13
1	Ag 328.068†	283.8	-75.9	-0.3363	ug/L	-0.3363	ppb	00:16:13
1	As 188.979†	-20.2	3.5	1.5277	ug/L	1.5277	ppb	00:16:33
1	B 249.677†	-543.0	92.1	2.0474	ug/L	2.0474	ppb	00:16:33
1	Ba 233.527†	17.0	28.3	0.2226	ug/L	0.2226	ppb	00:16:33
1	Be 313.107†	-4524.7	88.3	0.0346	ug/L	0.0346	ppb	00:16:13
1	Cd 226.502†	-211.7	-6.3	-0.0744	ug/L	-0.0744	ppb	00:16:33
1	Co 228.616†	-82.6	-7.5	-0.1536	ug/L	-0.1536	ppb	00:16:33
1	Cr 267.716†	344.9	259.5	2.8979	ug/L	2.8979	ppb	00:16:33
1	Cu 324.752†	6421.4	-30.0	-0.0909	ug/L	-0.0909	ppb	00:16:13
1	Mn 257.610†	860.3	410.2	0.4648	ug/L	0.4648	ppb	00:16:33
1	Mo 202.031†	34.4	10.5	0.7462	ug/L	0.7462	ppb	00:16:33
1	Ni 231.604†	86.2	17.7	0.4412	ug/L	0.4412	ppb	00:16:33
1	P 214.914†	236.5	5.2	3.1415	ug/L	3.1415	ppb	00:16:33
1	Pb 220.353†	18.4	81.6	9.9942	ug/L	9.9942	ppb	00:16:33
1	S 181.975 Axial†	50.6	7.3	10.313	ug/L	10.313	ppb	00:16:33
1	Sb 206.836†	38.5	10.3	3.5452	ug/L	3.5452	ppb	00:16:33
1	Se 196.026†	-31.3	0.9	0.8085	ug/L	0.8085	ppb	00:16:33
1	Si 251.611†	1030.9	474.1	15.091	ug/L	15.091	ppb	00:16:33
1	Sn 189.927†	8.2	0.5	0.0953	ug/L	0.0953	ppb	00:16:33
1	Ti 334.940†	-1114.1	267.2	0.4321	ug/L	0.4321	ppb	00:16:13
1	Tl 190.801†	-37.0	-3.9	-1.1998	ug/L	-1.1998	ppb	00:16:33
1	U 409.014†	-1744.0	278.3	8.1952	ug/L	8.1952	ppb	00:16:13
1	V 292.402†	-1350.9	-33.0	-0.2110	ug/L	-0.2110	ppb	00:16:13
1	Zn 213.857†	848.8	223.4	2.1036	ug/L	2.1036	ppb	00:16:33
1	SiO2†	1063.7	485.5	33.109	ug/L	33.109	ppb	00:17:29
2	Sc Radial	5165.9	5165.9	103	%			00:15:22
2	Y RADIAL	5555.7	5555.7	102.3	%			00:15:22
2	Al 396.153Radial†	9.8	10.2	7.8020	ug/L	7.8020	ppb	00:15:22
2	Ca 317.933Radial†	27.1	6.6	10.634	ug/L	10.634	ppb	00:15:42
2	Fe 238.204 Radial†	15.2	5.9	50.905	ug/L	50.905	ppb	00:15:42
2	K 766.490 Radial†	2742.3	82.8	15.156	ug/L	15.156	ppb	00:15:22
2	Mg 279.077 IEC†	0.4	-1.5	-51.277	ug/L	-51.277	ppb	00:15:42
2	Na 589.592 Radial†	-1233.6	78.0	23.353	ug/L	23.353	ppb	00:15:22
2	Sr 421.552†	20.4	39.4	0.2545	ug/L	0.2545	ppb	00:15:22
2	Sc 361.383	869808.2	869808.2	102.04	%			00:16:39
2	Y 371.029	736453.0	736453.0	101.91	%			00:16:39
2	Ag 328.068†	227.8	-134.7	-0.6079	ug/L	-0.6079	ppb	00:16:39
2	As 188.979†	-34.6	-10.3	-4.4348	ug/L	-4.4348	ppb	00:16:59
2	B 249.677†	-521.0	121.3	2.6998	ug/L	2.6998	ppb	00:16:59
2	Ba 233.527†	11.2	22.3	0.1768	ug/L	0.1768	ppb	00:16:59
2	Be 313.107†	-4539.8	136.4	0.0532	ug/L	0.0532	ppb	00:16:39
2	Cd 226.502†	-196.8	11.2	0.1206	ug/L	0.1206	ppb	00:16:59
2	Co 228.616†	-87.0	-10.5	-0.2168	ug/L	-0.2168	ppb	00:16:59
2	Cr 267.716†	378.3	287.5	3.2121	ug/L	3.2121	ppb	00:16:59
2	Cu 324.752†	6413.6	-127.0	-0.3801	ug/L	-0.3801	ppb	00:16:39
2	Mn 257.610†	848.3	386.5	0.4362	ug/L	0.4362	ppb	00:16:59
2	Mo 202.031†	36.9	12.4	0.8811	ug/L	0.8811	ppb	00:16:59
2	Ni 231.604†	73.8	4.4	0.1098	ug/L	0.1098	ppb	00:16:59

2	P 214.914†	235.6	1.0	0.6689 ug/L	0.6689 ppb	00:16:59
2	Pb 220.353†	2.9	66.2	8.1013 ug/L	8.1013 ppb	00:16:59
2	S 181.975 Axial†	46.1	2.2	3.0833 ug/L	3.0833 ppb	00:16:59
2	Sb 206.836†	35.5	6.9	2.3955 ug/L	2.3955 ppb	00:16:59
2	Se 196.026†	-24.0	8.5	5.6149 ug/L	5.6149 ppb	00:16:59
2	Si 251.611†	1040.2	468.9	14.923 ug/L	14.923 ppb	00:16:59
2	Sn 189.927†	16.2	8.2	1.4497 ug/L	1.4497 ppb	00:16:59
2	Ti 334.940†	-1051.8	343.7	0.5556 ug/L	0.5556 ppb	00:16:39
2	Tl 190.801†	-35.6	-2.0	-0.6106 ug/L	-0.6106 ppb	00:16:59
2	U 409.014†	-1860.6	188.2	5.5401 ug/L	5.5401 ppb	00:16:39
2	V 292.402†	-1303.9	31.9	0.2312 ug/L	0.2312 ppb	00:16:39
2	Zn 213.857†	839.1	202.0	1.9056 ug/L	1.9056 ppb	00:16:59
2	SiO2†	1056.2	463.4	31.595 ug/L	31.595 ppb	00:17:34
3	Sc Radial	5217.4	5217.4	104 %		00:15:47
3	Y RADIAL	5599.3	5599.3	103.1 %		00:15:47
3	Al 396.153Radial†	3.5	4.0	3.0957 ug/L	3.0957 ppb	00:15:47
3	Ca 317.933Radial†	24.1	3.4	5.5019 ug/L	5.5019 ppb	00:16:07
3	Fe 238.204 Radial†	16.4	6.9	59.968 ug/L	59.968 ppb	00:16:07
3	K 766.490 Radial†	2787.5	100.0	18.320 ug/L	18.320 ppb	00:15:47
3	Mg 279.077 IEC†	2.8	0.8	27.945 ug/L	27.945 ppb	00:16:07
3	Na 589.592 Radial†	-1255.0	69.2	20.727 ug/L	20.727 ppb	00:15:47
3	Sr 421.552†	0.0	19.5	0.1261 ug/L	0.1261 ppb	00:15:47
3	Sc 361.383	867539.0	867539.0	101.78 %		00:17:04
3	Y 371.029	734746.2	734746.2	101.67 %		00:17:04
3	Ag 328.068†	298.5	-64.7	-0.2820 ug/L	-0.2820 ppb	00:17:04
3	As 188.979†	-19.8	4.2	1.8209 ug/L	1.8209 ppb	00:17:24
3	B 249.677†	-543.7	97.6	2.1707 ug/L	2.1707 ppb	00:17:24
3	Ba 233.527†	0.6	12.0	0.0947 ug/L	0.0947 ppb	00:17:24
3	Be 313.107†	-4527.2	137.2	0.0536 ug/L	0.0536 ppb	00:17:04
3	Cd 226.502†	-195.6	11.9	0.1262 ug/L	0.1262 ppb	00:17:24
3	Co 228.616†	-87.3	-11.1	-0.2304 ug/L	-0.2304 ppb	00:17:24
3	Cr 267.716†	362.1	272.5	3.0452 ug/L	3.0452 ppb	00:17:24
3	Cu 324.752†	6445.7	-79.0	-0.2339 ug/L	-0.2339 ppb	00:17:04
3	Mn 257.610†	865.9	405.9	0.4555 ug/L	0.4555 ppb	00:17:24
3	Mo 202.031†	28.1	3.9	0.2811 ug/L	0.2811 ppb	00:17:24
3	Ni 231.604†	69.0	-0.2	-0.0044 ug/L	-0.0044 ppb	00:17:24
3	P 214.914†	231.1	-2.8	-1.6836 ug/L	-1.6836 ppb	00:17:24
3	Pb 220.353†	3.2	66.6	8.1458 ug/L	8.1458 ppb	00:17:24
3	S 181.975 Axial†	58.6	14.5	20.586 ug/L	20.586 ppb	00:17:24
3	Sb 206.836†	34.2	5.7	1.9651 ug/L	1.9651 ppb	00:17:24
3	Se 196.026†	-27.2	5.3	3.6231 ug/L	3.6231 ppb	00:17:24
3	Si 251.611†	1025.1	456.7	14.542 ug/L	14.542 ppb	00:17:24
3	Sn 189.927†	9.1	1.3	0.2345 ug/L	0.2345 ppb	00:17:24
3	Ti 334.940†	-1021.8	370.6	0.5935 ug/L	0.5935 ppb	00:17:04
3	Tl 190.801†	-39.5	-6.0	-1.8338 ug/L	-1.8338 ppb	00:17:24
3	U 409.014†	-1989.9	56.4	1.6511 ug/L	1.6511 ppb	00:17:04
3	V 292.402†	-1411.0	-76.7	-0.5265 ug/L	-0.5265 ppb	00:17:04
3	Zn 213.857†	840.6	205.7	1.9403 ug/L	1.9403 ppb	00:17:24
3	SiO2†	1054.7	464.6	31.691 ug/L	31.691 ppb	00:17:39

Mean Data: 1202004426|936808|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	864994.0	101.48	%	0.759				0.75%
Sc Radial	5200.9	103	%	0.6				0.58%
Y 371.029	732338.0	101.34	%	0.791				0.78%
Y RADIAL	5601.2	103.2	%	0.86				0.83%
Ag 328.068†	-91.8	-0.4087	ug/L	0.17458	-0.4087	ppb	0.17458	42.72%
Al 396.153Radial†	13.1	10.065	ug/L	8.3342	10.065	ppb	8.3342	82.81%
As 188.979†	-0.9	-0.3621	ug/L	3.53013	-0.3621	ppb	3.53013	974.99%
B 249.677†	103.7	2.3060	ug/L	0.34657	2.3060	ppb	0.34657	15.03%
Ba 233.527†	20.9	0.1647	ug/L	0.06480	0.1647	ppb	0.06480	39.34%
Be 313.107†	120.6	0.0472	ug/L	0.01086	0.0472	ppb	0.01086	23.02%
Ca 317.933Radial†	4.3	6.9474	ug/L	3.21761	6.9474	ppb	3.21761	46.31%
Cd 226.502†	5.6	0.0575	ug/L	0.11426	0.0575	ppb	0.11426	198.88%
Co 228.616†	-9.7	-0.2003	ug/L	0.04096	-0.2003	ppb	0.04096	20.45%
Cr 267.716†	273.2	3.0518	ug/L	0.15719	3.0518	ppb	0.15719	5.15%
Cu 324.752†	-78.7	-0.2350	ug/L	0.14457	-0.2350	ppb	0.14457	61.53%
Fe 238.204 Radial†	6.7	58.329	ug/L	6.7555	58.329	ppb	6.7555	11.58%
K 766.490 Radial†	33.1	6.0477	ug/L	18.58428	6.0477	ppb	18.58428	307.29%

Mg 279.077 IEC†	-0.9	-31.443 ug/L	52.3687	-31.443 ppb	52.3687	166.55%
Mn 257.610†	400.8	0.4522 ug/L	0.01457	0.4522 ppb	0.01457	3.22%
Mo 202.031†	8.9	0.6361 ug/L	0.31480	0.6361 ppb	0.31480	49.49%
Na 589.592 Radial†	79.0	23.661 ug/L	3.0990	23.661 ppb	3.0990	13.10%
Ni 231.604†	7.3	0.1822 ug/L	0.23144	0.1822 ppb	0.23144	127.00%
P 214.914†	1.1	0.7089 ug/L	2.41283	0.7089 ppb	2.41283	340.35%
Pb 220.353†	71.4	8.7471 ug/L	1.08023	8.7471 ppb	1.08023	12.35%
S 181.975 Axial†	8.0	11.327 ug/L	8.7951	11.327 ppb	8.7951	77.64%
Sb 206.836†	7.6	2.6353 ug/L	0.81689	2.6353 ppb	0.81689	31.00%
Se 196.026†	4.9	3.3488 ug/L	2.41488	3.3488 ppb	2.41488	72.11%
Si 251.611†	466.6	14.852 ug/L	0.2810	14.852 ppb	0.2810	1.89%
Sn 189.927†	3.3	0.5932 ug/L	0.74507	0.5932 ppb	0.74507	125.61%
Sr 421.552†	31.8	0.2051 ug/L	0.06910	0.2051 ppb	0.06910	33.69%
Ti 334.940†	327.2	0.5271 ug/L	0.08439	0.5271 ppb	0.08439	16.01%
Tl 190.801†	-4.0	-1.2147 ug/L	0.61175	-1.2147 ppb	0.61175	50.36%
U 409.014†	174.3	5.1288 ug/L	3.29140	5.1288 ppb	3.29140	64.17%
V 292.402†	-25.9	-0.1688 ug/L	0.38064	-0.1688 ppb	0.38064	225.53%
Zn 213.857†	210.4	1.9832 ug/L	0.10573	1.9832 ppb	0.10573	5.33%
SiO2†	471.2	32.132 ug/L	0.8477	32.132 ppb	0.8477	2.64%

Sequence No.: 79
Sample ID: 1202004427|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 87
Date Collected: 1/12/2010 00:19:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004427|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5429.7	5429.7	108	%			00:22:05
1	Y RADIAL	6322.4	6322.4	116.4	%			00:22:05
1	Al 396.153Radial†	119799.4	111099.0	85688	ug/L	85688	ppb	00:21:45
1	Ca 317.933Radial†	63947.3	59283.0	94859	ug/L	94859	ppb	00:21:45
1	Fe 238.204 Radial†	23272.2	21573.1	186720	ug/L	186720	ppb	00:21:45
1	K 766.490 Radial†	236431.3	216669.2	39630	ug/L	39630	ppb	00:21:45
1	Mg 279.077 IEC†	1247.8	1155.3	38410	ug/L	38410	ppb	00:22:05
1	Na 589.592 Radial†	36207.0	34857.8	10437	ug/L	10437	ppb	00:21:45
1	Sr 421.552†	370861.9	343945.8	2220.8	ug/L	2220.8	ppb	00:21:45
1	Sc 361.383	889958.3	889958.3	104.41	%			00:23:07
1	Y 371.029	806857.2	806857.2	111.65	%			00:23:07
1	Ag 328.068†	58092.4	55282.7	318.52	ug/L	318.52	ppb	00:23:07
1	As 188.979†	2424.2	2345.5	1083.6	ug/L	1083.6	ppb	00:23:12
1	B 249.677†	67002.1	64806.2	1423.3	ug/L	1423.3	ppb	00:23:07
1	Ba 233.527†	259245.4	248315.5	1948.0	ug/L	1948.0	ppb	00:23:07
1	Be 313.107†	2096749.2	2012842.3	782.13	ug/L	782.13	ppb	00:23:07
1	Cd 226.502†	54999.8	52882.7	568.30	ug/L	568.30	ppb	00:23:12
1	Co 228.616†	45688.9	43835.2	881.54	ug/L	881.54	ppb	00:23:12
1	Cr 267.716†	210453.5	201488.2	2257.8	ug/L	2257.8	ppb	00:23:07
1	Cu 324.752†	639579.2	606173.8	1822.6	ug/L	1822.6	ppb	00:23:07
1	Mn 257.610†	4955476.6	4745888.3	5280.6	ug/L	5280.6	ppb	00:23:07
1	Mo 202.031†	7214.6	6886.4	500.59	ug/L	500.59	ppb	00:23:12
1	Ni 231.604†	52811.2	50514.4	1257.3	ug/L	1257.3	ppb	00:23:12
1	P 214.914†	14304.2	13470.6	7721.9	ug/L	7721.9	ppb	00:23:12
1	Pb 220.353†	7111.6	6874.8	844.18	ug/L	844.18	ppb	00:23:12
1	S 181.975 Axial†	3085.5	2912.3	4105.3	ug/L	4105.3	ppb	00:23:12
1	Sb 206.836†	3148.7	2987.9	1029.6	ug/L	1029.6	ppb	00:23:12
1	Se 196.026†	3959.2	3824.1	3066.0	ug/L	3066.0	ppb	00:23:12
1	Si 251.611†	1281765.8	1227119.1	39076	ug/L	39076	ppb	00:23:07
1	Sn 189.927†	6146.1	5879.1	1058.3	ug/L	1058.3	ppb	00:23:12
1	Ti 334.940†	4332928.2	4151433.7	6695.3	ug/L	6695.3	ppb	00:23:07
1	Tl 190.801†	3837.3	3708.2	1203.0	ug/L	1203.0	ppb	00:23:12
1	U 409.014†	-7344.3	-5022.7	-174.49	ug/L	-174.49	ppb	00:23:07
1	V 292.402†	186856.8	180280.3	1201.9	ug/L	1201.9	ppb	00:23:07
1	Zn 213.857†	668938.1	640085.6	6025.4	ug/L	6025.4	ppb	00:23:07
1	SiO2†	1283141.1	1228415.1	83803	ug/L	83803	ppb	00:23:46
2	Sc Radial	5472.1	5472.1	109	%			00:22:30
2	Y RADIAL	6379.5	6379.5	117.5	%			00:22:30
2	Al 396.153Radial†	120244.3	110646.9	85340	ug/L	85340	ppb	00:22:10
2	Ca 317.933Radial†	63998.6	58870.4	94198	ug/L	94198	ppb	00:22:10
2	Fe 238.204 Radial†	23335.1	21463.6	185770	ug/L	185770	ppb	00:22:10
2	K 766.490 Radial†	237092.7	215577.6	39430	ug/L	39430	ppb	00:22:10
2	Mg 279.077 IEC†	1252.9	1151.0	38267	ug/L	38267	ppb	00:22:30
2	Na 589.592 Radial†	36212.5	34602.5	10360	ug/L	10360	ppb	00:22:10
2	Sr 421.552†	371336.6	341715.7	2206.4	ug/L	2206.4	ppb	00:22:10
2	Sc 361.383	880514.5	880514.5	103.30	%			00:23:21
2	Y 371.029	800061.1	800061.1	110.71	%			00:23:21
2	Ag 328.068†	57440.1	55247.9	318.07	ug/L	318.07	ppb	00:23:21
2	As 188.979†	2282.1	2232.8	1034.6	ug/L	1034.6	ppb	00:23:26
2	B 249.677†	66193.0	64711.1	1421.3	ug/L	1421.3	ppb	00:23:21
2	Ba 233.527†	256349.3	248175.0	1946.9	ug/L	1946.9	ppb	00:23:21
2	Be 313.107†	2075918.1	2014215.5	782.64	ug/L	782.64	ppb	00:23:21
2	Cd 226.502†	53330.4	51831.5	556.71	ug/L	556.71	ppb	00:23:26
2	Co 228.616†	44122.1	42787.9	860.10	ug/L	860.10	ppb	00:23:26
2	Cr 267.716†	208382.3	201645.0	2259.5	ug/L	2259.5	ppb	00:23:21
2	Cu 324.752†	629941.4	603414.0	1814.3	ug/L	1814.3	ppb	00:23:21
2	Mn 257.610†	4896158.6	4739370.4	5273.3	ug/L	5273.3	ppb	00:23:21
2	Mo 202.031†	6948.5	6702.9	487.55	ug/L	487.55	ppb	00:23:26
2	Ni 231.604†	51046.4	49348.4	1228.3	ug/L	1228.3	ppb	00:23:26

2	P 214.914†	13756.9	13087.7	7490.0 ug/L	7490.0 ppb	00:23:26
2	Pb 220.353†	6858.2	6702.5	823.06 ug/L	823.06 ppb	00:23:26
2	S 181.975 Axial†	2975.1	2837.1	3999.0 ug/L	3999.0 ppb	00:23:26
2	Sb 206.836†	3012.3	2888.1	994.70 ug/L	994.70 ppb	00:23:26
2	Se 196.026†	3772.3	3683.8	2972.5 ug/L	2972.5 ppb	00:23:26
2	Si 251.611†	1265665.5	1224700.0	38999 ug/L	38999 ppb	00:23:21
2	Sn 189.927†	5917.4	5720.8	1030.1 ug/L	1030.1 ppb	00:23:26
2	Ti 334.940†	4280961.4	4145636.9	6685.9 ug/L	6685.9 ppb	00:23:21
2	Tl 190.801†	3722.9	3636.8	1181.1 ug/L	1181.1 ppb	00:23:26
2	U 409.014†	-7404.5	-5156.4	-178.33 ug/L	-178.33 ppb	00:23:21
2	V 292.402†	184898.9	180304.4	1202.0 ug/L	1202.0 ppb	00:23:21
2	Zn 213.857†	661207.4	639473.6	6019.9 ug/L	6019.9 ppb	00:23:21
2	SiO2†	1276274.8	1234949.3	84250 ug/L	84250 ppb	00:23:52
3	Sc Radial	5431.3	5431.3	108 %		00:22:56
3	Y RADIAL	6312.1	6312.1	116.3 %		00:22:56
3	Al 396.153Radial†	123015.6	114047.5	87963 ug/L	87963 ppb	00:22:36
3	Ca 317.933Radial†	65305.8	60524.8	96845 ug/L	96845 ppb	00:22:36
3	Fe 238.204 Radial†	23837.1	22090.3	191200 ug/L	191200 ppb	00:22:36
3	K 766.490 Radial†	242978.0	222672.9	40730 ug/L	40730 ppb	00:22:36
3	Mg 279.077 IEC†	1245.7	1152.9	38327 ug/L	38327 ppb	00:22:56
3	Na 589.592 Radial†	37207.0	35774.8	10711 ug/L	10711 ppb	00:22:36
3	Sr 421.552†	380979.8	353223.0	2280.7 ug/L	2280.7 ppb	00:22:36
3	Sc 361.383	891390.7	891390.7	104.57 %		00:23:35
3	Y 371.029	810302.3	810302.3	112.13 %		00:23:35
3	Ag 328.068†	58258.4	55352.0	320.27 ug/L	320.27 ppb	00:23:35
3	As 188.979†	2361.5	2281.8	1056.8 ug/L	1056.8 ppb	00:23:40
3	B 249.677†	67105.8	64802.2	1422.7 ug/L	1422.7 ppb	00:23:35
3	Ba 233.527†	259313.5	247981.5	1945.6 ug/L	1945.6 ppb	00:23:35
3	Be 313.107†	2102140.4	2014770.4	782.85 ug/L	782.85 ppb	00:23:35
3	Cd 226.502†	55035.2	52831.9	567.27 ug/L	567.27 ppb	00:23:40
3	Co 228.616†	45679.4	43755.9	879.86 ug/L	879.86 ppb	00:23:40
3	Cr 267.716†	210523.1	201230.8	2255.0 ug/L	2255.0 ppb	00:23:35
3	Cu 324.752†	639364.3	604983.9	1819.3 ug/L	1819.3 ppb	00:23:35
3	Mn 257.610†	4949901.4	4732929.6	5266.7 ug/L	5266.7 ppb	00:23:35
3	Mo 202.031†	7204.1	6865.2	499.43 ug/L	499.43 ppb	00:23:40
3	Ni 231.604†	52774.3	50397.8	1254.4 ug/L	1254.4 ppb	00:23:40
3	P 214.914†	14279.0	13424.5	7691.4 ug/L	7691.4 ppb	00:23:40
3	Pb 220.353†	7111.7	6863.9	842.94 ug/L	842.94 ppb	00:23:40
3	S 181.975 Axial†	3110.0	2930.9	4131.3 ug/L	4131.3 ppb	00:23:40
3	Sb 206.836†	3145.9	2980.4	1026.9 ug/L	1026.9 ppb	00:23:40
3	Se 196.026†	3933.3	3793.3	3060.6 ug/L	3060.6 ppb	00:23:40
3	Si 251.611†	1279134.5	1222630.0	38933 ug/L	38933 ppb	00:23:35
3	Sn 189.927†	6146.5	5870.0	1057.0 ug/L	1057.0 ppb	00:23:40
3	Ti 334.940†	4334466.3	4146235.3	6687.1 ug/L	6687.1 ppb	00:23:35
3	Tl 190.801†	3872.7	3736.1	1211.5 ug/L	1211.5 ppb	00:23:40
3	U 409.014†	-7325.3	-4993.2	-174.12 ug/L	-174.12 ppb	00:23:35
3	V 292.402†	187248.9	180367.7	1201.8 ug/L	1201.8 ppb	00:23:35
3	Zn 213.857†	667914.0	638076.8	6006.0 ug/L	6006.0 ppb	00:23:35
3	SiO2†	1285500.6	1228696.4	83823 ug/L	83823 ppb	00:23:58

Mean Data: 1202004427|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	887287.8	104.09	%	0.693				0.67%
Sc Radial	5444.3	108	%	0.5				0.44%
Y 371.029	805740.2	111.50	%	0.721				0.65%
Y RADIAL	6338.0	116.7	%	0.67				0.57%
Ag 328.068†	55294.2	318.95	ug/L	1.160	318.95	ppb	1.160	0.36%
Al 396.153Radial†	111931.1	86330	ug/L	1424.5	86330	ppb	1424.5	1.65%
As 188.979†	2286.7	1058.3	ug/L	24.55	1058.3	ppb	24.55	2.32%
B 249.677†	64773.2	1422.4	ug/L	1.01	1422.4	ppb	1.01	0.07%
Ba 233.527†	248157.4	1946.8	ug/L	1.22	1946.8	ppb	1.22	0.06%
Be 313.107†	2013942.8	782.54	ug/L	0.367	782.54	ppb	0.367	0.05%
Ca 317.933Radial†	59559.4	95301	ug/L	1377.9	95301	ppb	1377.9	1.45%
Cd 226.502†	52515.4	564.09	ug/L	6.413	564.09	ppb	6.413	1.14%
Co 228.616†	43459.7	873.84	ug/L	11.921	873.84	ppb	11.921	1.36%
Cr 267.716†	201454.7	2257.5	ug/L	2.28	2257.5	ppb	2.28	0.10%
Cu 324.752†	604857.3	1818.7	ug/L	4.18	1818.7	ppb	4.18	0.23%
Fe 238.204 Radial†	21709.0	187900	ug/L	2897.1	187900	ppb	2897.1	1.54%
K 766.490 Radial†	218306.6	39930	ug/L	700.0	39930	ppb	700.0	1.75%

Mg 279.077 IEC†	1153.1	38335 ug/L	72.2	38335 ppb	72.2	0.19%
Mn 257.610†	4739396.1	5273.5 ug/L	6.94	5273.5 ppb	6.94	0.13%
Mo 202.031†	6818.2	495.86 ug/L	7.217	495.86 ppb	7.217	1.46%
Na 589.592 Radial†	35078.3	10503 ug/L	184.6	10503 ppb	184.6	1.76%
Ni 231.604†	50086.9	1246.6 ug/L	15.98	1246.6 ppb	15.98	1.28%
P 214.914†	13327.6	7634.4 ug/L	126.02	7634.4 ppb	126.02	1.65%
Pb 220.353†	6813.8	836.73 ug/L	11.853	836.73 ppb	11.853	1.42%
S 181.975 Axial†	2893.4	4078.5 ug/L	70.11	4078.5 ppb	70.11	1.72%
Sb 206.836†	2952.1	1017.1 ug/L	19.41	1017.1 ppb	19.41	1.91%
Se 196.026†	3767.1	3033.0 ug/L	52.46	3033.0 ppb	52.46	1.73%
Si 251.611†	1224816.3	39003 ug/L	71.5	39003 ppb	71.5	0.18%
Sn 189.927†	5823.3	1048.5 ug/L	15.90	1048.5 ppb	15.90	1.52%
Sr 421.552†	346294.8	2236.0 ug/L	39.41	2236.0 ppb	39.41	1.76%
Ti 334.940†	4147768.6	6689.4 ug/L	5.10	6689.4 ppb	5.10	0.08%
Tl 190.801†	3693.7	1198.5 ug/L	15.68	1198.5 ppb	15.68	1.31%
U 409.014†	-5057.4	-175.65 ug/L	2.331	-175.65 ppb	2.331	1.33%
V 292.402†	180317.5	1201.9 ug/L	0.11	1201.9 ppb	0.11	0.01%
Zn 213.857†	639212.0	6017.1 ug/L	10.00	6017.1 ppb	10.00	0.17%
SiO2†	1230686.9	83959 ug/L	252.2	83959 ppb	252.2	0.30%

Sequence No.: 85
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/12/2010 01:01:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5098.8	5098.8	101	%			01:03:42
1	Y RADIAL	5390.1	5390.1	99.28	%			01:03:42
1	Al 396.153Radial†	6567.4	6486.3	4978.6	ug/L	4978.6	ppb	01:03:42
1	Ca 317.933Radial†	3258.2	3197.8	5116.9	ug/L	5116.9	ppb	01:04:02
1	Fe 238.204 Radial†	624.2	607.6	5273.6	ug/L	5273.6	ppb	01:04:02
1	K 766.490 Radial†	30383.1	27414.4	5008.5	ug/L	5008.5	ppb	01:03:42
1	Mg 279.077 IEC†	161.6	157.7	5270.0	ug/L	5270.0	ppb	01:04:02
1	Na 589.592 Radial†	33325.7	34191.0	10237	ug/L	10237	ppb	01:03:42
1	Sr 421.552†	78757.5	77795.9	502.44	ug/L	502.44	ppb	01:03:42
1	Sc 361.383	861945.3	861945.3	101.12	%			01:04:59
1	Y 371.029	717319.5	717319.5	99.260	%			01:04:59
1	Ag 328.068†	115908.6	114266.8	529.42	ug/L	529.42	ppb	01:05:05
1	As 188.979†	1186.6	1197.0	520.93	ug/L	520.93	ppb	01:05:25
1	B 249.677†	22724.7	23104.8	513.05	ug/L	513.05	ppb	01:05:05
1	Ba 233.527†	67545.0	66808.2	522.88	ug/L	522.88	ppb	01:05:05
1	Be 313.107†	1377764.2	1367088.9	522.09	ug/L	522.09	ppb	01:04:59
1	Cd 226.502†	47488.6	47166.7	523.28	ug/L	523.28	ppb	01:05:05
1	Co 228.616†	25889.6	25677.5	525.68	ug/L	525.68	ppb	01:05:05
1	Cr 267.716†	47279.1	46672.2	522.43	ug/L	522.43	ppb	01:05:05
1	Cu 324.752†	181455.9	173033.8	517.40	ug/L	517.40	ppb	01:05:05
1	Mn 257.610†	474592.8	468891.1	520.19	ug/L	520.19	ppb	01:04:59
1	Mo 202.031†	7552.2	7444.9	526.59	ug/L	526.59	ppb	01:05:25
1	Ni 231.604†	21354.7	21050.2	523.84	ug/L	523.84	ppb	01:05:05
1	P 214.914†	4516.6	4236.7	2479.6	ug/L	2479.6	ppb	01:05:25
1	Pb 220.353†	4250.3	4266.6	524.14	ug/L	524.14	ppb	01:05:25
1	S 181.975 Axial†	807.0	755.1	1067.6	ug/L	1067.6	ppb	01:05:25
1	Sb 206.836†	1543.3	1498.3	532.07	ug/L	532.07	ppb	01:05:25
1	Se 196.026†	777.2	800.6	534.59	ug/L	534.59	ppb	01:05:25
1	Si 251.611†	85139.9	83646.4	2657.5	ug/L	2657.5	ppb	01:05:05
1	Sn 189.927†	3013.5	2972.4	527.42	ug/L	527.42	ppb	01:05:25
1	Ti 334.940†	327541.4	325287.9	523.80	ug/L	523.80	ppb	01:04:59
1	Tl 190.801†	1676.6	1690.9	521.97	ug/L	521.97	ppb	01:05:25
1	U 409.014†	16470.1	18299.3	538.06	ug/L	538.06	ppb	01:05:05
1	V 292.402†	75789.9	76260.2	527.97	ug/L	527.97	ppb	01:05:05
1	Zn 213.857†	56569.0	55322.2	518.70	ug/L	518.70	ppb	01:05:05
1	SiO2†	84309.7	82804.2	5635.5	ug/L	5635.5	ppb	01:06:32
2	Sc Radial	5118.7	5118.7	102	%			01:04:07
2	Y RADIAL	5463.1	5463.1	100.6	%			01:04:07
2	Al 396.153Radial†	6668.7	6560.7	5036.0	ug/L	5036.0	ppb	01:04:07
2	Ca 317.933Radial†	3278.9	3205.7	5129.4	ug/L	5129.4	ppb	01:04:27
2	Fe 238.204 Radial†	631.5	612.3	5314.8	ug/L	5314.8	ppb	01:04:27
2	K 766.490 Radial†	30706.8	27616.3	5045.5	ug/L	5045.5	ppb	01:04:07
2	Mg 279.077 IEC†	167.5	162.9	5443.0	ug/L	5443.0	ppb	01:04:27
2	Na 589.592 Radial†	33583.3	34316.5	10275	ug/L	10275	ppb	01:04:07
2	Sr 421.552†	79896.0	78613.5	507.72	ug/L	507.72	ppb	01:04:07
2	Sc 361.383	852215.9	852215.9	99.979	%			01:05:30
2	Y 371.029	708783.1	708783.1	98.079	%			01:05:30
2	Ag 328.068†	114006.4	113672.7	526.69	ug/L	526.69	ppb	01:05:36
2	As 188.979†	1180.2	1204.1	524.01	ug/L	524.01	ppb	01:05:56
2	B 249.677†	22310.5	22947.2	509.54	ug/L	509.54	ppb	01:05:36
2	Ba 233.527†	66411.8	66437.4	519.99	ug/L	519.99	ppb	01:05:36
2	Be 313.107†	1365750.7	1370628.0	523.44	ug/L	523.44	ppb	01:05:30
2	Cd 226.502†	46670.4	46884.5	520.14	ug/L	520.14	ppb	01:05:36
2	Co 228.616†	25433.1	25513.2	522.32	ug/L	522.32	ppb	01:05:36
2	Cr 267.716†	46589.2	46515.9	520.68	ug/L	520.68	ppb	01:05:36
2	Cu 324.752†	178160.9	171786.8	513.67	ug/L	513.67	ppb	01:05:36
2	Mn 257.610†	470958.8	470614.6	522.10	ug/L	522.10	ppb	01:05:30
2	Mo 202.031†	7469.1	7447.0	526.74	ug/L	526.74	ppb	01:05:56
2	Ni 231.604†	21007.7	20944.3	521.20	ug/L	521.20	ppb	01:05:36

2	P 214.914†	4498.5	4269.6	2500.5 ug/L	2500.5 ppb	01:05:56
2	Pb 220.353†	4205.7	4270.0	524.56 ug/L	524.56 ppb	01:05:56
2	S 181.975 Axial†	797.3	754.5	1066.7 ug/L	1066.7 ppb	01:05:56
2	Sb 206.836†	1528.8	1501.2	533.05 ug/L	533.05 ppb	01:05:56
2	Se 196.026†	780.8	813.0	542.71 ug/L	542.71 ppb	01:05:56
2	Si 251.611†	83531.4	82998.8	2636.9 ug/L	2636.9 ppb	01:05:36
2	Sn 189.927†	2975.7	2968.7	526.77 ug/L	526.77 ppb	01:05:56
2	Ti 334.940†	325116.6	326560.6	525.84 ug/L	525.84 ppb	01:05:30
2	Tl 190.801†	1675.0	1708.2	527.31 ug/L	527.31 ppb	01:05:56
2	U 409.014†	16151.4	18166.5	534.14 ug/L	534.14 ppb	01:05:36
2	V 292.402†	74626.6	75952.2	525.86 ug/L	525.86 ppb	01:05:36
2	Zn 213.857†	55618.5	55010.1	515.76 ug/L	515.76 ppb	01:05:36
2	SiO2†	83052.4	82498.4	5614.7 ug/L	5614.7 ppb	01:06:37
3	Sc Radial	5179.2	5179.2	103 %		01:04:32
3	Y RADIAL	5471.6	5471.6	100.8 %		01:04:32
3	Al 396.153Radial†	6718.8	6532.9	5015.0 ug/L	5015.0 ppb	01:04:32
3	Ca 317.933Radial†	3234.8	3125.2	5000.6 ug/L	5000.6 ppb	01:04:52
3	Fe 238.204 Radial†	613.9	587.9	5103.4 ug/L	5103.4 ppb	01:04:52
3	K 766.490 Radial†	30891.9	27443.7	5014.1 ug/L	5014.1 ppb	01:04:32
3	Mg 279.077 IEC†	160.1	153.7	5136.4 ug/L	5136.4 ppb	01:04:52
3	Na 589.592 Radial†	33482.3	33832.7	10130 ug/L	10130 ppb	01:04:32
3	Sr 421.552†	80010.0	77807.2	502.51 ug/L	502.51 ppb	01:04:32
3	Sc 361.383	870721.9	870721.9	102.15 %		01:06:02
3	Y 371.029	724682.4	724682.4	100.28 %		01:06:02
3	Ag 328.068†	114641.7	111871.1	518.30 ug/L	518.30 ppb	01:06:07
3	As 188.979†	1182.8	1181.5	514.19 ug/L	514.19 ppb	01:06:27
3	B 249.677†	22394.9	22555.4	500.86 ug/L	500.86 ppb	01:06:07
3	Ba 233.527†	66760.5	65367.0	511.61 ug/L	511.61 ppb	01:06:07
3	Be 313.107†	1389334.0	1364681.6	521.17 ug/L	521.17 ppb	01:06:02
3	Cd 226.502†	46969.1	46184.8	512.39 ug/L	512.39 ppb	01:06:07
3	Co 228.616†	25538.5	25075.7	513.35 ug/L	513.35 ppb	01:06:07
3	Cr 267.716†	47017.5	45944.8	514.29 ug/L	514.29 ppb	01:06:07
3	Cu 324.752†	179184.2	169001.2	505.34 ug/L	505.34 ppb	01:06:07
3	Mn 257.610†	477661.9	467164.9	518.26 ug/L	518.26 ppb	01:06:02
3	Mo 202.031†	7496.1	7314.6	517.37 ug/L	517.37 ppb	01:06:27
3	Ni 231.604†	21147.6	20634.6	513.50 ug/L	513.50 ppb	01:06:07
3	P 214.914†	4488.7	4164.3	2438.0 ug/L	2438.0 ppb	01:06:27
3	Pb 220.353†	4209.3	4184.1	514.04 ug/L	514.04 ppb	01:06:27
3	S 181.975 Axial†	796.9	737.1	1042.2 ug/L	1042.2 ppb	01:06:27
3	Sb 206.836†	1540.6	1480.2	525.53 ug/L	525.53 ppb	01:06:27
3	Se 196.026†	789.5	804.9	536.77 ug/L	536.77 ppb	01:06:27
3	Si 251.611†	84003.8	81685.5	2595.2 ug/L	2595.2 ppb	01:06:07
3	Sn 189.927†	2995.5	2924.8	518.96 ug/L	518.96 ppb	01:06:27
3	Ti 334.940†	330906.5	325317.3	523.85 ug/L	523.85 ppb	01:06:02
3	Tl 190.801†	1669.9	1667.6	514.86 ug/L	514.86 ppb	01:06:27
3	U 409.014†	16159.7	17831.2	524.28 ug/L	524.28 ppb	01:06:07
3	V 292.402†	75057.2	74787.3	517.78 ug/L	517.78 ppb	01:06:07
3	Zn 213.857†	55985.4	54186.9	508.06 ug/L	508.06 ppb	01:06:07
3	SiO2†	82319.9	80015.9	5445.5 ug/L	5445.5 ppb	01:06:43

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	861627.7	101.08	%	1.086				1.07%
Sc Radial	5132.2	102	%	0.8				0.82%
Y 371.029	716928.3	99.206	%	1.1010				1.11%
Y RADIAL	5441.6	100.2	%	0.82				0.82%
Ag 328.068†	113270.2	524.80	ug/L	5.792	524.80	ppb	5.792	1.10%
QC value within limits for Ag 328.068 Recovery = 104.96%								
Al 396.153Radial†	6526.6	5009.8	ug/L	29.05	5009.8	ppb	29.05	0.58%
QC value within limits for Al 396.153Radial Recovery = 100.20%								
As 188.979†	1194.2	519.71	ug/L	5.025	519.71	ppb	5.025	0.97%
QC value within limits for As 188.979 Recovery = 103.94%								
B 249.677†	22869.1	507.82	ug/L	6.278	507.82	ppb	6.278	1.24%
QC value within limits for B 249.677 Recovery = 101.56%								
Ba 233.527†	66204.2	518.16	ug/L	5.858	518.16	ppb	5.858	1.13%
QC value within limits for Ba 233.527 Recovery = 103.63%								
Be 313.107†	1367466.2	522.24	ug/L	1.142	522.24	ppb	1.142	0.22%
QC value within limits for Be 313.107 Recovery = 104.45%								
Ca 317.933Radial†	3176.2	5082.3	ug/L	71.04	5082.3	ppb	71.04	1.40%

QC value within limits for Ca 317.933Radial Recovery = 101.65%

Cd 226.502†	46745.3	518.60 ug/L	5.604	518.60 ppb	5.604	1.08%
QC value within limits for Cd 226.502 Recovery = 103.72%						
Co 228.616†	25422.2	520.45 ug/L	6.378	520.45 ppb	6.378	1.23%
QC value within limits for Co 228.616 Recovery = 104.09%						
Cr 267.716†	46377.6	519.13 ug/L	4.288	519.13 ppb	4.288	0.83%
QC value within limits for Cr 267.716 Recovery = 103.83%						
Cu 324.752†	171273.9	512.14 ug/L	6.175	512.14 ppb	6.175	1.21%
QC value within limits for Cu 324.752 Recovery = 102.43%						
Fe 238.204 Radial†	602.6	5230.6 ug/L	112.07	5230.6 ppb	112.07	2.14%
QC value within limits for Fe 238.204 Radial Recovery = 104.61%						
K 766.490 Radial†	27491.5	5022.7 ug/L	19.93	5022.7 ppb	19.93	0.40%
QC value within limits for K 766.490 Radial Recovery = 100.45%						
Mg 279.077 IEC†	158.1	5283.1 ug/L	153.69	5283.1 ppb	153.69	2.91%
QC value within limits for Mg 279.077 IEC Recovery = 105.66%						
Mn 257.610†	468890.2	520.18 ug/L	1.918	520.18 ppb	1.918	0.37%
QC value within limits for Mn 257.610 Recovery = 104.04%						
Mo 202.031†	7402.1	523.56 ug/L	5.367	523.56 ppb	5.367	1.03%
QC value within limits for Mo 202.031 Recovery = 104.71%						
Na 589.592 Radial†	34113.4	10214 ug/L	75.2	10214 ppb	75.2	0.74%
QC value within limits for Na 589.592 Radial Recovery = 102.14%						
Ni 231.604†	20876.4	519.51 ug/L	5.374	519.51 ppb	5.374	1.03%
QC value within limits for Ni 231.604 Recovery = 103.90%						
P 214.914†	4223.5	2472.7 ug/L	31.78	2472.7 ppb	31.78	1.29%
QC value within limits for P 214.914 Recovery = 98.91%						
Pb 220.353†	4240.2	520.91 ug/L	5.955	520.91 ppb	5.955	1.14%
QC value within limits for Pb 220.353 Recovery = 104.18%						
S 181.975 Axial†	748.9	1058.9 ug/L	14.43	1058.9 ppb	14.43	1.36%
QC value within limits for S 181.975 Axial Recovery = 105.89%						
Sb 206.836†	1493.2	530.22 ug/L	4.088	530.22 ppb	4.088	0.77%
QC value within limits for Sb 206.836 Recovery = 106.04%						
Se 196.026†	806.1	538.03 ug/L	4.201	538.03 ppb	4.201	0.78%
QC value within limits for Se 196.026 Recovery = 107.61%						
Si 251.611†	82776.9	2629.9 ug/L	31.76	2629.9 ppb	31.76	1.21%
QC value within limits for Si 251.611 Recovery = 105.19%						
Sn 189.927†	2955.3	524.38 ug/L	4.707	524.38 ppb	4.707	0.90%
QC value within limits for Sn 189.927 Recovery = 104.88%						
Sr 421.552†	78072.2	504.22 ug/L	3.028	504.22 ppb	3.028	0.60%
QC value within limits for Sr 421.552 Recovery = 100.84%						
Ti 334.940†	325721.9	524.50 ug/L	1.163	524.50 ppb	1.163	0.22%
QC value within limits for Ti 334.940 Recovery = 104.90%						
Tl 190.801†	1688.9	521.38 ug/L	6.246	521.38 ppb	6.246	1.20%
QC value within limits for Tl 190.801 Recovery = 104.28%						
U 409.014†	18099.0	532.16 ug/L	7.096	532.16 ppb	7.096	1.33%
QC value within limits for U 409.014 Recovery = 106.43%						
V 292.402†	75666.6	523.87 ug/L	5.379	523.87 ppb	5.379	1.03%
QC value within limits for V 292.402 Recovery = 104.77%						
Zn 213.857†	54839.8	514.17 ug/L	5.495	514.17 ppb	5.495	1.07%
QC value within limits for Zn 213.857 Recovery = 102.83%						
SiO2†	81772.8	5565.2 ug/L	104.20	5565.2 ppb	104.20	1.87%
QC value within limits for SiO2 Recovery = 104.07%						

All analyte(s) passed QC.

Sequence No.: 86
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/12/2010 01:08:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5207.8	5207.8	103	%			01:10:45
1	Y RADIAL	5584.2	5584.2	102.9	%			01:10:45
1	Al 396.153Radial†	-26.1	-24.6	-18.985	ug/L	-18.985	ppb	01:10:45
1	Ca 317.933Radial†	16.2	-4.1	-6.6397	ug/L	-6.6397	ppb	01:11:05
1	Fe 238.204 Radial†	10.6	1.4	11.932	ug/L	11.932	ppb	01:11:05
1	K 766.490 Radial†	2825.0	141.3	25.912	ug/L	25.912	ppb	01:10:45
1	Mg 279.077 IEC†	3.2	1.1	38.325	ug/L	38.325	ppb	01:11:05
1	Na 589.592 Radial†	-1322.2	2.0	0.6057	ug/L	0.6057	ppb	01:10:45
1	Sr 421.552†	-22.9	-2.6	-0.0170	ug/L	-0.0170	ppb	01:10:45
1	Sc 361.383	853415.9	853415.9	100.12	%			01:12:02
1	Y 371.029	723372.1	723372.1	100.10	%			01:12:02
1	Ag 328.068†	217.9	-140.3	-0.6493	ug/L	-0.6493	ppb	01:12:02
1	As 188.979†	-31.3	-7.6	-3.2919	ug/L	-3.2919	ppb	01:12:22
1	B 249.677†	-466.5	165.9	3.6963	ug/L	3.6963	ppb	01:12:22
1	Ba 233.527†	-12.2	-0.8	-0.0060	ug/L	-0.0060	ppb	01:12:22
1	Be 313.107†	-4588.6	2.2	0.0008	ug/L	0.0008	ppb	01:12:02
1	Cd 226.502†	-186.8	17.6	0.1951	ug/L	0.1951	ppb	01:12:22
1	Co 228.616†	-73.5	1.3	0.0267	ug/L	0.0267	ppb	01:12:22
1	Cr 267.716†	77.3	-6.1	-0.0708	ug/L	-0.0708	ppb	01:12:22
1	Cu 324.752†	6420.1	0.2	-0.0032	ug/L	-0.0032	ppb	01:12:02
1	Mn 257.610†	445.9	0.5	0.0004	ug/L	0.0004	ppb	01:12:22
1	Mo 202.031†	24.4	0.7	0.0476	ug/L	0.0476	ppb	01:12:22
1	Ni 231.604†	66.5	-1.6	-0.0386	ug/L	-0.0386	ppb	01:12:22
1	P 214.914†	220.3	-9.8	-6.0089	ug/L	-6.0089	ppb	01:12:22
1	Pb 220.353†	-75.1	-11.7	-1.4354	ug/L	-1.4354	ppb	01:12:22
1	S 181.975 Axial†	45.4	2.4	3.3828	ug/L	3.3828	ppb	01:12:22
1	Sb 206.836†	40.5	12.5	4.2770	ug/L	4.2770	ppb	01:12:22
1	Se 196.026†	-32.0	0.1	0.0981	ug/L	0.0981	ppb	01:12:22
1	Si 251.611†	518.4	-32.6	-1.0399	ug/L	-1.0399	ppb	01:12:22
1	Sn 189.927†	4.3	-3.4	-0.6009	ug/L	-0.6009	ppb	01:12:22
1	Ti 334.940†	-1389.1	-12.9	-0.0281	ug/L	-0.0281	ppb	01:12:02
1	Tl 190.801†	-31.6	1.3	0.3840	ug/L	0.3840	ppb	01:12:22
1	U 409.014†	-1745.3	268.4	7.9161	ug/L	7.9161	ppb	01:12:02
1	V 292.402†	-1328.6	-17.3	-0.1033	ug/L	-0.1033	ppb	01:12:02
1	Zn 213.857†	611.9	-9.1	-0.0868	ug/L	-0.0868	ppb	01:12:22
1	SiO2†	541.0	-31.3	-2.1376	ug/L	-2.1376	ppb	01:13:18
2	Sc Radial	5095.7	5095.7	101	%			01:11:10
2	Y RADIAL	5489.5	5489.5	101.1	%			01:11:10
2	Al 396.153Radial†	-15.3	-14.5	-11.169	ug/L	-11.169	ppb	01:11:10
2	Ca 317.933Radial†	14.3	-5.7	-9.0539	ug/L	-9.0539	ppb	01:11:30
2	Fe 238.204 Radial†	10.9	1.8	15.932	ug/L	15.932	ppb	01:11:30
2	K 766.490 Radial†	2686.9	64.9	11.898	ug/L	11.898	ppb	01:11:10
2	Mg 279.077 IEC†	2.7	0.7	24.711	ug/L	24.711	ppb	01:11:30
2	Na 589.592 Radial†	-1291.2	4.5	1.3594	ug/L	1.3594	ppb	01:11:10
2	Sr 421.552†	2.8	22.3	0.1440	ug/L	0.1440	ppb	01:11:10
2	Sc 361.383	846618.4	846618.4	99.322	%			01:12:27
2	Y 371.029	719089.1	719089.1	99.505	%			01:12:27
2	Ag 328.068†	281.0	-75.1	-0.3392	ug/L	-0.3392	ppb	01:12:27
2	As 188.979†	-17.5	6.0	2.5986	ug/L	2.5986	ppb	01:12:47
2	B 249.677†	-471.5	157.2	3.5022	ug/L	3.5022	ppb	01:12:47
2	Ba 233.527†	-10.4	1.0	0.0079	ug/L	0.0079	ppb	01:12:47
2	Be 313.107†	-4476.6	78.2	0.0296	ug/L	0.0296	ppb	01:12:27
2	Cd 226.502†	-192.7	10.1	0.1093	ug/L	0.1093	ppb	01:12:47
2	Co 228.616†	-76.8	-2.7	-0.0539	ug/L	-0.0539	ppb	01:12:47
2	Cr 267.716†	100.5	17.9	0.2012	ug/L	0.2012	ppb	01:12:47
2	Cu 324.752†	6325.3	-43.7	-0.1285	ug/L	-0.1285	ppb	01:12:27
2	Mn 257.610†	446.6	4.8	0.0061	ug/L	0.0061	ppb	01:12:47
2	Mo 202.031†	27.7	4.2	0.2946	ug/L	0.2946	ppb	01:12:47
2	Ni 231.604†	59.1	-8.5	-0.2113	ug/L	-0.2113	ppb	01:12:47

2	P 214.914†	217.8	-10.6	-6.4877 ug/L	-6.4877 ppb	01:12:47
2	Pb 220.353†	-64.0	-1.0	-0.1306 ug/L	-0.1306 ppb	01:12:47
2	S 181.975 Axial†	44.4	1.7	2.3992 ug/L	2.3992 ppb	01:12:47
2	Sb 206.836†	35.5	7.8	2.6593 ug/L	2.6593 ppb	01:12:47
2	Se 196.026†	-31.5	0.3	0.2524 ug/L	0.2524 ppb	01:12:47
2	Si 251.611†	506.9	-40.1	-1.2794 ug/L	-1.2794 ppb	01:12:47
2	Sn 189.927†	0.1	-7.5	-1.3327 ug/L	-1.3327 ppb	01:12:47
2	Ti 334.940†	-1424.8	-60.0	-0.0986 ug/L	-0.0986 ppb	01:12:27
2	Tl 190.801†	-45.4	-12.8	-3.9386 ug/L	-3.9386 ppb	01:12:47
2	U 409.014†	-2086.8	-89.5	-2.6416 ug/L	-2.6416 ppb	01:12:27
2	V 292.402†	-1329.3	-28.7	-0.1984 ug/L	-0.1984 ppb	01:12:27
2	Zn 213.857†	622.5	6.5	0.0616 ug/L	0.0616 ppb	01:12:47
2	SiO2†	535.8	-32.2	-2.2041 ug/L	-2.2041 ppb	01:13:23
3	Sc Radial	5106.8	5106.8	101 %		01:11:35
3	Y RADIAL	5506.5	5506.5	101.4 %		01:11:35
3	Al 396.153Radial†	-7.2	-6.5	-4.9928 ug/L	-4.9928 ppb	01:11:35
3	Ca 317.933Radial†	11.5	-8.4	-13.501 ug/L	-13.501 ppb	01:11:55
3	Fe 238.204 Radial†	10.4	1.4	11.898 ug/L	11.898 ppb	01:11:55
3	K 766.490 Radial†	2748.8	120.2	22.042 ug/L	22.042 ppb	01:11:35
3	Mg 279.077 IEC†	2.7	0.7	24.638 ug/L	24.638 ppb	01:11:55
3	Na 589.592 Radial†	-1311.6	-12.7	-3.8156 ug/L	-3.8156 ppb	01:11:35
3	Sr 421.552†	-5.7	13.9	0.0900 ug/L	0.0900 ppb	01:11:35
3	Sc 361.383	850728.9	850728.9	99.804 %		01:12:53
3	Y 371.029	721907.6	721907.6	99.895 %		01:12:53
3	Ag 328.068†	302.4	-55.0	-0.2501 ug/L	-0.2501 ppb	01:12:53
3	As 188.979†	-18.4	5.2	2.2358 ug/L	2.2358 ppb	01:13:13
3	B 249.677†	-500.4	130.4	2.9058 ug/L	2.9058 ppb	01:13:13
3	Ba 233.527†	-39.9	-28.6	-0.2229 ug/L	-0.2229 ppb	01:13:13
3	Be 313.107†	-4505.8	70.7	0.0267 ug/L	0.0267 ppb	01:12:53
3	Cd 226.502†	-184.6	19.2	0.2117 ug/L	0.2117 ppb	01:13:13
3	Co 228.616†	-66.0	8.6	0.1754 ug/L	0.1754 ppb	01:13:13
3	Cr 267.716†	87.5	4.4	0.0495 ug/L	0.0495 ppb	01:13:13
3	Cu 324.752†	6286.8	-113.1	-0.3377 ug/L	-0.3377 ppb	01:12:53
3	Mn 257.610†	456.5	12.5	0.0142 ug/L	0.0142 ppb	01:13:13
3	Mo 202.031†	24.4	0.8	0.0550 ug/L	0.0550 ppb	01:13:13
3	Ni 231.604†	68.3	0.5	0.0126 ug/L	0.0126 ppb	01:13:13
3	P 214.914†	227.6	-1.9	-1.0697 ug/L	-1.0697 ppb	01:13:13
3	Pb 220.353†	-58.0	5.3	0.6455 ug/L	0.6455 ppb	01:13:13
3	S 181.975 Axial†	51.5	8.6	12.106 ug/L	12.106 ppb	01:13:13
3	Sb 206.836†	26.9	-1.0	-0.3141 ug/L	-0.3141 ppb	01:13:13
3	Se 196.026†	-29.8	2.2	1.4408 ug/L	1.4408 ppb	01:13:13
3	Si 251.611†	510.6	-38.9	-1.2393 ug/L	-1.2393 ppb	01:13:13
3	Sn 189.927†	12.3	4.7	0.8252 ug/L	0.8252 ppb	01:13:13
3	Ti 334.940†	-1429.3	-57.6	-0.0966 ug/L	-0.0966 ppb	01:12:53
3	Tl 190.801†	-38.3	-5.5	-1.6875 ug/L	-1.6875 ppb	01:13:13
3	U 409.014†	-1995.2	12.5	0.3680 ug/L	0.3680 ppb	01:12:53
3	V 292.402†	-1332.2	-25.1	-0.1713 ug/L	-0.1713 ppb	01:12:53
3	Zn 213.857†	633.2	14.2	0.1332 ug/L	0.1332 ppb	01:13:13
3	SiO2†	512.7	-58.0	-3.9599 ug/L	-3.9599 ppb	01:13:28

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	850254.4	99.749	%	0.4016				0.40%
Sc Radial	5136.8	102	%	1.2				1.20%
Y 371.029	721456.3	99.832	%	0.3012				0.30%
Y RADIAL	5526.7	101.8	%	0.93				0.91%
Ag 328.068†	-90.1	-0.4129	ug/L	0.20956	-0.4129	ppb	0.20956	50.76%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-15.2	-11.715	ug/L	7.0119	-11.715	ppb	7.0119	59.85%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.2	0.5142	ug/L	3.30113	0.5142	ppb	3.30113	641.99%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	151.1	3.3681	ug/L	0.41195	3.3681	ppb	0.41195	12.23%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-9.5	-0.0737	ug/L	0.12945	-0.0737	ppb	0.12945	175.72%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	50.4	0.0190	ug/L	0.01585	0.0190	ppb	0.01585	83.27%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-6.1	-9.7316	ug/L	3.48049	-9.7316	ppb	3.48049	35.76%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              15.6      0.1720 ug/L       0.05492      0.1720 ppb       0.05492  31.92%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               2.4      0.0494 ug/L       0.11635      0.0494 ppb       0.11635 235.56%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               5.4      0.0600 ug/L       0.13631      0.0600 ppb       0.13631 227.30%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -52.2     -0.1565 ug/L       0.16902     -0.1565 ppb       0.16902 108.03%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.5      13.254 ug/L        2.3190      13.254 ppb        2.3190  17.50%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       108.8      19.951 ug/L        7.2371      19.951 ppb        7.2371  36.27%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.9      29.225 ug/L        7.8812      29.225 ppb        7.8812  26.97%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               5.9      0.0069 ug/L       0.00694      0.0069 ppb       0.00694 101.11%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               1.9      0.1324 ug/L       0.14053      0.1324 ppb       0.14053 106.15%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       -2.1     -0.6168 ug/L       2.79572     -0.6168 ppb       2.79572 453.25%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              -3.2     -0.0791 ug/L       0.11732     -0.0791 ppb       0.11732 148.29%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -7.4     -4.5221 ug/L       2.99940     -4.5221 ppb       2.99940  66.33%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -2.5     -0.3069 ug/L       1.05156     -0.3069 ppb       1.05156 342.70%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          4.2      5.9626 ug/L       5.34285      5.9626 ppb       5.34285  89.61%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               6.4      2.2074 ug/L       2.32868      2.2074 ppb       2.32868 105.49%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               0.9      0.5971 ug/L       0.73474      0.5971 ppb       0.73474 123.06%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             -37.2     -1.1862 ug/L       0.12829     -1.1862 ppb       0.12829  10.82%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -2.1     -0.3695 ug/L       1.09740     -0.3695 ppb       1.09740 297.02%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              11.2      0.0723 ug/L       0.08194      0.0723 ppb       0.08194 113.32%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -43.5     -0.0744 ug/L       0.04012     -0.0744 ppb       0.04012  53.90%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -5.7     -1.7474 ug/L       2.16194     -1.7474 ppb       2.16194 123.72%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               63.8      1.8808 ug/L       5.43897      1.8808 ppb       5.43897 289.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -23.7     -0.1577 ug/L       0.04903     -0.1577 ppb       0.04903  31.10%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               3.9      0.0360 ug/L       0.11225      0.0360 ppb       0.11225 311.83%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   -40.5     -2.7672 ug/L       1.03341     -2.7672 ppb       1.03341  37.35%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 89
Sample ID: 243492001|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 95
Date Collected: 1/12/2010 01:29:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492001|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5334.5	5334.5	106	%			01:32:05
1	Y RADIAL	6808.2	6808.2	125.4	%			01:32:05
1	Al 396.153Radial†	214802.0	202755.4	156420	ug/L	156420	ppb	01:31:45
1	Ca 317.933Radial†	19401.8	18293.9	29272	ug/L	29272	ppb	01:31:45
1	Fe 238.204 Radial†	25324.9	23895.6	206800	ug/L	206800	ppb	01:31:45
1	K 766.490 Radial†	167985.1	155973.5	28526	ug/L	28526	ppb	01:31:45
1	Mg 279.077 IEC†	915.2	862.0	28584	ug/L	28584	ppb	01:32:05
1	Na 589.592 Radial†	6123.1	7060.2	2113.9	ug/L	2113.9	ppb	01:31:45
1	Sr 421.552†	58888.6	55605.3	358.93	ug/L	358.93	ppb	01:31:45
1	Sc 361.383	874957.7	874957.7	102.65	%			01:33:09
1	Y 371.029	868284.1	868284.1	120.15	%			01:33:09
1	Ag 328.068†	-14357.0	-14344.8	2.5553	ug/L	2.5553	ppb	01:33:09
1	As 188.979†	-212.9	-183.8	15.984	ug/L	15.984	ppb	01:33:29
1	B 249.677†	2420.6	2990.0	45.373	ug/L	45.373	ppb	01:33:09
1	Ba 233.527†	276034.7	268928.9	2108.1	ug/L	2108.1	ppb	01:33:09
1	Be 313.107†	-38444.0	-32867.4	13.763	ug/L	13.763	ppb	01:33:09
1	Cd 226.502†	2023.8	2175.7	2.8178	ug/L	2.8178	ppb	01:33:29
1	Co 228.616†	5837.1	5761.3	91.569	ug/L	91.569	ppb	01:33:29
1	Cr 267.716†	16046.0	15549.0	178.75	ug/L	178.75	ppb	01:33:29
1	Cu 324.752†	42400.1	34894.7	115.42	ug/L	115.42	ppb	01:33:09
1	Mn 257.610†	5338298.8	5200212.4	5786.9	ug/L	5786.9	ppb	01:33:04
1	Mo 202.031†	-85.7	-107.2	6.9130	ug/L	6.9130	ppb	01:33:29
1	Ni 231.604†	5228.6	5025.8	125.07	ug/L	125.07	ppb	01:33:29
1	P 214.914†	2672.0	2373.2	1300.5	ug/L	1300.5	ppb	01:33:29
1	Pb 220.353†	1689.3	1709.1	223.22	ug/L	223.22	ppb	01:33:29
1	S 181.975 Axial†	1131.9	1059.7	1470.3	ug/L	1470.3	ppb	01:33:29
1	Sb 206.836†	128.7	97.5	-8.4703	ug/L	-8.4703	ppb	01:33:29
1	Se 196.026†	-964.9	-908.0	82.694	ug/L	82.694	ppb	01:33:29
1	Si 251.611†	1326820.3	1292059.4	41150	ug/L	41150	ppb	01:33:09
1	Sn 189.927†	-169.4	-172.7	-22.926	ug/L	-22.926	ppb	01:33:29
1	Ti 334.940†	7375480.2	7186687.0	11580	ug/L	11580	ppb	01:33:04
1	Tl 190.801†	-430.3	-386.3	-13.717	ug/L	-13.717	ppb	01:33:29
1	U 409.014†	-9954.4	-7686.1	-250.70	ug/L	-250.70	ppb	01:33:09
1	V 292.402†	73408.6	72825.6	453.20	ug/L	453.20	ppb	01:33:09
1	Zn 213.857†	47319.6	45479.3	409.15	ug/L	409.15	ppb	01:33:09
1	SiO2†	1345744.8	1310474.7	89416	ug/L	89416	ppb	01:34:41
2	Sc Radial	5334.6	5334.6	106	%			01:32:30
2	Y RADIAL	6792.6	6792.6	125.1	%			01:32:30
2	Al 396.153Radial†	214796.6	202747.7	156420	ug/L	156420	ppb	01:32:10
2	Ca 317.933Radial†	19388.1	18280.7	29251	ug/L	29251	ppb	01:32:10
2	Fe 238.204 Radial†	25303.2	23874.8	206620	ug/L	206620	ppb	01:32:10
2	K 766.490 Radial†	167468.7	155484.0	28436	ug/L	28436	ppb	01:32:10
2	Mg 279.077 IEC†	916.1	862.8	28612	ug/L	28612	ppb	01:32:30
2	Na 589.592 Radial†	6098.2	7036.6	2106.8	ug/L	2106.8	ppb	01:32:10
2	Sr 421.552†	58860.3	55577.9	358.75	ug/L	358.75	ppb	01:32:10
2	Sc 361.383	873228.9	873228.9	102.44	%			01:33:42
2	Y 371.029	866154.7	866154.7	119.86	%			01:33:42
2	Ag 328.068†	-14429.4	-14443.2	2.0451	ug/L	2.0451	ppb	01:33:42
2	As 188.979†	-218.6	-189.7	13.322	ug/L	13.322	ppb	01:34:02
2	B 249.677†	2350.7	2926.5	43.973	ug/L	43.973	ppb	01:33:42
2	Ba 233.527†	274845.9	268300.9	2103.2	ug/L	2103.2	ppb	01:33:42
2	Be 313.107†	-38126.9	-32632.1	13.828	ug/L	13.828	ppb	01:33:42
2	Cd 226.502†	2029.9	2185.6	2.9452	ug/L	2.9452	ppb	01:34:02
2	Co 228.616†	5865.0	5799.8	92.380	ug/L	92.380	ppb	01:34:02
2	Cr 267.716†	16039.3	15573.5	179.02	ug/L	179.02	ppb	01:34:02
2	Cu 324.752†	42123.5	34706.4	114.85	ug/L	114.85	ppb	01:33:42
2	Mn 257.610†	5320258.0	5192898.6	5778.8	ug/L	5778.8	ppb	01:33:36
2	Mo 202.031†	-85.8	-107.5	6.8833	ug/L	6.8833	ppb	01:34:02
2	Ni 231.604†	5229.2	5036.5	125.34	ug/L	125.34	ppb	01:34:02

2	P 214.914†	2679.9	2386.1	1308.6 ug/L	1308.6 ppb	01:34:02
2	Pb 220.353†	1692.8	1715.7	224.04 ug/L	224.04 ppb	01:34:02
2	S 181.975 Axial†	1120.1	1050.4	1457.2 ug/L	1457.2 ppb	01:34:02
2	Sb 206.836†	116.2	85.5	-12.497 ug/L	-12.497 ppb	01:34:02
2	Se 196.026†	-976.7	-921.4	73.489 ug/L	73.489 ppb	01:34:02
2	Si 251.611†	1322787.8	1290682.3	41106 ug/L	41106 ppb	01:33:42
2	Sn 189.927†	-148.2	-152.3	-19.328 ug/L	-19.328 ppb	01:34:02
2	Ti 334.940†	7353846.5	7179795.4	11568 ug/L	11568 ppb	01:33:36
2	Tl 190.801†	-449.7	-406.1	-19.919 ug/L	-19.919 ppb	01:34:02
2	U 409.014†	-10063.8	-7812.1	-254.40 ug/L	-254.40 ppb	01:33:42
2	V 292.402†	73175.8	72739.9	452.65 ug/L	452.65 ppb	01:33:42
2	Zn 213.857†	47214.0	45467.4	409.06 ug/L	409.06 ppb	01:33:42
2	SiO2†	1333694.3	1301307.4	88790 ug/L	88790 ppb	01:34:47
3	Sc Radial	5284.8	5284.8	105 %		01:32:55
3	Y RADIAL	6748.8	6748.8	124.3 %		01:32:55
3	Al 396.153Radial†	213601.2	203517.7	157010 ug/L	157010 ppb	01:32:35
3	Ca 317.933Radial†	19276.7	18346.9	29357 ug/L	29357 ppb	01:32:35
3	Fe 238.204 Radial†	25183.6	23985.8	207580 ug/L	207580 ppb	01:32:35
3	K 766.490 Radial†	166833.1	156366.7	28599 ug/L	28599 ppb	01:32:35
3	Mg 279.077 IEC†	904.0	859.4	28498 ug/L	28498 ppb	01:32:55
3	Na 589.592 Radial†	6082.4	7075.7	2118.6 ug/L	2118.6 ppb	01:32:35
3	Sr 421.552†	58427.5	55688.6	359.47 ug/L	359.47 ppb	01:32:35
3	Sc 361.383	880555.9	880555.9	103.30 %		01:34:15
3	Y 371.029	872828.8	872828.8	120.78 %		01:34:15
3	Ag 328.068†	-14576.2	-14468.1	2.2459 ug/L	2.2459 ppb	01:34:15
3	As 188.979†	-227.3	-196.5	9.9281 ug/L	9.9281 ppb	01:34:35
3	B 249.677†	2331.6	2888.9	43.041 ug/L	43.041 ppb	01:34:15
3	Ba 233.527†	277687.6	268819.3	2107.2 ug/L	2107.2 ppb	01:34:15
3	Be 313.107†	-38286.7	-32477.0	13.567 ug/L	13.567 ppb	01:34:15
3	Cd 226.502†	2041.5	2180.3	2.7856 ug/L	2.7856 ppb	01:34:35
3	Co 228.616†	5838.5	5726.5	91.164 ug/L	91.164 ppb	01:34:35
3	Cr 267.716†	16041.9	15445.6	177.62 ug/L	177.62 ppb	01:34:35
3	Cu 324.752†	42514.8	34743.1	115.01 ug/L	115.01 ppb	01:34:15
3	Mn 257.610†	5306189.2	5136066.0	5715.9 ug/L	5715.9 ppb	01:34:09
3	Mo 202.031†	-87.0	-107.9	6.9223 ug/L	6.9223 ppb	01:34:35
3	Ni 231.604†	5223.4	4988.4	124.14 ug/L	124.14 ppb	01:34:35
3	P 214.914†	2664.1	2349.1	1285.4 ug/L	1285.4 ppb	01:34:35
3	Pb 220.353†	1694.0	1703.2	222.55 ug/L	222.55 ppb	01:34:35
3	S 181.975 Axial†	1128.9	1049.8	1456.2 ug/L	1456.2 ppb	01:34:35
3	Sb 206.836†	128.6	96.5	-8.2694 ug/L	-8.2694 ppb	01:34:35
3	Se 196.026†	-966.8	-903.9	87.861 ug/L	87.861 ppb	01:34:35
3	Si 251.611†	1335406.3	1292153.0	41153 ug/L	41153 ppb	01:34:15
3	Sn 189.927†	-156.7	-159.4	-20.544 ug/L	-20.544 ppb	01:34:35
3	Ti 334.940†	7325312.0	7092441.9	11428 ug/L	11428 ppb	01:34:09
3	Tl 190.801†	-449.0	-401.8	-19.837 ug/L	-19.837 ppb	01:34:35
3	U 409.014†	-10355.8	-8013.0	-260.43 ug/L	-260.43 ppb	01:34:15
3	V 292.402†	73830.0	72778.8	452.90 ug/L	452.90 ppb	01:34:15
3	Zn 213.857†	47775.2	45627.2	410.48 ug/L	410.48 ppb	01:34:15
3	SiO2†	1339515.8	1296109.9	88436 ug/L	88436 ppb	01:34:53

Mean Data: 243492001|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	876247.5	102.80	%	0.449				0.44%
Sc Radial	5317.9	106	%	0.6				0.54%
Y 371.029	869089.2	120.26	%	0.472				0.39%
Y RADIAL	6783.2	124.9	%	0.57				0.45%
Ag 328.068†	-14418.7	2.2821	ug/L	0.25704	2.2821	ppb	0.25704	11.26%
Al 396.153Radial†	203006.9	156620	ug/L	341.3	156620	ppb	341.3	0.22%
As 188.979†	-190.0	13.078	ug/L	3.0354	13.078	ppb	3.0354	23.21%
B 249.677†	2935.1	44.129	ug/L	1.1740	44.129	ppb	1.1740	2.66%
Ba 233.527†	268683.0	2106.2	ug/L	2.63	2106.2	ppb	2.63	0.12%
Be 313.107†	-32658.8	13.719	ug/L	0.1356	13.719	ppb	0.1356	0.99%
Ca 317.933Radial†	18307.2	29293	ug/L	56.1	29293	ppb	56.1	0.19%
Cd 226.502†	2180.6	2.8495	ug/L	0.08440	2.8495	ppb	0.08440	2.96%
Co 228.616†	5762.5	91.704	ug/L	0.6194	91.704	ppb	0.6194	0.68%
Cr 267.716†	15522.7	178.46	ug/L	0.747	178.46	ppb	0.747	0.42%
Cu 324.752†	34781.4	115.09	ug/L	0.294	115.09	ppb	0.294	0.26%
Fe 238.204 Radial†	23918.8	207000	ug/L	510.4	207000	ppb	510.4	0.25%
K 766.490 Radial†	155941.4	28520	ug/L	81.4	28520	ppb	81.4	0.29%

Mg 279.077 IEC†	861.4	28565	ug/L	59.4	28565	ppb	59.4	0.21%
Mn 257.610†	5176392.4	5760.5	ug/L	38.87	5760.5	ppb	38.87	0.67%
Mo 202.031†	-107.5	6.9062	ug/L	0.02037	6.9062	ppb	0.02037	0.29%
Na 589.592 Radial†	7057.5	2113.1	ug/L	5.90	2113.1	ppb	5.90	0.28%
Ni 231.604†	5016.9	124.85	ug/L	0.629	124.85	ppb	0.629	0.50%
P 214.914†	2369.4	1298.2	ug/L	11.81	1298.2	ppb	11.81	0.91%
Pb 220.353†	1709.4	223.27	ug/L	0.749	223.27	ppb	0.749	0.34%
S 181.975 Axial†	1053.3	1461.2	ug/L	7.91	1461.2	ppb	7.91	0.54%
Sb 206.836†	93.2	-9.7457	ug/L	2.38515	-9.7457	ppb	2.38515	24.47%
Se 196.026†	-911.1	81.348	ug/L	7.2798	81.348	ppb	7.2798	8.95%
Si 251.611†	1291631.6	41136	ug/L	26.2	41136	ppb	26.2	0.06%
Sn 189.927†	-161.5	-20.933	ug/L	1.8299	-20.933	ppb	1.8299	8.74%
Sr 421.552†	55624.0	359.05	ug/L	0.372	359.05	ppb	0.372	0.10%
Ti 334.940†	7152974.7	11525	ug/L	84.6	11525	ppb	84.6	0.73%
Tl 190.801†	-398.1	-17.825	ug/L	3.5573	-17.825	ppb	3.5573	19.96%
U 409.014†	-7837.1	-255.18	ug/L	4.912	-255.18	ppb	4.912	1.92%
V 292.402†	72781.4	452.92	ug/L	0.277	452.92	ppb	0.277	0.06%
Zn 213.857†	45524.7	409.56	ug/L	0.797	409.56	ppb	0.797	0.19%
SiO2†	1302630.7	88881	ug/L	496.3	88881	ppb	496.3	0.56%

Sequence No.: 90
Sample ID: 243492002|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 96
Date Collected: 1/12/2010 01:37:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492002|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5259.0	5259.0	104	%			01:38:57
1	Y RADIAL	7067.9	7067.9	130.2	%			01:38:57
1	Al 396.153Radial†	34810.9	33330.9	25714	ug/L	25714	ppb	01:38:57
1	Ca 317.933Radial†	8625.9	8239.3	13184	ug/L	13184	ppb	01:38:57
1	Fe 238.204 Radial†	8431.4	8063.9	69788	ug/L	69788	ppb	01:38:57
1	K 766.490 Radial†	39671.3	35393.8	6449.8	ug/L	6449.8	ppb	01:38:57
1	Mg 279.077 IEC†	258.7	245.8	8139.2	ug/L	8139.2	ppb	01:39:17
1	Na 589.592 Radial†	10805.5	11626.3	3481.1	ug/L	3481.1	ppb	01:38:57
1	Sr 421.552†	14621.5	14019.1	90.450	ug/L	90.450	ppb	01:38:57
1	Sc 361.383	880328.5	880328.5	103.28	%			01:40:14
1	Y 371.029	924583.5	924583.5	127.94	%			01:40:14
1	Ag 328.068†	-4140.7	-4367.3	2.7721	ug/L	2.7721	ppb	01:40:19
1	As 188.979†	-44.3	-19.2	14.590	ug/L	14.590	ppb	01:40:39
1	B 249.677†	457.3	1074.6	16.678	ug/L	16.678	ppb	01:40:19
1	Ba 233.527†	47559.5	46062.0	362.29	ug/L	362.29	ppb	01:40:19
1	Be 313.107†	-14043.0	-9012.1	0.9805	ug/L	0.9805	ppb	01:40:19
1	Cd 226.502†	438.6	628.8	-0.2078	ug/L	-0.2078	ppb	01:40:39
1	Co 228.616†	3616.1	3576.0	68.214	ug/L	68.214	ppb	01:40:39
1	Cr 267.716†	18890.5	18207.9	205.08	ug/L	205.08	ppb	01:40:19
1	Cu 324.752†	16100.5	9177.5	31.273	ug/L	31.273	ppb	01:40:19
1	Mn 257.610†	2870465.5	2778948.3	3088.2	ug/L	3088.2	ppb	01:40:14
1	Mo 202.031†	208.5	178.2	17.526	ug/L	17.526	ppb	01:40:39
1	Ni 231.604†	4690.1	4473.3	111.34	ug/L	111.34	ppb	01:40:39
1	P 214.914†	2068.3	1772.8	1028.1	ug/L	1028.1	ppb	01:40:39
1	Pb 220.353†	500.3	547.8	66.139	ug/L	66.139	ppb	01:40:39
1	S 181.975 Axial†	584.3	522.7	734.91	ug/L	734.91	ppb	01:40:39
1	Sb 206.836†	67.3	37.3	5.9620	ug/L	5.9620	ppb	01:40:39
1	Se 196.026†	-309.9	-268.1	51.259	ug/L	51.259	ppb	01:40:39
1	Si 251.611†	803734.6	777683.7	24768	ug/L	24768	ppb	01:40:14
1	Sn 189.927†	-67.4	-72.9	-9.8537	ug/L	-9.8537	ppb	01:40:39
1	Ti 334.940†	1245013.3	1206886.8	1945.3	ug/L	1945.3	ppb	01:40:14
1	Tl 190.801†	-160.4	-122.5	-10.096	ug/L	-10.096	ppb	01:40:39
1	U 409.014†	-10666.0	-8316.0	-253.73	ug/L	-253.73	ppb	01:40:14
1	V 292.402†	9336.5	10350.0	57.730	ug/L	57.730	ppb	01:40:19
1	Zn 213.857†	31255.3	29643.4	272.86	ug/L	272.86	ppb	01:40:19
1	SiO2†	805494.0	779366.2	53177	ug/L	53177	ppb	01:41:48
2	Sc Radial	4992.4	4992.4	99.1	%			01:39:22
2	Y RADIAL	6727.1	6727.1	123.9	%			01:39:22
2	Al 396.153Radial†	33547.2	33836.4	26104	ug/L	26104	ppb	01:39:22
2	Ca 317.933Radial†	8308.4	8360.1	13377	ug/L	13377	ppb	01:39:22
2	Fe 238.204 Radial†	8105.0	8165.8	70670	ug/L	70670	ppb	01:39:22
2	K 766.490 Radial†	37936.3	35672.4	6500.8	ug/L	6500.8	ppb	01:39:22
2	Mg 279.077 IEC†	259.6	260.0	8611.9	ug/L	8611.9	ppb	01:39:42
2	Na 589.592 Radial†	10205.5	11573.7	3465.3	ug/L	3465.3	ppb	01:39:22
2	Sr 421.552†	13988.6	14128.4	91.154	ug/L	91.154	ppb	01:39:22
2	Sc 361.383	866986.7	866986.7	101.71	%			01:40:45
2	Y 371.029	909498.1	909498.1	125.85	%			01:40:45
2	Ag 328.068†	-4153.3	-4441.4	2.7228	ug/L	2.7228	ppb	01:40:50
2	As 188.979†	-44.5	-20.1	14.386	ug/L	14.386	ppb	01:41:10
2	B 249.677†	468.3	1092.2	16.979	ug/L	16.979	ppb	01:40:50
2	Ba 233.527†	47264.5	46480.6	365.59	ug/L	365.59	ppb	01:40:50
2	Be 313.107†	-13959.5	-9139.3	0.9330	ug/L	0.9330	ppb	01:40:50
2	Cd 226.502†	446.4	643.0	-0.1422	ug/L	-0.1422	ppb	01:41:10
2	Co 228.616†	3612.9	3626.8	69.239	ug/L	69.239	ppb	01:41:10
2	Cr 267.716†	18693.3	18295.5	206.08	ug/L	206.08	ppb	01:40:50
2	Cu 324.752†	15944.9	9264.4	31.583	ug/L	31.583	ppb	01:40:50
2	Mn 257.610†	2832739.4	2784628.3	3094.6	ug/L	3094.6	ppb	01:40:45
2	Mo 202.031†	198.3	171.2	17.094	ug/L	17.094	ppb	01:41:10
2	Ni 231.604†	4655.1	4508.9	112.23	ug/L	112.23	ppb	01:41:10

2	P 214.914†	2070.5	1805.8	1047.6	ug/L	1047.6 ppb	01:41:10
2	Pb 220.353†	490.4	545.5	65.855	ug/L	65.855 ppb	01:41:10
2	S 181.975 Axial†	583.0	530.2	745.47	ug/L	745.47 ppb	01:41:10
2	Sb 206.836†	46.1	17.3	-0.8893	ug/L	-0.8893 ppb	01:41:10
2	Se 196.026†	-315.2	-277.9	47.779	ug/L	47.779 ppb	01:41:10
2	Si 251.611†	792923.8	779030.9	24811	ug/L	24811 ppb	01:40:45
2	Sn 189.927†	-68.1	-74.6	-10.118	ug/L	-10.118 ppb	01:41:10
2	Ti 334.940†	1226403.7	1207141.6	1945.7	ug/L	1945.7 ppb	01:40:45
2	Tl 190.801†	-157.3	-121.8	-9.8781	ug/L	-9.8781 ppb	01:41:10
2	U 409.014†	-10718.8	-8526.9	-260.05	ug/L	-260.05 ppb	01:40:45
2	V 292.402†	9366.4	10518.5	58.735	ug/L	58.735 ppb	01:40:50
2	Zn 213.857†	31140.0	29995.8	276.10	ug/L	276.10 ppb	01:40:50
2	SiO2†	797651.2	783657.5	53470	ug/L	53470 ppb	01:41:54
3	Sc Radial	5075.1	5075.1	101	%		01:39:47
3	Y RADIAL	6837.8	6837.8	125.9	%		01:39:47
3	Al 396.153Radial†	33610.1	33347.4	25726	ug/L	25726 ppb	01:39:47
3	Ca 317.933Radial†	8368.6	8283.2	13254	ug/L	13254 ppb	01:39:47
3	Fe 238.204 Radial†	8114.4	8042.0	69598	ug/L	69598 ppb	01:39:47
3	K 766.490 Radial†	38271.5	35381.5	6447.5	ug/L	6447.5 ppb	01:39:47
3	Mg 279.077 IEC†	258.8	254.9	8443.7	ug/L	8443.7 ppb	01:40:07
3	Na 589.592 Radial†	10296.1	11495.9	3442.0	ug/L	3442.0 ppb	01:39:47
3	Sr 421.552†	14131.5	14040.3	90.586	ug/L	90.586 ppb	01:39:47
3	Sc 361.383	863438.2	863438.2	101.30	%		01:41:16
3	Y 371.029	906770.1	906770.1	125.48	%		01:41:16
3	Ag 328.068†	-4096.3	-4401.9	2.5585	ug/L	2.5585 ppb	01:41:22
3	As 188.979†	-40.6	-16.4	15.763	ug/L	15.763 ppb	01:41:42
3	B 249.677†	497.0	1122.5	17.762	ug/L	17.762 ppb	01:41:22
3	Ba 233.527†	47559.5	46962.8	369.32	ug/L	369.32 ppb	01:41:22
3	Be 313.107†	-14001.5	-9237.1	0.8930	ug/L	0.8930 ppb	01:41:22
3	Cd 226.502†	422.5	621.2	-0.2713	ug/L	-0.2713 ppb	01:41:42
3	Co 228.616†	3606.3	3634.9	69.424	ug/L	69.424 ppb	01:41:42
3	Cr 267.716†	18763.6	18440.4	207.68	ug/L	207.68 ppb	01:41:22
3	Cu 324.752†	16060.1	9442.5	32.058	ug/L	32.058 ppb	01:41:22
3	Mn 257.610†	2816785.8	2780324.7	3089.7	ug/L	3089.7 ppb	01:41:16
3	Mo 202.031†	195.6	169.4	16.888	ug/L	16.888 ppb	01:41:42
3	Ni 231.604†	4712.7	4584.5	114.11	ug/L	114.11 ppb	01:41:42
3	P 214.914†	2066.3	1810.0	1050.8	ug/L	1050.8 ppb	01:41:42
3	Pb 220.353†	510.6	567.5	68.568	ug/L	68.568 ppb	01:41:42
3	S 181.975 Axial†	581.5	531.1	746.78	ug/L	746.78 ppb	01:41:42
3	Sb 206.836†	58.9	30.2	3.5142	ug/L	3.5142 ppb	01:41:42
3	Se 196.026†	-297.4	-261.6	54.812	ug/L	54.812 ppb	01:41:42
3	Si 251.611†	787851.8	777227.7	24753	ug/L	24753 ppb	01:41:16
3	Sn 189.927†	-70.9	-77.6	-10.688	ug/L	-10.688 ppb	01:41:42
3	Ti 334.940†	1220633.7	1206400.9	1944.5	ug/L	1944.5 ppb	01:41:16
3	Tl 190.801†	-159.7	-124.8	-10.830	ug/L	-10.830 ppb	01:41:42
3	U 409.014†	-10609.7	-8462.4	-258.03	ug/L	-258.03 ppb	01:41:16
3	V 292.402†	9343.8	10534.1	59.004	ug/L	59.004 ppb	01:41:22
3	Zn 213.857†	31301.0	30280.6	278.88	ug/L	278.88 ppb	01:41:22
3	SiO2†	790291.0	779614.4	53194	ug/L	53194 ppb	01:42:00

Mean Data: 243492002|936808|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	870251.2	102.09	%	1.045				1.02%
Sc Radial	5108.8	101	%	2.7				2.67%
Y 371.029	913617.2	126.42	%	1.328				1.05%
Y RADIAL	6877.6	126.7	%	3.20				2.53%
Ag 328.068†	-4403.5	2.6845	ug/L	0.11183	2.6845	ppb	0.11183	4.17%
Al 396.153Radial†	33504.9	25848	ug/L	221.5	25848	ppb	221.5	0.86%
As 188.979†	-18.6	14.913	ug/L	0.7431	14.913	ppb	0.7431	4.98%
B 249.677†	1096.4	17.140	ug/L	0.5595	17.140	ppb	0.5595	3.26%
Ba 233.527†	46501.8	365.73	ug/L	3.516	365.73	ppb	3.516	0.96%
Be 313.107†	-9129.5	0.9355	ug/L	0.04382	0.9355	ppb	0.04382	4.68%
Ca 317.933Radial†	8294.2	13272	ug/L	97.9	13272	ppb	97.9	0.74%
Cd 226.502†	631.0	-0.2071	ug/L	0.06457	-0.2071	ppb	0.06457	31.18%
Co 228.616†	3612.6	68.959	ug/L	0.6518	68.959	ppb	0.6518	0.95%
Cr 267.716†	18314.6	206.28	ug/L	1.311	206.28	ppb	1.311	0.64%
Cu 324.752†	9294.8	31.638	ug/L	0.3953	31.638	ppb	0.3953	1.25%
Fe 238.204 Radial†	8090.5	70019	ug/L	571.8	70019	ppb	571.8	0.82%
K 766.490 Radial†	35482.6	6466.1	ug/L	30.10	6466.1	ppb	30.10	0.47%

Mg 279.077 IEC†	253.5	8398.3	ug/L	239.58	8398.3	ppb	239.58	2.85%
Mn 257.610†	2781300.4	3090.8	ug/L	3.33	3090.8	ppb	3.33	0.11%
Mo 202.031†	172.9	17.169	ug/L	0.3252	17.169	ppb	0.3252	1.89%
Na 589.592 Radial†	11565.3	3462.8	ug/L	19.66	3462.8	ppb	19.66	0.57%
Ni 231.604†	4522.2	112.56	ug/L	1.413	112.56	ppb	1.413	1.26%
P 214.914†	1796.2	1042.2	ug/L	12.30	1042.2	ppb	12.30	1.18%
Pb 220.353†	553.6	66.854	ug/L	1.4911	66.854	ppb	1.4911	2.23%
S 181.975 Axial†	528.0	742.39	ug/L	6.505	742.39	ppb	6.505	0.88%
Sb 206.836†	28.3	2.8623	ug/L	3.47187	2.8623	ppb	3.47187	121.30%
Se 196.026†	-269.2	51.283	ug/L	3.5165	51.283	ppb	3.5165	6.86%
Si 251.611†	777980.8	24777	ug/L	29.9	24777	ppb	29.9	0.12%
Sn 189.927†	-75.0	-10.220	ug/L	0.4262	-10.220	ppb	0.4262	4.17%
Sr 421.552†	14062.6	90.730	ug/L	0.3736	90.730	ppb	0.3736	0.41%
Ti 334.940†	1206809.8	1945.2	ug/L	0.61	1945.2	ppb	0.61	0.03%
Tl 190.801†	-123.0	-10.268	ug/L	0.4986	-10.268	ppb	0.4986	4.86%
U 409.014†	-8435.1	-257.27	ug/L	3.230	-257.27	ppb	3.230	1.26%
V 292.402†	10467.5	58.489	ug/L	0.6715	58.489	ppb	0.6715	1.15%
Zn 213.857†	29973.3	275.94	ug/L	3.016	275.94	ppb	3.016	1.09%
SiO2†	780879.4	53280	ug/L	164.4	53280	ppb	164.4	0.31%

Sequence No.: 91
Sample ID: 243492003|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 97
Date Collected: 1/12/2010 01:44:11
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492003|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5161.8	5161.8	103	%			01:46:24
1	Y RADIAL	5992.6	5992.6	110.4	%			01:46:24
1	Al 396.153Radial†	114969.0	112152.3	86524	ug/L	86524	ppb	01:46:04
1	Ca 317.933Radial†	13565.5	13213.3	21143	ug/L	21143	ppb	01:46:04
1	Fe 238.204 Radial†	13475.1	13136.0	113680	ug/L	113680	ppb	01:46:04
1	K 766.490 Radial†	88404.7	83648.2	15298	ug/L	15298	ppb	01:46:04
1	Mg 279.077 IEC†	554.5	539.0	17891	ug/L	17891	ppb	01:46:24
1	Na 589.592 Radial†	11100.3	12108.7	3625.5	ug/L	3625.5	ppb	01:46:04
1	Sr 421.552†	36250.5	35381.6	228.37	ug/L	228.37	ppb	01:46:04
1	Sc 361.383	872802.4	872802.4	102.39	%			01:47:23
1	Y 371.029	792081.6	792081.6	109.61	%			01:47:23
1	Ag 328.068†	-7430.5	-7614.8	2.4552	ug/L	2.4552	ppb	01:47:23
1	As 188.979†	-107.5	-81.3	11.376	ug/L	11.376	ppb	01:47:43
1	B 249.677†	926.0	1536.2	22.493	ug/L	22.493	ppb	01:47:23
1	Ba 233.527†	147369.6	143935.8	1128.3	ug/L	1128.3	ppb	01:47:23
1	Be 313.107†	-15022.0	-10085.4	7.7602	ug/L	7.7602	ppb	01:47:23
1	Cd 226.502†	927.1	1109.5	0.5824	ug/L	0.5824	ppb	01:47:43
1	Co 228.616†	4110.6	4089.2	71.830	ug/L	71.830	ppb	01:47:43
1	Cr 267.716†	7433.5	7176.5	82.881	ug/L	82.881	ppb	01:47:43
1	Cu 324.752†	24217.0	17238.7	57.653	ug/L	57.653	ppb	01:47:23
1	Mn 257.610†	2598383.3	2537193.5	2824.7	ug/L	2824.7	ppb	01:47:23
1	Mo 202.031†	-20.1	-43.3	4.9641	ug/L	4.9641	ppb	01:47:43
1	Ni 231.604†	2923.3	2787.0	69.346	ug/L	69.346	ppb	01:47:43
1	P 214.914†	1248.2	989.1	523.33	ug/L	523.33	ppb	01:47:43
1	Pb 220.353†	770.7	816.1	107.80	ug/L	107.80	ppb	01:47:43
1	S 181.975 Axial†	755.5	694.9	967.13	ug/L	967.13	ppb	01:47:43
1	Sb 206.836†	69.0	39.4	-5.5566	ug/L	-5.5566	ppb	01:47:43
1	Se 196.026†	-503.9	-460.1	70.669	ug/L	70.669	ppb	01:47:43
1	Si 251.611†	1181916.2	1153734.9	36745	ug/L	36745	ppb	01:47:23
1	Sn 189.927†	-130.0	-134.6	-18.907	ug/L	-18.907	ppb	01:47:43
1	Ti 334.940†	3246789.0	3172260.2	5111.8	ug/L	5111.8	ppb	01:47:23
1	Tl 190.801†	-236.2	-197.9	-13.331	ug/L	-13.331	ppb	01:47:43
1	U 409.014†	-7528.7	-5341.1	-170.70	ug/L	-170.70	ppb	01:47:23
1	V 292.402†	33445.2	33973.0	209.09	ug/L	209.09	ppb	01:47:23
1	Zn 213.857†	26578.8	25337.2	228.10	ug/L	228.10	ppb	01:47:43
1	SiO2†	1191405.3	1162980.9	79352	ug/L	79352	ppb	01:48:43
2	Sc Radial	5156.4	5156.4	102	%			01:46:49
2	Y RADIAL	5965.9	5965.9	109.9	%			01:46:49
2	Al 396.153Radial†	115262.3	112555.6	86835	ug/L	86835	ppb	01:46:29
2	Ca 317.933Radial†	13509.6	13172.4	21077	ug/L	21077	ppb	01:46:29
2	Fe 238.204 Radial†	13454.0	13129.1	113620	ug/L	113620	ppb	01:46:29
2	K 766.490 Radial†	88549.5	83879.4	15340	ug/L	15340	ppb	01:46:29
2	Mg 279.077 IEC†	551.2	536.3	17801	ug/L	17801	ppb	01:46:49
2	Na 589.592 Radial†	11047.9	12068.9	3613.6	ug/L	3613.6	ppb	01:46:29
2	Sr 421.552†	36357.2	35522.8	229.28	ug/L	229.28	ppb	01:46:29
2	Sc 361.383	867608.4	867608.4	101.78	%			01:47:50
2	Y 371.029	787623.9	787623.9	108.99	%			01:47:50
2	Ag 328.068†	-7419.9	-7647.8	2.2962	ug/L	2.2962	ppb	01:47:50
2	As 188.979†	-104.7	-79.3	12.610	ug/L	12.610	ppb	01:48:10
2	B 249.677†	1063.4	1676.6	25.626	ug/L	25.626	ppb	01:47:50
2	Ba 233.527†	148586.9	145993.4	1144.4	ug/L	1144.4	ppb	01:47:50
2	Be 313.107†	-15204.8	-10352.9	7.8328	ug/L	7.8328	ppb	01:47:50
2	Cd 226.502†	946.9	1134.4	0.8659	ug/L	0.8659	ppb	01:48:10
2	Co 228.616†	4139.5	4141.6	72.749	ug/L	72.749	ppb	01:48:10
2	Cr 267.716†	7469.7	7255.5	83.768	ug/L	83.768	ppb	01:48:10
2	Cu 324.752†	24483.1	17641.6	58.854	ug/L	58.854	ppb	01:47:50
2	Mn 257.610†	2620991.0	2574596.6	2866.2	ug/L	2866.2	ppb	01:47:50
2	Mo 202.031†	-21.8	-45.1	4.8341	ug/L	4.8341	ppb	01:48:10
2	Ni 231.604†	2931.8	2812.5	69.980	ug/L	69.980	ppb	01:48:10

2	P 214.914†	1241.7	990.0	523.74 ug/L	523.74 ppb	01:48:10
2	Pb 220.353†	773.9	823.7	108.81 ug/L	108.81 ppb	01:48:10
2	S 181.975 Axial†	757.5	701.2	976.03 ug/L	976.03 ppb	01:48:10
2	Sb 206.836†	70.1	40.9	-5.3318 ug/L	-5.3318 ppb	01:48:10
2	Se 196.026†	-516.2	-475.1	60.794 ug/L	60.794 ppb	01:48:10
2	Si 251.611†	1192775.6	1171314.1	37305 ug/L	37305 ppb	01:47:50
2	Sn 189.927†	-141.8	-147.0	-21.118 ug/L	-21.118 ppb	01:48:10
2	Ti 334.940†	3276024.0	3219965.3	5188.7 ug/L	5188.7 ppb	01:47:50
2	Tl 190.801†	-234.8	-197.8	-12.609 ug/L	-12.609 ppb	01:48:10
2	U 409.014†	-7465.8	-5323.3	-170.17 ug/L	-170.17 ppb	01:47:50
2	V 292.402†	33721.4	34440.0	212.20 ug/L	212.20 ppb	01:47:50
2	Zn 213.857†	26637.6	25550.4	230.12 ug/L	230.12 ppb	01:48:10
2	SiO2†	1197558.6	1175992.0	80240 ug/L	80240 ppb	01:48:49
3	Sc Radial	5099.4	5099.4	101 %		01:47:15
3	Y RADIAL	5921.2	5921.2	109.1 %		01:47:15
3	Al 396.153Radial†	115320.5	113872.7	87851 ug/L	87851 ppb	01:46:55
3	Ca 317.933Radial†	13519.6	13330.0	21329 ug/L	21329 ppb	01:46:55
3	Fe 238.204 Radial†	13394.5	13217.4	114390 ug/L	114390 ppb	01:46:55
3	K 766.490 Radial†	88634.2	84930.7	15533 ug/L	15533 ppb	01:46:55
3	Mg 279.077 IEC†	543.9	535.1	17760 ug/L	17760 ppb	01:47:15
3	Na 589.592 Radial†	11071.1	12212.5	3656.6 ug/L	3656.6 ppb	01:46:55
3	Sr 421.552†	36340.6	35903.7	231.74 ug/L	231.74 ppb	01:46:55
3	Sc 361.383	870229.1	870229.1	102.09 %		01:48:17
3	Y 371.029	790828.6	790828.6	109.43 %		01:48:17
3	Ag 328.068†	-7443.7	-7649.2	2.5310 ug/L	2.5310 ppb	01:48:17
3	As 188.979†	-104.2	-78.5	13.108 ug/L	13.108 ppb	01:48:37
3	B 249.677†	952.5	1564.8	23.058 ug/L	23.058 ppb	01:48:17
3	Ba 233.527†	148943.5	145903.0	1143.7 ug/L	1143.7 ppb	01:48:17
3	Be 313.107†	-15493.6	-10590.7	7.7426 ug/L	7.7426 ppb	01:48:17
3	Cd 226.502†	921.0	1106.3	0.4744 ug/L	0.4744 ppb	01:48:37
3	Co 228.616†	4119.1	4109.4	72.080 ug/L	72.080 ppb	01:48:37
3	Cr 267.716†	7457.3	7221.3	83.399 ug/L	83.399 ppb	01:48:37
3	Cu 324.752†	24564.6	17649.1	58.916 ug/L	58.916 ppb	01:48:17
3	Mn 257.610†	2625231.6	2570995.4	2862.3 ug/L	2862.3 ppb	01:48:17
3	Mo 202.031†	-15.7	-39.1	5.3136 ug/L	5.3136 ppb	01:48:37
3	Ni 231.604†	2940.1	2811.9	69.966 ug/L	69.966 ppb	01:48:37
3	P 214.914†	1256.7	1001.1	530.16 ug/L	530.16 ppb	01:48:37
3	Pb 220.353†	765.7	813.3	107.69 ug/L	107.69 ppb	01:48:37
3	S 181.975 Axial†	750.1	691.8	962.50 ug/L	962.50 ppb	01:48:37
3	Sb 206.836†	66.5	37.2	-6.5854 ug/L	-6.5854 ppb	01:48:37
3	Se 196.026†	-527.2	-484.4	57.333 ug/L	57.333 ppb	01:48:37
3	Si 251.611†	1195457.3	1170411.7	37276 ug/L	37276 ppb	01:48:17
3	Sn 189.927†	-128.3	-133.3	-18.649 ug/L	-18.649 ppb	01:48:37
3	Ti 334.940†	3286041.9	3220084.9	5188.9 ug/L	5188.9 ppb	01:48:17
3	Tl 190.801†	-228.7	-191.2	-10.584 ug/L	-10.584 ppb	01:48:37
3	U 409.014†	-7464.3	-5299.7	-169.56 ug/L	-169.56 ppb	01:48:17
3	V 292.402†	33716.1	34335.0	211.38 ug/L	211.38 ppb	01:48:17
3	Zn 213.857†	26550.9	25386.7	228.50 ug/L	228.50 ppb	01:48:37
3	SiO2†	1194812.9	1169759.3	79815 ug/L	79815 ppb	01:48:55

Mean Data: 243492003|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	870213.3	102.09	%	0.305				0.30%
Sc Radial	5139.2	102	%	0.7				0.67%
Y 371.029	790178.0	109.34	%	0.318				0.29%
Y RADIAL	5959.9	109.8	%	0.66				0.60%
Ag 328.068†	-7637.3	2.4275	ug/L	0.11982	2.4275	ppb	0.11982	4.94%
Al 396.153Radial†	112860.2	87070	ug/L	694.1	87070	ppb	694.1	0.80%
As 188.979†	-79.7	12.365	ug/L	0.8919	12.365	ppb	0.8919	7.21%
B 249.677†	1592.6	23.726	ug/L	1.6699	23.726	ppb	1.6699	7.04%
Ba 233.527†	145277.4	1138.8	ug/L	9.09	1138.8	ppb	9.09	0.80%
Be 313.107†	-10343.0	7.7785	ug/L	0.04780	7.7785	ppb	0.04780	0.61%
Ca 317.933Radial†	13238.6	21183	ug/L	130.8	21183	ppb	130.8	0.62%
Cd 226.502†	1116.7	0.6409	ug/L	0.20222	0.6409	ppb	0.20222	31.55%
Co 228.616†	4113.4	72.220	ug/L	0.4752	72.220	ppb	0.4752	0.66%
Cr 267.716†	7217.7	83.349	ug/L	0.4457	83.349	ppb	0.4457	0.53%
Cu 324.752†	17509.8	58.474	ug/L	0.7123	58.474	ppb	0.7123	1.22%
Fe 238.204 Radial†	13160.8	113900	ug/L	425.1	113900	ppb	425.1	0.37%
K 766.490 Radial†	84152.8	15391	ug/L	125.1	15391	ppb	125.1	0.81%

Mg 279.077 IEC†	536.8	17817 ug/L	67.1	17817 ppb	67.1	0.38%
Mn 257.610†	2560928.5	2851.1 ug/L	22.89	2851.1 ppb	22.89	0.80%
Mo 202.031†	-42.5	5.0373 ug/L	0.24798	5.0373 ppb	0.24798	4.92%
Na 589.592 Radial†	12130.0	3631.9 ug/L	22.20	3631.9 ppb	22.20	0.61%
Ni 231.604†	2803.8	69.764 ug/L	0.3624	69.764 ppb	0.3624	0.52%
P 214.914†	993.4	525.75 ug/L	3.831	525.75 ppb	3.831	0.73%
Pb 220.353†	817.7	108.10 ug/L	0.615	108.10 ppb	0.615	0.57%
S 181.975 Axial†	695.9	968.55 ug/L	6.879	968.55 ppb	6.879	0.71%
Sb 206.836†	39.2	-5.8246 ug/L	0.66840	-5.8246 ppb	0.66840	11.48%
Se 196.026†	-473.2	62.932 ug/L	6.9204	62.932 ppb	6.9204	11.00%
Si 251.611†	1165153.6	37108 ug/L	315.3	37108 ppb	315.3	0.85%
Sn 189.927†	-138.3	-19.558 ug/L	1.3575	-19.558 ppb	1.3575	6.94%
Sr 421.552†	35602.7	229.80 ug/L	1.743	229.80 ppb	1.743	0.76%
Ti 334.940†	3204103.5	5163.2 ug/L	44.44	5163.2 ppb	44.44	0.86%
Tl 190.801†	-195.6	-12.175 ug/L	1.4241	-12.175 ppb	1.4241	11.70%
U 409.014†	-5321.4	-170.14 ug/L	0.570	-170.14 ppb	0.570	0.34%
V 292.402†	34249.3	210.89 ug/L	1.612	210.89 ppb	1.612	0.76%
Zn 213.857†	25424.8	228.91 ug/L	1.069	228.91 ppb	1.069	0.47%
SiO2†	1169577.4	79802 ug/L	444.0	79802 ppb	444.0	0.56%

Sequence No.: 92
Sample ID: 243492004|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 98
Date Collected: 1/12/2010 01:51:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492004|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5147.5	5147.5	102	%			01:53:19
1	Y RADIAL	6052.0	6052.0	111.5	%			01:53:19
1	Al 396.153Radial†	91517.2	89522.9	69066	ug/L	69066	ppb	01:52:59
1	Ca 317.933Radial†	13180.7	12873.6	20599	ug/L	20599	ppb	01:52:59
1	Fe 238.204 Radial†	13076.1	12782.1	110620	ug/L	110620	ppb	01:52:59
1	K 766.490 Radial†	86211.2	81741.7	14950	ug/L	14950	ppb	01:52:59
1	Mg 279.077 IEC†	467.6	455.5	15103	ug/L	15103	ppb	01:53:19
1	Na 589.592 Radial†	1231.4	2485.0	744.04	ug/L	744.04	ppb	01:52:59
1	Sr 421.552†	31800.1	31126.4	200.89	ug/L	200.89	ppb	01:52:59
1	Sc 361.383	878567.9	878567.9	103.07	%			01:54:18
1	Y 371.029	807861.3	807861.3	111.79	%			01:54:18
1	Ag 328.068†	-7173.2	-7317.5	2.8380	ug/L	2.8380	ppb	01:54:18
1	As 188.979†	-110.4	-83.5	9.6208	ug/L	9.6208	ppb	01:54:38
1	B 249.677†	1039.6	1640.5	25.199	ug/L	25.199	ppb	01:54:18
1	Ba 233.527†	142570.4	138335.1	1084.5	ug/L	1084.5	ppb	01:54:18
1	Be 313.107†	-18274.8	-13145.1	6.4982	ug/L	6.4982	ppb	01:54:18
1	Cd 226.502†	915.5	1092.3	0.7155	ug/L	0.7155	ppb	01:54:38
1	Co 228.616†	2889.3	2877.9	47.136	ug/L	47.136	ppb	01:54:38
1	Cr 267.716†	11722.9	11290.5	128.80	ug/L	128.80	ppb	01:54:38
1	Cu 324.752†	23306.4	16200.0	54.384	ug/L	54.384	ppb	01:54:18
1	Mn 257.610†	2639858.6	2560780.3	2850.6	ug/L	2850.6	ppb	01:54:18
1	Mo 202.031†	-3.3	-26.9	5.9082	ug/L	5.9082	ppb	01:54:38
1	Ni 231.604†	3431.4	3261.2	81.169	ug/L	81.169	ppb	01:54:38
1	P 214.914†	1587.7	1310.6	718.68	ug/L	718.68	ppb	01:54:38
1	Pb 220.353†	749.7	790.7	101.28	ug/L	101.28	ppb	01:54:38
1	S 181.975 Axial†	628.7	567.0	789.42	ug/L	789.42	ppb	01:54:38
1	Sb 206.836†	82.7	52.3	-0.5007	ug/L	-0.5007	ppb	01:54:38
1	Se 196.026†	-503.9	-456.9	62.074	ug/L	62.074	ppb	01:54:38
1	Si 251.611†	1125137.8	1091072.9	34749	ug/L	34749	ppb	01:54:18
1	Sn 189.927†	-125.6	-129.5	-18.135	ug/L	-18.135	ppb	01:54:38
1	Ti 334.940†	3241131.8	3145962.8	5069.6	ug/L	5069.6	ppb	01:54:18
1	Tl 190.801†	-229.3	-189.6	-10.858	ug/L	-10.858	ppb	01:54:38
1	U 409.014†	-7567.8	-5330.8	-170.15	ug/L	-170.15	ppb	01:54:18
1	V 292.402†	33581.0	33890.4	208.99	ug/L	208.99	ppb	01:54:18
1	Zn 213.857†	27321.8	25887.7	233.54	ug/L	233.54	ppb	01:54:38
1	SiO2†	1114537.1	1080766.7	73742	ug/L	73742	ppb	01:55:38
2	Sc Radial	5217.3	5217.3	104	%			01:53:45
2	Y RADIAL	6113.1	6113.1	112.6	%			01:53:45
2	Al 396.153Radial†	91206.8	88026.2	67911	ug/L	67911	ppb	01:53:25
2	Ca 317.933Radial†	13115.3	12638.1	20222	ug/L	20222	ppb	01:53:25
2	Fe 238.204 Radial†	12955.9	12495.2	108140	ug/L	108140	ppb	01:53:25
2	K 766.490 Radial†	85712.8	80133.0	14655	ug/L	14655	ppb	01:53:25
2	Mg 279.077 IEC†	469.9	451.6	14976	ug/L	14976	ppb	01:53:45
2	Na 589.592 Radial†	1203.8	2442.2	731.23	ug/L	731.23	ppb	01:53:25
2	Sr 421.552†	31625.0	30541.5	197.11	ug/L	197.11	ppb	01:53:25
2	Sc 361.383	877380.7	877380.7	102.93	%			01:54:45
2	Y 371.029	806936.2	806936.2	111.66	%			01:54:45
2	Ag 328.068†	-7237.5	-7389.4	1.7050	ug/L	1.7050	ppb	01:54:45
2	As 188.979†	-100.2	-73.7	13.375	ug/L	13.375	ppb	01:55:05
2	B 249.677†	1017.6	1620.4	25.004	ug/L	25.004	ppb	01:54:45
2	Ba 233.527†	142579.7	138531.3	1085.9	ug/L	1085.9	ppb	01:54:45
2	Be 313.107†	-18054.0	-12954.6	6.5763	ug/L	6.5763	ppb	01:54:45
2	Cd 226.502†	919.1	1097.1	1.0250	ug/L	1.0250	ppb	01:55:05
2	Co 228.616†	2870.9	2863.9	46.880	ug/L	46.880	ppb	01:55:05
2	Cr 267.716†	11637.6	11222.9	128.00	ug/L	128.00	ppb	01:55:05
2	Cu 324.752†	23302.6	16226.8	54.332	ug/L	54.332	ppb	01:54:45
2	Mn 257.610†	2636930.2	2561400.9	2851.0	ug/L	2851.0	ppb	01:54:45
2	Mo 202.031†	-8.9	-32.4	5.3472	ug/L	5.3472	ppb	01:55:05
2	Ni 231.604†	3390.9	3226.4	80.303	ug/L	80.303	ppb	01:55:05

2	P 214.914†	1570.2	1295.6	711.23 ug/L	711.23 ppb	01:55:05
2	Pb 220.353†	795.6	836.3	106.85 ug/L	106.85 ppb	01:55:05
2	S 181.975 Axial†	622.6	561.9	782.47 ug/L	782.47 ppb	01:55:05
2	Sb 206.836†	82.3	52.0	-0.5737 ug/L	-0.5737 ppb	01:55:05
2	Se 196.026†	-510.9	-464.3	49.294 ug/L	49.294 ppb	01:55:05
2	Si 251.611†	1122776.4	1090255.8	34723 ug/L	34723 ppb	01:54:45
2	Sn 189.927†	-128.2	-132.3	-18.719 ug/L	-18.719 ppb	01:55:05
2	Ti 334.940†	3238311.3	3147477.5	5072.0 ug/L	5072.0 ppb	01:54:45
2	Tl 190.801†	-229.0	-189.6	-10.834 ug/L	-10.834 ppb	01:55:05
2	U 409.014†	-7463.7	-5239.5	-167.17 ug/L	-167.17 ppb	01:54:45
2	V 292.402†	33518.9	33874.2	209.25 ug/L	209.25 ppb	01:54:45
2	Zn 213.857†	27172.1	25778.1	232.75 ug/L	232.75 ppb	01:55:05
2	SiO2†	1120268.9	1087798.5	74222 ug/L	74222 ppb	01:55:44
3	Sc Radial	5251.9	5251.9	104 %		01:54:10
3	Y RADIAL	6158.2	6158.2	113.4 %		01:54:10
3	Al 396.153Radial†	91487.5	87715.7	67672 ug/L	67672 ppb	01:53:50
3	Ca 317.933Radial†	13141.6	12579.9	20129 ug/L	20129 ppb	01:53:50
3	Fe 238.204 Radial†	13023.9	12478.0	107990 ug/L	107990 ppb	01:53:50
3	K 766.490 Radial†	86141.0	79998.9	14631 ug/L	14631 ppb	01:53:50
3	Mg 279.077 IEC†	473.1	451.7	14979 ug/L	14979 ppb	01:54:10
3	Na 589.592 Radial†	1179.9	2411.7	722.10 ug/L	722.10 ppb	01:53:50
3	Sr 421.552†	31687.2	30400.1	196.20 ug/L	196.20 ppb	01:53:50
3	Sc 361.383	870938.9	870938.9	102.18 %		01:55:12
3	Y 371.029	802622.6	802622.6	111.06 %		01:55:12
3	Ag 328.068†	-7052.1	-7260.0	2.2588 ug/L	2.2588 ppb	01:55:12
3	As 188.979†	-100.1	-74.3	13.068 ug/L	13.068 ppb	01:55:32
3	B 249.677†	983.6	1594.5	24.439 ug/L	24.439 ppb	01:55:12
3	Ba 233.527†	141597.8	138594.8	1086.4 ug/L	1086.4 ppb	01:55:12
3	Be 313.107†	-18265.3	-13291.1	6.4347 ug/L	6.4347 ppb	01:55:12
3	Cd 226.502†	920.7	1105.2	1.1305 ug/L	1.1305 ppb	01:55:32
3	Co 228.616†	2872.9	2886.4	47.355 ug/L	47.355 ppb	01:55:32
3	Cr 267.716†	11664.4	11332.9	129.23 ug/L	129.23 ppb	01:55:32
3	Cu 324.752†	23047.1	16144.2	54.079 ug/L	54.079 ppb	01:55:12
3	Mn 257.610†	2614356.5	2558256.2	2847.5 ug/L	2847.5 ppb	01:55:12
3	Mo 202.031†	-9.6	-33.1	5.2853 ug/L	5.2853 ppb	01:55:32
3	Ni 231.604†	3393.4	3253.2	80.971 ug/L	80.971 ppb	01:55:32
3	P 214.914†	1581.6	1318.1	725.04 ug/L	725.04 ppb	01:55:32
3	Pb 220.353†	751.6	798.9	102.23 ug/L	102.23 ppb	01:55:32
3	S 181.975 Axial†	625.6	569.2	792.88 ug/L	792.88 ppb	01:55:32
3	Sb 206.836†	83.7	54.0	0.0925 ug/L	0.0925 ppb	01:55:32
3	Se 196.026†	-506.3	-463.5	49.304 ug/L	49.304 ppb	01:55:32
3	Si 251.611†	1112587.7	1088352.0	34662 ug/L	34662 ppb	01:55:12
3	Sn 189.927†	-142.5	-147.1	-21.365 ug/L	-21.365 ppb	01:55:32
3	Ti 334.940†	3210793.4	3143815.2	5066.1 ug/L	5066.1 ppb	01:55:12
3	Tl 190.801†	-241.8	-203.8	-15.240 ug/L	-15.240 ppb	01:55:32
3	U 409.014†	-7514.3	-5342.7	-170.20 ug/L	-170.20 ppb	01:55:12
3	V 292.402†	33355.5	33955.1	209.83 ug/L	209.83 ppb	01:55:12
3	Zn 213.857†	27189.4	25990.4	234.76 ug/L	234.76 ppb	01:55:32
3	SiO2†	1125515.6	1100983.5	75122 ug/L	75122 ppb	01:55:50

Mean Data: 243492004|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	875629.2	102.73	%	0.482				0.47%
Sc Radial	5205.5	103	%	1.1				1.02%
Y 371.029	805806.7	111.50	%	0.387				0.35%
Y RADIAL	6107.8	112.5	%	0.98				0.87%
Ag 328.068†	-7322.3	2.2672	ug/L	0.56655	2.2672	ppb	0.56655	24.99%
Al 396.153Radial†	88421.6	68216	ug/L	745.5	68216	ppb	745.5	1.09%
As 188.979†	-77.2	12.021	ug/L	2.0845	12.021	ppb	2.0845	17.34%
B 249.677†	1618.5	24.880	ug/L	0.3946	24.880	ppb	0.3946	1.59%
Ba 233.527†	138487.1	1085.6	ug/L	1.00	1085.6	ppb	1.00	0.09%
Be 313.107†	-13130.3	6.5031	ug/L	0.07093	6.5031	ppb	0.07093	1.09%
Ca 317.933Radial†	12697.2	20317	ug/L	248.8	20317	ppb	248.8	1.22%
Cd 226.502†	1098.2	0.9570	ug/L	0.21573	0.9570	ppb	0.21573	22.54%
Co 228.616†	2876.1	47.124	ug/L	0.2379	47.124	ppb	0.2379	0.50%
Cr 267.716†	11282.1	128.67	ug/L	0.624	128.67	ppb	0.624	0.48%
Cu 324.752†	16190.3	54.265	ug/L	0.1635	54.265	ppb	0.1635	0.30%
Fe 238.204 Radial†	12585.1	108910	ug/L	1478.7	108910	ppb	1478.7	1.36%
K 766.490 Radial†	80624.5	14745	ug/L	177.7	14745	ppb	177.7	1.21%

Mg 279.077 IEC†	452.9	15020	ug/L	72.7	15020	ppb	72.7	0.48%
Mn 257.610†	2560145.8	2849.7	ug/L	1.91	2849.7	ppb	1.91	0.07%
Mo 202.031†	-30.8	5.5136	ug/L	0.34317	5.5136	ppb	0.34317	6.22%
Na 589.592 Radial†	2446.3	732.45	ug/L	11.023	732.45	ppb	11.023	1.50%
Ni 231.604†	3247.0	80.814	ug/L	0.4538	80.814	ppb	0.4538	0.56%
P 214.914†	1308.1	718.32	ug/L	6.916	718.32	ppb	6.916	0.96%
Pb 220.353†	808.7	103.45	ug/L	2.975	103.45	ppb	2.975	2.88%
S 181.975 Axial†	566.0	788.26	ug/L	5.302	788.26	ppb	5.302	0.67%
Sb 206.836†	52.8	-0.3273	ug/L	0.36539	-0.3273	ppb	0.36539	111.63%
Se 196.026†	-461.6	53.557	ug/L	7.3753	53.557	ppb	7.3753	13.77%
Si 251.611†	1089893.6	34711	ug/L	44.5	34711	ppb	44.5	0.13%
Sn 189.927†	-136.3	-19.407	ug/L	1.7213	-19.407	ppb	1.7213	8.87%
Sr 421.552†	30689.3	198.07	ug/L	2.485	198.07	ppb	2.485	1.25%
Ti 334.940†	3145751.8	5069.3	ug/L	2.97	5069.3	ppb	2.97	0.06%
Tl 190.801†	-194.4	-12.311	ug/L	2.5366	-12.311	ppb	2.5366	20.60%
U 409.014†	-5304.3	-169.17	ug/L	1.734	-169.17	ppb	1.734	1.02%
V 292.402†	33906.6	209.36	ug/L	0.428	209.36	ppb	0.428	0.20%
Zn 213.857†	25885.4	233.68	ug/L	1.017	233.68	ppb	1.017	0.44%
SiO2†	1089849.6	74362	ug/L	700.3	74362	ppb	700.3	0.94%

Sequence No.: 93
Sample ID: 243492005|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 99
Date Collected: 1/12/2010 01:58:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492005|936808|1

Rep1#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5172.8	5172.8	103	%			02:00:14
1	Y RADIAL	6383.1	6383.1	117.6	%			02:00:14
1	Al 396.153Radial†	72495.7	70568.7	54443	ug/L	54443	ppb	01:59:54
1	Ca 317.933Radial†	21859.7	21258.7	34016	ug/L	34016	ppb	01:59:54
1	Fe 238.204 Radial†	10822.5	10525.8	91094	ug/L	91094	ppb	01:59:54
1	K 766.490 Radial†	59768.4	55589.0	10150	ug/L	10150	ppb	01:59:54
1	Mg 279.077 IEC†	386.1	373.9	12397	ug/L	12397	ppb	02:00:14
1	Na 589.592 Radial†	5658.7	6788.7	2032.6	ug/L	2032.6	ppb	01:59:54
1	Sr 421.552†	43396.7	42262.3	272.71	ug/L	272.71	ppb	01:59:54
1	Sc 361.383	865733.7	865733.7	101.56	%			02:01:12
1	Y 371.029	842319.2	842319.2	116.56	%			02:01:12
1	Ag 328.068†	-5730.0	-5999.7	2.0968	ug/L	2.0968	ppb	02:01:17
1	As 188.979†	-9.4	14.4	31.766	ug/L	31.766	ppb	02:01:37
1	B 249.677†	705.0	1326.0	20.160	ug/L	20.160	ppb	02:01:17
1	Ba 233.527†	500326.5	492630.9	3849.4	ug/L	3849.4	ppb	02:01:12
1	Be 313.107†	2138.7	6691.1	6.1925	ug/L	6.1925	ppb	02:01:17
1	Cd 226.502†	656.3	850.3	0.0254	ug/L	0.0254	ppb	02:01:37
1	Co 228.616†	2954.2	2983.3	58.192	ug/L	58.192	ppb	02:01:37
1	Cr 267.716†	8926.7	8705.9	99.397	ug/L	99.397	ppb	02:01:17
1	Cu 324.752†	18048.9	11358.7	38.910	ug/L	38.910	ppb	02:01:17
1	Mn 257.610†	2597431.1	2556975.5	2844.3	ug/L	2844.3	ppb	02:01:12
1	Mo 202.031†	80.3	55.4	10.549	ug/L	10.549	ppb	02:01:37
1	Ni 231.604†	2787.2	2676.3	66.604	ug/L	66.604	ppb	02:01:37
1	P 214.914†	1176.5	928.5	500.27	ug/L	500.27	ppb	02:01:37
1	Pb 220.353†	536.1	591.2	75.888	ug/L	75.888	ppb	02:01:37
1	S 181.975 Axial†	966.2	908.3	1275.2	ug/L	1275.2	ppb	02:01:37
1	Sb 206.836†	39.2	10.6	-3.1003	ug/L	-3.1003	ppb	02:01:37
1	Se 196.026†	-413.4	-375.0	51.769	ug/L	51.769	ppb	02:01:37
1	Si 251.611†	890205.0	875941.9	27897	ug/L	27897	ppb	02:01:12
1	Sn 189.927†	-146.9	-152.3	-20.585	ug/L	-20.585	ppb	02:01:37
1	Ti 334.940†	1010190.2	996003.8	1607.6	ug/L	1607.6	ppb	02:01:12
1	Tl 190.801†	-139.6	-104.6	-8.1679	ug/L	-8.1679	ppb	02:01:37
1	U 409.014†	-9689.1	-7528.2	-232.68	ug/L	-232.68	ppb	02:01:12
1	V 292.402†	18922.8	19941.0	120.34	ug/L	120.34	ppb	02:01:17
1	Zn 213.857†	26477.1	25449.0	231.39	ug/L	231.39	ppb	02:01:17
1	SiO2†	896440.9	882060.5	60184	ug/L	60184	ppb	02:02:46
2	Sc Radial	5204.2	5204.2	103	%			02:00:39
2	Y RADIAL	6439.5	6439.5	118.6	%			02:00:39
2	Al 396.153Radial†	74512.7	72095.6	55621	ug/L	55621	ppb	02:00:19
2	Ca 317.933Radial†	22469.9	21721.0	34756	ug/L	34756	ppb	02:00:19
2	Fe 238.204 Radial†	11100.6	10731.6	92874	ug/L	92874	ppb	02:00:19
2	K 766.490 Radial†	61329.4	56749.3	10362	ug/L	10362	ppb	02:00:19
2	Mg 279.077 IEC†	392.5	377.9	12528	ug/L	12528	ppb	02:00:39
2	Na 589.592 Radial†	5744.3	6838.4	2047.5	ug/L	2047.5	ppb	02:00:19
2	Sr 421.552†	44587.9	43160.7	278.51	ug/L	278.51	ppb	02:00:19
2	Sc 361.383	881121.1	881121.1	103.37	%			02:01:43
2	Y 371.029	853866.2	853866.2	118.15	%			02:01:43
2	Ag 328.068†	-5730.8	-5902.0	3.1059	ug/L	3.1059	ppb	02:01:49
2	As 188.979†	-10.5	13.5	31.735	ug/L	31.735	ppb	02:02:09
2	B 249.677†	744.6	1352.2	20.569	ug/L	20.569	ppb	02:01:49
2	Ba 233.527†	507684.8	491146.6	3837.9	ug/L	3837.9	ppb	02:01:43
2	Be 313.107†	2094.9	6612.0	6.1673	ug/L	6.1673	ppb	02:01:49
2	Cd 226.502†	634.4	817.8	-0.5205	ug/L	-0.5205	ppb	02:02:09
2	Co 228.616†	2888.9	2869.4	55.823	ug/L	55.823	ppb	02:02:09
2	Cr 267.716†	8972.5	8596.8	98.208	ug/L	98.208	ppb	02:01:49
2	Cu 324.752†	18309.0	11299.9	38.827	ug/L	38.827	ppb	02:01:49
2	Mn 257.610†	2639440.0	2552953.8	2840.1	ug/L	2840.1	ppb	02:01:43
2	Mo 202.031†	69.4	43.4	9.8323	ug/L	9.8323	ppb	02:02:09
2	Ni 231.604†	2727.7	2570.8	63.978	ug/L	63.978	ppb	02:02:09

2	P 214.914†	1134.2	867.3	461.75 ug/L	461.75 ppb	02:02:09
2	Pb 220.353†	495.5	542.7	70.035 ug/L	70.035 ppb	02:02:09
2	S 181.975 Axial†	956.5	882.3	1238.2 ug/L	1238.2 ppb	02:02:09
2	Sb 206.836†	45.8	16.3	-1.2255 ug/L	-1.2255 ppb	02:02:09
2	Se 196.026†	-418.3	-372.7	59.023 ug/L	59.023 ppb	02:02:09
2	Si 251.611†	906602.4	876498.2	27915 ug/L	27915 ppb	02:01:43
2	Sn 189.927†	-156.5	-159.0	-21.641 ug/L	-21.641 ppb	02:02:09
2	Ti 334.940†	1029542.2	997355.4	1609.8 ug/L	1609.8 ppb	02:01:43
2	Tl 190.801†	-126.2	-89.2	-3.4355 ug/L	-3.4355 ppb	02:02:09
2	U 409.014†	-9764.9	-7435.0	-230.13 ug/L	-230.13 ppb	02:01:43
2	V 292.402†	19034.4	19723.6	118.58 ug/L	118.58 ppb	02:01:49
2	Zn 213.857†	26493.4	25009.5	227.08 ug/L	227.08 ppb	02:01:49
2	SiO2†	893205.4	863516.8	58919 ug/L	58919 ppb	02:02:52
3	Sc Radial	5191.6	5191.6	103 %		02:01:05
3	Y RADIAL	6408.4	6408.4	118.0 %		02:01:05
3	Al 396.153Radial†	72264.7	70090.0	54073 ug/L	54073 ppb	02:00:45
3	Ca 317.933Radial†	21825.1	21148.3	33839 ug/L	33839 ppb	02:00:45
3	Fe 238.204 Radial†	10774.0	10440.8	90358 ug/L	90358 ppb	02:00:45
3	K 766.490 Radial†	59648.8	55263.1	10090 ug/L	10090 ppb	02:00:45
3	Mg 279.077 IEC†	391.1	377.4	12515 ug/L	12515 ppb	02:01:05
3	Na 589.592 Radial†	5541.6	6655.2	1992.7 ug/L	1992.7 ppb	02:00:45
3	Sr 421.552†	43168.1	41888.1	270.30 ug/L	270.30 ppb	02:00:45
3	Sc 361.383	864955.4	864955.4	101.47 %		02:02:15
3	Y 371.029	841568.0	841568.0	116.45 %		02:02:15
3	Ag 328.068†	-5643.8	-5919.8	2.2290 ug/L	2.2290 ppb	02:02:20
3	As 188.979†	-32.4	-8.3	21.795 ug/L	21.795 ppb	02:02:40
3	B 249.677†	832.0	1451.7	23.037 ug/L	23.037 ppb	02:02:20
3	Ba 233.527†	498420.0	491195.4	3838.2 ug/L	3838.2 ppb	02:02:15
3	Be 313.107†	1930.2	6487.5	6.1150 ug/L	6.1150 ppb	02:02:20
3	Cd 226.502†	640.3	835.1	-0.0679 ug/L	-0.0679 ppb	02:02:40
3	Co 228.616†	2950.9	2982.8	58.185 ug/L	58.185 ppb	02:02:40
3	Cr 267.716†	8884.2	8672.0	99.003 ug/L	99.003 ppb	02:02:20
3	Cu 324.752†	18107.0	11431.9	39.090 ug/L	39.090 ppb	02:02:20
3	Mn 257.610†	2588557.2	2550531.7	2837.1 ug/L	2837.1 ppb	02:02:15
3	Mo 202.031†	77.4	52.5	10.295 ug/L	10.295 ppb	02:02:40
3	Ni 231.604†	2747.1	2639.3	65.681 ug/L	65.681 ppb	02:02:40
3	P 214.914†	1165.7	918.9	494.82 ug/L	494.82 ppb	02:02:40
3	Pb 220.353†	539.3	594.8	76.318 ug/L	76.318 ppb	02:02:40
3	S 181.975 Axial†	970.5	913.4	1282.4 ug/L	1282.4 ppb	02:02:40
3	Sb 206.836†	54.9	26.2	2.2137 ug/L	2.2137 ppb	02:02:40
3	Se 196.026†	-408.2	-370.3	52.464 ug/L	52.464 ppb	02:02:40
3	Si 251.611†	888793.6	875339.6	27878 ug/L	27878 ppb	02:02:15
3	Sn 189.927†	-156.2	-161.6	-22.264 ug/L	-22.264 ppb	02:02:40
3	Ti 334.940†	1009300.0	996021.6	1607.6 ug/L	1607.6 ppb	02:02:15
3	Tl 190.801†	-137.0	-102.2	-7.4669 ug/L	-7.4669 ppb	02:02:40
3	U 409.014†	-9655.2	-7503.4	-231.87 ug/L	-231.87 ppb	02:02:15
3	V 292.402†	18933.3	19968.1	120.64 ug/L	120.64 ppb	02:02:20
3	Zn 213.857†	26363.6	25360.7	230.63 ug/L	230.63 ppb	02:02:20
3	SiO2†	893320.0	879779.1	60029 ug/L	60029 ppb	02:02:58

Mean Data: 243492005|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	870603.4	102.14	%	1.070				1.05%
Sc Radial	5189.5	103	%	0.3				0.30%
Y 371.029	845917.8	117.05	%	0.954				0.81%
Y RADIAL	6410.3	118.1	%	0.52				0.44%
Ag 328.068†	-5940.5	2.4772	ug/L	0.54840	2.4772	ppb	0.54840	22.14%
Al 396.153Radial†	70918.1	54712	ug/L	808.1	54712	ppb	808.1	1.48%
As 188.979†	6.5	28.432	ug/L	5.7479	28.432	ppb	5.7479	20.22%
B 249.677†	1376.6	21.255	ug/L	1.5564	21.255	ppb	1.5564	7.32%
Ba 233.527†	491657.6	3841.8	ug/L	6.57	3841.8	ppb	6.57	0.17%
Be 313.107†	6596.9	6.1583	ug/L	0.03953	6.1583	ppb	0.03953	0.64%
Ca 317.933Radial†	21376.0	34204	ug/L	486.2	34204	ppb	486.2	1.42%
Cd 226.502†	834.4	-0.1876	ug/L	0.29198	-0.1876	ppb	0.29198	155.61%
Co 228.616†	2945.2	57.400	ug/L	1.3657	57.400	ppb	1.3657	2.38%
Cr 267.716†	8658.2	98.870	ug/L	0.6056	98.870	ppb	0.6056	0.61%
Cu 324.752†	11363.5	38.942	ug/L	0.1342	38.942	ppb	0.1342	0.34%
Fe 238.204 Radial†	10566.0	91442	ug/L	1293.8	91442	ppb	1293.8	1.41%
K 766.490 Radial†	55867.1	10200	ug/L	143.1	10200	ppb	143.1	1.40%

Mg 279.077 IEC†	376.4	12480	ug/L	72.4	12480	ppb	72.4	0.58%
Mn 257.610†	2553487.0	2840.5	ug/L	3.63	2840.5	ppb	3.63	0.13%
Mo 202.031†	50.4	10.225	ug/L	0.3634	10.225	ppb	0.3634	3.55%
Na 589.592 Radial†	6760.7	2024.2	ug/L	28.36	2024.2	ppb	28.36	1.40%
Ni 231.604†	2628.8	65.421	ug/L	1.3322	65.421	ppb	1.3322	2.04%
P 214.914†	904.9	485.61	ug/L	20.847	485.61	ppb	20.847	4.29%
Pb 220.353†	576.2	74.080	ug/L	3.5099	74.080	ppb	3.5099	4.74%
S 181.975 Axial†	901.3	1265.3	ug/L	23.72	1265.3	ppb	23.72	1.87%
Sb 206.836†	17.7	-0.7040	ug/L	2.69511	-0.7040	ppb	2.69511	382.80%
Se 196.026†	-372.7	54.419	ug/L	4.0025	54.419	ppb	4.0025	7.35%
Si 251.611†	875926.6	27897	ug/L	18.5	27897	ppb	18.5	0.07%
Sn 189.927†	-157.6	-21.497	ug/L	0.8486	-21.497	ppb	0.8486	3.95%
Sr 421.552†	42437.0	273.84	ug/L	4.221	273.84	ppb	4.221	1.54%
Ti 334.940†	996460.3	1608.3	ug/L	1.30	1608.3	ppb	1.30	0.08%
Tl 190.801†	-98.7	-6.3568	ug/L	2.55407	-6.3568	ppb	2.55407	40.18%
U 409.014†	-7488.9	-231.56	ug/L	1.302	-231.56	ppb	1.302	0.56%
V 292.402†	19877.6	119.85	ug/L	1.114	119.85	ppb	1.114	0.93%
Zn 213.857†	25273.1	229.70	ug/L	2.302	229.70	ppb	2.302	1.00%
SiO2†	875118.8	59711	ug/L	690.0	59711	ppb	690.0	1.16%

Sequence No.: 94
Sample ID: 243492006|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 100
Date Collected: 1/12/2010 02:05:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492006|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5271.9	5271.9	105	%			02:07:02
1	Y RADIAL	7171.9	7171.9	132.1	%			02:07:02
1	Al 396.153Radial†	21529.6	20564.1	15864	ug/L	15864	ppb	02:07:02
1	Ca 317.933Radial†	5220.7	4966.6	7947.0	ug/L	7947.0	ppb	02:07:02
1	Fe 238.204 Radial†	7900.6	7537.2	65229	ug/L	65229	ppb	02:07:02
1	K 766.490 Radial†	23489.1	19844.8	3610.0	ug/L	3610.0	ppb	02:07:02
1	Mg 279.077 IEC†	111.2	104.3	3417.8	ug/L	3417.8	ppb	02:07:22
1	Na 589.592 Radial†	6087.1	7094.3	2124.1	ug/L	2124.1	ppb	02:07:02
1	Sr 421.552†	8900.0	8520.1	54.971	ug/L	54.971	ppb	02:07:02
1	Sc 361.383	880745.5	880745.5	103.33	%			02:08:20
1	Y 371.029	932881.2	932881.2	129.09	%			02:08:20
1	Ag 328.068†	-3914.2	-4146.2	2.2915	ug/L	2.2915	ppb	02:08:25
1	As 188.979†	-35.8	-11.0	13.970	ug/L	13.970	ppb	02:08:45
1	B 249.677†	210.2	835.3	11.875	ug/L	11.875	ppb	02:08:25
1	Ba 233.527†	30299.4	29335.6	231.50	ug/L	231.50	ppb	02:08:25
1	Be 313.107†	-6589.1	-1791.7	2.1578	ug/L	2.1578	ppb	02:08:25
1	Cd 226.502†	388.7	580.3	-0.3279	ug/L	-0.3279	ppb	02:08:45
1	Co 228.616†	2381.6	2379.6	45.261	ug/L	45.261	ppb	02:08:45
1	Cr 267.716†	2208.9	2054.5	24.406	ug/L	24.406	ppb	02:08:45
1	Cu 324.752†	12872.3	6045.8	21.660	ug/L	21.660	ppb	02:08:25
1	Mn 257.610†	2122550.2	2053789.5	2284.0	ug/L	2284.0	ppb	02:08:20
1	Mo 202.031†	177.0	147.6	14.989	ug/L	14.989	ppb	02:08:45
1	Ni 231.604†	1129.3	1025.0	25.492	ug/L	25.492	ppb	02:08:45
1	P 214.914†	1056.6	792.7	432.12	ug/L	432.12	ppb	02:08:45
1	Pb 220.353†	252.2	307.5	34.953	ug/L	34.953	ppb	02:08:45
1	S 181.975 Axial†	251.3	200.2	280.37	ug/L	280.37	ppb	02:08:45
1	Sb 206.836†	46.1	16.7	1.4179	ug/L	1.4179	ppb	02:08:45
1	Se 196.026†	-298.1	-256.5	43.639	ug/L	43.639	ppb	02:08:45
1	Si 251.611†	578475.6	559306.4	17813	ug/L	17813	ppb	02:08:20
1	Sn 189.927†	-17.2	-24.3	-2.0773	ug/L	-2.0773	ppb	02:08:45
1	Ti 334.940†	800972.7	776567.4	1251.8	ug/L	1251.8	ppb	02:08:20
1	Tl 190.801†	-118.0	-81.3	-5.8826	ug/L	-5.8826	ppb	02:08:45
1	U 409.014†	-10260.0	-7918.1	-241.07	ug/L	-241.07	ppb	02:08:20
1	V 292.402†	5945.6	7064.0	36.696	ug/L	36.696	ppb	02:08:25
1	Zn 213.857†	24033.3	22639.6	207.61	ug/L	207.61	ppb	02:08:25
1	SiO2†	581552.9	562263.5	38364	ug/L	38364	ppb	02:09:53
2	Sc Radial	5113.4	5113.4	102	%			02:07:27
2	Y RADIAL	6981.8	6981.8	128.6	%			02:07:27
2	Al 396.153Radial†	21070.7	20749.5	16007	ug/L	16007	ppb	02:07:27
2	Ca 317.933Radial†	5049.5	4952.6	7924.6	ug/L	7924.6	ppb	02:07:27
2	Fe 238.204 Radial†	7713.9	7587.2	65662	ug/L	65662	ppb	02:07:27
2	K 766.490 Radial†	22788.3	19850.1	3611.0	ug/L	3611.0	ppb	02:07:27
2	Mg 279.077 IEC†	114.0	110.4	3619.7	ug/L	3619.7	ppb	02:07:47
2	Na 589.592 Radial†	5750.5	6943.1	2078.9	ug/L	2078.9	ppb	02:07:27
2	Sr 421.552†	8610.6	8498.6	54.832	ug/L	54.832	ppb	02:07:27
2	Sc 361.383	891455.0	891455.0	104.58	%			02:08:51
2	Y 371.029	944870.9	944870.9	130.75	%			02:08:51
2	Ag 328.068†	-3927.6	-4113.5	2.5796	ug/L	2.5796	ppb	02:08:56
2	As 188.979†	-28.6	-3.7	17.233	ug/L	17.233	ppb	02:09:16
2	B 249.677†	185.7	809.4	11.255	ug/L	11.255	ppb	02:08:56
2	Ba 233.527†	30446.9	29124.3	229.86	ug/L	229.86	ppb	02:08:56
2	Be 313.107†	-6803.7	-1920.2	2.1110	ug/L	2.1110	ppb	02:08:56
2	Cd 226.502†	397.9	584.6	-0.3251	ug/L	-0.3251	ppb	02:09:16
2	Co 228.616†	2385.6	2355.8	44.764	ug/L	44.764	ppb	02:09:16
2	Cr 267.716†	2216.5	2036.1	24.208	ug/L	24.208	ppb	02:09:16
2	Cu 324.752†	12928.1	5949.5	21.394	ug/L	21.394	ppb	02:08:56
2	Mn 257.610†	2147439.8	2052909.9	2283.1	ug/L	2283.1	ppb	02:08:51
2	Mo 202.031†	182.7	151.0	15.259	ug/L	15.259	ppb	02:09:16
2	Ni 231.604†	1108.9	992.4	24.682	ug/L	24.682	ppb	02:09:16

2	P 214.914†	1068.8	792.1	431.48 ug/L	431.48 ppb	02:09:16
2	Pb 220.353†	246.9	299.4	33.958 ug/L	33.958 ppb	02:09:16
2	S 181.975 Axial†	250.5	196.5	275.13 ug/L	275.13 ppb	02:09:16
2	Sb 206.836†	32.1	2.7	-3.3816 ug/L	-3.3816 ppb	02:09:16
2	Se 196.026†	-300.3	-255.1	45.930 ug/L	45.930 ppb	02:09:16
2	Si 251.611†	585221.9	559031.4	17804 ug/L	17804 ppb	02:08:51
2	Sn 189.927†	-27.5	-34.0	-3.7832 ug/L	-3.7832 ppb	02:09:16
2	Ti 334.940†	811363.6	777190.2	1252.8 ug/L	1252.8 ppb	02:08:51
2	Tl 190.801†	-131.9	-93.2	-9.5265 ug/L	-9.5265 ppb	02:09:16
2	U 409.014†	-10318.9	-7855.2	-239.26 ug/L	-239.26 ppb	02:08:51
2	V 292.402†	5958.4	7007.0	36.251 ug/L	36.251 ppb	02:08:56
2	Zn 213.857†	24120.5	22443.5	205.72 ug/L	205.72 ppb	02:08:56
2	SiO2†	577810.3	551923.3	37658 ug/L	37658 ppb	02:09:58
3	Sc Radial	5231.6	5231.6	104 %		02:07:52
3	Y RADIAL	7026.7	7026.7	129.4 %		02:07:52
3	Al 396.153Radial†	21266.3	20469.1	15791 ug/L	15791 ppb	02:07:52
3	Ca 317.933Radial†	5141.3	4928.6	7886.2 ug/L	7886.2 ppb	02:07:52
3	Fe 238.204 Radial†	7853.3	7549.8	65338 ug/L	65338 ppb	02:07:52
3	K 766.490 Radial†	23202.8	19742.2	3591.2 ug/L	3591.2 ppb	02:07:52
3	Mg 279.077 IEC†	114.7	108.5	3558.1 ug/L	3558.1 ppb	02:08:12
3	Na 589.592 Radial†	5927.2	6985.3	2091.5 ug/L	2091.5 ppb	02:07:52
3	Sr 421.552†	8782.8	8472.8	54.666 ug/L	54.666 ppb	02:07:52
3	Sc 361.383	877121.8	877121.8	102.90 %		02:09:22
3	Y 371.029	930859.8	930859.8	128.81 %		02:09:22
3	Ag 328.068†	-3842.3	-4092.0	2.5774 ug/L	2.5774 ppb	02:09:27
3	As 188.979†	-33.9	-9.4	14.704 ug/L	14.704 ppb	02:09:47
3	B 249.677†	151.4	779.0	10.609 ug/L	10.609 ppb	02:09:27
3	Ba 233.527†	30123.1	29285.5	231.11 ug/L	231.11 ppb	02:09:27
3	Be 313.107†	-6624.8	-1852.7	2.1320 ug/L	2.1320 ppb	02:09:27
3	Cd 226.502†	383.8	577.1	-0.3747 ug/L	-0.3747 ppb	02:09:47
3	Co 228.616†	2380.4	2388.0	45.433 ug/L	45.433 ppb	02:09:47
3	Cr 267.716†	2204.5	2059.1	24.459 ug/L	24.459 ppb	02:09:47
3	Cu 324.752†	12797.0	6024.1	21.602 ug/L	21.602 ppb	02:09:27
3	Mn 257.610†	2112231.3	2052248.1	2282.3 ug/L	2282.3 ppb	02:09:22
3	Mo 202.031†	184.5	155.6	15.558 ug/L	15.558 ppb	02:09:47
3	Ni 231.604†	1131.4	1031.5	25.656 ug/L	25.656 ppb	02:09:47
3	P 214.914†	1059.1	799.4	436.12 ug/L	436.12 ppb	02:09:47
3	Pb 220.353†	236.6	293.3	33.195 ug/L	33.195 ppb	02:09:47
3	S 181.975 Axial†	258.0	207.7	291.04 ug/L	291.04 ppb	02:09:47
3	Sb 206.836†	35.3	6.3	-2.1128 ug/L	-2.1128 ppb	02:09:47
3	Se 196.026†	-299.0	-258.6	42.666 ug/L	42.666 ppb	02:09:47
3	Si 251.611†	575688.7	558911.0	17800 ug/L	17800 ppb	02:09:22
3	Sn 189.927†	-21.5	-28.5	-2.8262 ug/L	-2.8262 ppb	02:09:47
3	Ti 334.940†	796981.7	775891.3	1250.7 ug/L	1250.7 ppb	02:09:22
3	Tl 190.801†	-118.6	-82.4	-6.2357 ug/L	-6.2357 ppb	02:09:47
3	U 409.014†	-10256.2	-7955.5	-242.18 ug/L	-242.18 ppb	02:09:22
3	V 292.402†	5882.8	7026.7	36.435 ug/L	36.435 ppb	02:09:27
3	Zn 213.857†	23989.2	22692.7	208.11 ug/L	208.11 ppb	02:09:27
3	SiO2†	581426.8	564466.2	38514 ug/L	38514 ppb	02:10:04

Mean Data: 243492006|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	883107.4	103.60	%	0.874				0.84%
Sc Radial	5205.6	103	%	1.6				1.58%
Y 371.029	936204.0	129.55	%	1.048				0.81%
Y RADIAL	7060.1	130.0	%	1.83				1.41%
Ag 328.068†	-4117.2	2.4828	ug/L	0.16570	2.4828	ppb	0.16570	6.67%
Al 396.153Radial†	20594.2	15888	ug/L	110.0	15888	ppb	110.0	0.69%
As 188.979†	-8.0	15.303	ug/L	1.7118	15.303	ppb	1.7118	11.19%
B 249.677†	807.9	11.246	ug/L	0.6330	11.246	ppb	0.6330	5.63%
Ba 233.527†	29248.5	230.82	ug/L	0.854	230.82	ppb	0.854	0.37%
Be 313.107†	-1854.9	2.1336	ug/L	0.02339	2.1336	ppb	0.02339	1.10%
Ca 317.933Radial†	4949.3	7919.3	ug/L	30.74	7919.3	ppb	30.74	0.39%
Cd 226.502†	580.6	-0.3426	ug/L	0.02784	-0.3426	ppb	0.02784	8.13%
Co 228.616†	2374.5	45.153	ug/L	0.3475	45.153	ppb	0.3475	0.77%
Cr 267.716†	2049.9	24.358	ug/L	0.1327	24.358	ppb	0.1327	0.54%
Cu 324.752†	6006.5	21.552	ug/L	0.1398	21.552	ppb	0.1398	0.65%
Fe 238.204 Radial†	7558.1	65410	ug/L	225.4	65410	ppb	225.4	0.34%
K 766.490 Radial†	19812.4	3604.1	ug/L	11.14	3604.1	ppb	11.14	0.31%

Mg 279.077 IEC†	107.8	3531.9 ug/L	103.46	3531.9 ppb	103.46	2.93%
Mn 257.610†	2052982.5	2283.1 ug/L	0.85	2283.1 ppb	0.85	0.04%
Mo 202.031†	151.4	15.269 ug/L	0.2845	15.269 ppb	0.2845	1.86%
Na 589.592 Radial†	7007.6	2098.2 ug/L	23.36	2098.2 ppb	23.36	1.11%
Ni 231.604†	1016.3	25.277 ug/L	0.5216	25.277 ppb	0.5216	2.06%
P 214.914†	794.7	433.24 ug/L	2.513	433.24 ppb	2.513	0.58%
Pb 220.353†	300.1	34.035 ug/L	0.8812	34.035 ppb	0.8812	2.59%
S 181.975 Axial†	201.5	282.18 ug/L	8.108	282.18 ppb	8.108	2.87%
Sb 206.836†	8.6	-1.3588 ug/L	2.48701	-1.3588 ppb	2.48701	183.02%
Se 196.026†	-256.7	44.078 ug/L	1.6755	44.078 ppb	1.6755	3.80%
Si 251.611†	559082.9	17806 ug/L	6.5	17806 ppb	6.5	0.04%
Sn 189.927†	-28.9	-2.8956 ug/L	0.85507	-2.8956 ppb	0.85507	29.53%
Sr 421.552†	8497.2	54.823 ug/L	0.1525	54.823 ppb	0.1525	0.28%
Ti 334.940†	776549.6	1251.8 ug/L	1.05	1251.8 ppb	1.05	0.08%
Tl 190.801†	-85.7	-7.2149 ug/L	2.00965	-7.2149 ppb	2.00965	27.85%
U 409.014†	-7909.6	-240.84 ug/L	1.474	-240.84 ppb	1.474	0.61%
V 292.402†	7032.6	36.461 ug/L	0.2236	36.461 ppb	0.2236	0.61%
Zn 213.857†	22591.9	207.15 ug/L	1.258	207.15 ppb	1.258	0.61%
SiO2†	559551.0	38179 ug/L	456.9	38179 ppb	456.9	1.20%

Sequence No.: 95
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/12/2010 02:12:15
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5217.5	5217.5	104	%			02:14:08
1	Y RADIAL	5548.4	5548.4	102.2	%			02:14:08
1	Al 396.153Radial†	6559.5	6331.0	4859.5	ug/L	4859.5	ppb	02:14:08
1	Ca 317.933Radial†	3238.1	3105.2	4968.6	ug/L	4968.6	ppb	02:14:28
1	Fe 238.204 Radial†	616.8	586.4	5090.0	ug/L	5090.0	ppb	02:14:28
1	K 766.490 Radial†	30193.7	26548.9	4850.4	ug/L	4850.4	ppb	02:14:08
1	Mg 279.077 IEC†	156.9	149.5	4995.4	ug/L	4995.4	ppb	02:14:28
1	Na 589.592 Radial†	32991.0	33119.2	9916.3	ug/L	9916.3	ppb	02:14:08
1	Sr 421.552†	78341.8	75625.0	488.42	ug/L	488.42	ppb	02:14:08
1	Sc 361.383	870004.3	870004.3	102.07	%			02:15:26
1	Y 371.029	725150.7	725150.7	100.34	%			02:15:26
1	Ag 328.068†	114337.2	111665.3	517.35	ug/L	517.35	ppb	02:15:31
1	As 188.979†	1175.7	1175.6	511.55	ug/L	511.55	ppb	02:15:51
1	B 249.677†	22233.4	22415.3	497.73	ug/L	497.73	ppb	02:15:31
1	Ba 233.527†	66454.0	65120.6	509.68	ug/L	509.68	ppb	02:15:31
1	Be 313.107†	1344233.2	1321615.4	504.73	ug/L	504.73	ppb	02:15:26
1	Cd 226.502†	46689.4	45948.6	509.77	ug/L	509.77	ppb	02:15:31
1	Co 228.616†	25518.1	25076.3	513.38	ug/L	513.38	ppb	02:15:31
1	Cr 267.716†	46620.8	45594.1	510.36	ug/L	510.36	ppb	02:15:31
1	Cu 324.752†	178726.7	168697.6	504.43	ug/L	504.43	ppb	02:15:31
1	Mn 257.610†	462415.3	452612.5	502.13	ug/L	502.13	ppb	02:15:26
1	Mo 202.031†	7425.2	7251.2	512.89	ug/L	512.89	ppb	02:15:51
1	Ni 231.604†	20990.4	20497.6	510.08	ug/L	510.08	ppb	02:15:31
1	P 214.914†	4455.4	4135.3	2420.4	ug/L	2420.4	ppb	02:15:51
1	Pb 220.353†	4161.3	4140.5	508.66	ug/L	508.66	ppb	02:15:51
1	S 181.975 Axial†	781.9	723.0	1022.3	ug/L	1022.3	ppb	02:15:51
1	Sb 206.836†	1534.9	1475.9	523.89	ug/L	523.89	ppb	02:15:51
1	Se 196.026†	769.8	786.2	524.67	ug/L	524.67	ppb	02:15:51
1	Si 251.611†	83773.1	81527.3	2590.2	ug/L	2590.2	ppb	02:15:31
1	Sn 189.927†	2946.8	2879.5	510.93	ug/L	510.93	ppb	02:15:51
1	Ti 334.940†	320190.3	315085.1	507.38	ug/L	507.38	ppb	02:15:26
1	Tl 190.801†	1640.6	1640.2	506.28	ug/L	506.28	ppb	02:15:51
1	U 409.014†	16204.4	17888.1	525.97	ug/L	525.97	ppb	02:15:31
1	V 292.402†	74841.2	74636.3	516.70	ug/L	516.70	ppb	02:15:31
1	Zn 213.857†	55604.3	53858.8	504.98	ug/L	504.98	ppb	02:15:31
1	SiO2†	83440.0	81179.7	5525.1	ug/L	5525.1	ppb	02:16:59
2	Sc Radial	5194.5	5194.5	103	%			02:14:33
2	Y RADIAL	5534.8	5534.8	101.9	%			02:14:33
2	Al 396.153Radial†	6700.8	6496.1	4986.6	ug/L	4986.6	ppb	02:14:33
2	Ca 317.933Radial†	3181.4	3064.1	4902.9	ug/L	4902.9	ppb	02:14:53
2	Fe 238.204 Radial†	609.4	581.8	5050.6	ug/L	5050.6	ppb	02:14:53
2	K 766.490 Radial†	30908.5	27371.0	5000.9	ug/L	5000.9	ppb	02:14:33
2	Mg 279.077 IEC†	160.9	154.1	5148.6	ug/L	5148.6	ppb	02:14:53
2	Na 589.592 Radial†	33672.3	33920.7	10156	ug/L	10156	ppb	02:14:33
2	Sr 421.552†	80208.7	77769.7	502.27	ug/L	502.27	ppb	02:14:33
2	Sc 361.383	870542.7	870542.7	102.13	%			02:15:57
2	Y 371.029	726980.3	726980.3	100.60	%			02:15:57
2	Ag 328.068†	114273.0	111533.2	516.73	ug/L	516.73	ppb	02:16:02
2	As 188.979†	1177.7	1176.8	512.10	ug/L	512.10	ppb	02:16:22
2	B 249.677†	22239.6	22407.9	497.58	ug/L	497.58	ppb	02:16:02
2	Ba 233.527†	66481.7	65107.5	509.57	ug/L	509.57	ppb	02:16:02
2	Be 313.107†	1370431.8	1346453.3	514.21	ug/L	514.21	ppb	02:15:57
2	Cd 226.502†	46753.9	45983.5	510.16	ug/L	510.16	ppb	02:16:02
2	Co 228.616†	25466.6	25010.4	512.03	ug/L	512.03	ppb	02:16:02
2	Cr 267.716†	46675.8	45619.6	510.65	ug/L	510.65	ppb	02:16:02
2	Cu 324.752†	178036.8	167913.7	502.08	ug/L	502.08	ppb	02:16:02
2	Mn 257.610†	469977.1	459736.5	510.02	ug/L	510.02	ppb	02:15:57
2	Mo 202.031†	7479.0	7299.4	516.29	ug/L	516.29	ppb	02:16:22
2	Ni 231.604†	20970.6	20465.5	509.29	ug/L	509.29	ppb	02:16:02

2	P 214.914†	4474.8	4151.6	2431.0 ug/L	2431.0 ppb	02:16:22
2	Pb 220.353†	4197.0	4172.9	512.66 ug/L	512.66 ppb	02:16:22
2	S 181.975 Axial†	785.9	726.5	1027.2 ug/L	1027.2 ppb	02:16:22
2	Sb 206.836†	1539.8	1479.8	525.33 ug/L	525.33 ppb	02:16:22
2	Se 196.026†	777.9	793.7	529.41 ug/L	529.41 ppb	02:16:22
2	Si 251.611†	83533.7	81242.1	2581.1 ug/L	2581.1 ppb	02:16:02
2	Sn 189.927†	2976.5	2906.8	515.76 ug/L	515.76 ppb	02:16:22
2	Ti 334.940†	325361.3	319954.4	515.20 ug/L	515.20 ppb	02:15:57
2	Tl 190.801†	1671.7	1669.7	515.43 ug/L	515.43 ppb	02:16:22
2	U 409.014†	16083.0	17759.4	522.18 ug/L	522.18 ppb	02:16:02
2	V 292.402†	74826.0	74576.1	516.33 ug/L	516.33 ppb	02:16:02
2	Zn 213.857†	55571.8	53793.3	504.37 ug/L	504.37 ppb	02:16:02
2	SiO2†	82668.6	80373.9	5470.0 ug/L	5470.0 ppb	02:17:04
3	Sc Radial	4911.2	4911.2	97.5 %		02:14:58
3	Y RADIAL	5174.6	5174.6	95.31 %		02:14:58
3	Al 396.153Radial†	6727.0	6897.6	5295.4 ug/L	5295.4 ppb	02:14:58
3	Ca 317.933Radial†	3238.8	3300.8	5281.6 ug/L	5281.6 ppb	02:15:18
3	Fe 238.204 Radial†	616.5	623.2	5409.4 ug/L	5409.4 ppb	02:15:18
3	K 766.490 Radial†	30674.7	28859.4	5272.9 ug/L	5272.9 ppb	02:14:58
3	Mg 279.077 IEC†	162.8	165.0	5511.8 ug/L	5511.8 ppb	02:15:18
3	Na 589.592 Radial†	33811.6	35946.2	10763 ug/L	10763 ppb	02:14:58
3	Sr 421.552†	80177.5	82222.4	531.03 ug/L	531.03 ppb	02:14:58
3	Sc 361.383	831435.7	831435.7	97.541 %		02:16:28
3	Y 371.029	693115.3	693115.3	95.911 %		02:16:28
3	Ag 328.068†	113756.4	116266.4	538.71 ug/L	538.71 ppb	02:16:33
3	As 188.979†	1172.3	1225.5	533.34 ug/L	533.34 ppb	02:16:53
3	B 249.677†	22075.8	23264.3	516.57 ug/L	516.57 ppb	02:16:33
3	Ba 233.527†	66288.7	67971.4	531.99 ug/L	531.99 ppb	02:16:33
3	Be 313.107†	1363291.6	1402248.5	535.52 ug/L	535.52 ppb	02:16:28
3	Cd 226.502†	46573.1	47951.5	531.98 ug/L	531.98 ppb	02:16:33
3	Co 228.616†	25376.3	26090.8	534.14 ug/L	534.14 ppb	02:16:33
3	Cr 267.716†	46566.3	47657.0	533.46 ug/L	533.46 ppb	02:16:33
3	Cu 324.752†	177178.0	175232.8	523.98 ug/L	523.98 ppb	02:16:33
3	Mn 257.610†	469128.0	480510.9	533.07 ug/L	533.07 ppb	02:16:28
3	Mo 202.031†	7426.7	7590.3	536.87 ug/L	536.87 ppb	02:16:53
3	Ni 231.604†	20983.0	21444.0	533.64 ug/L	533.64 ppb	02:16:33
3	P 214.914†	4440.3	4322.4	2530.6 ug/L	2530.6 ppb	02:16:53
3	Pb 220.353†	4148.1	4316.0	530.27 ug/L	530.27 ppb	02:16:53
3	S 181.975 Axial†	786.5	763.3	1079.2 ug/L	1079.2 ppb	02:16:53
3	Sb 206.836†	1522.3	1532.8	544.24 ug/L	544.24 ppb	02:16:53
3	Se 196.026†	775.6	827.2	552.20 ug/L	552.20 ppb	02:16:53
3	Si 251.611†	83135.4	84680.9	2690.3 ug/L	2690.3 ppb	02:16:33
3	Sn 189.927†	2968.6	3035.8	538.67 ug/L	538.67 ppb	02:16:53
3	Ti 334.940†	324795.9	334359.3	538.41 ug/L	538.41 ppb	02:16:28
3	Tl 190.801†	1642.0	1716.2	529.84 ug/L	529.84 ppb	02:16:53
3	U 409.014†	15913.4	18326.2	538.81 ug/L	538.81 ppb	02:16:33
3	V 292.402†	74505.6	77693.7	537.87 ug/L	537.87 ppb	02:16:33
3	Zn 213.857†	55436.1	56213.6	527.04 ug/L	527.04 ppb	02:16:33
3	SiO2†	84519.2	86078.4	5858.7 ug/L	5858.7 ppb	02:17:09

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	857327.5	100.58	%	2.631				2.62%
Sc Radial	5107.8	101	%	3.4				3.34%
Y 371.029	715082.1	98.950	%	2.6355				2.66%
Y RADIAL	5419.3	99.81	%	3.904				3.91%
Ag 328.068†	113155.0	524.26	ug/L	12.513	524.26	ppb	12.513	2.39%
QC value within limits for Ag 328.068 Recovery = 104.85%								
Al 396.153Radial†	6574.9	5047.2	ug/L	224.18	5047.2	ppb	224.18	4.44%
QC value within limits for Al 396.153Radial Recovery = 100.94%								
As 188.979†	1192.6	519.00	ug/L	12.426	519.00	ppb	12.426	2.39%
QC value within limits for As 188.979 Recovery = 103.80%								
B 249.677†	22695.8	503.96	ug/L	10.920	503.96	ppb	10.920	2.17%
QC value within limits for B 249.677 Recovery = 100.79%								
Ba 233.527†	66066.5	517.08	ug/L	12.913	517.08	ppb	12.913	2.50%
QC value within limits for Ba 233.527 Recovery = 103.42%								
Be 313.107†	1356772.4	518.15	ug/L	15.771	518.15	ppb	15.771	3.04%
QC value within limits for Be 313.107 Recovery = 103.63%								
Ca 317.933Radial†	3156.7	5051.0	ug/L	202.40	5051.0	ppb	202.40	4.01%

QC value within limits for Ca 317.933Radial Recovery = 101.02%

Cd 226.502†	46627.9	517.30 ug/L	12.711	517.30 ppb	12.711	2.46%
QC value within limits for Cd 226.502 Recovery = 103.46%						
Co 228.616†	25392.5	519.85 ug/L	12.392	519.85 ppb	12.392	2.38%
QC value within limits for Co 228.616 Recovery = 103.97%						
Cr 267.716†	46290.3	518.16 ug/L	13.252	518.16 ppb	13.252	2.56%
QC value within limits for Cr 267.716 Recovery = 103.63%						
Cu 324.752†	170614.7	510.16 ug/L	12.022	510.16 ppb	12.022	2.36%
QC value within limits for Cu 324.752 Recovery = 102.03%						
Fe 238.204 Radial†	597.1	5183.3 ug/L	196.78	5183.3 ppb	196.78	3.80%
QC value within limits for Fe 238.204 Radial Recovery = 103.67%						
K 766.490 Radial†	27593.1	5041.4 ug/L	214.15	5041.4 ppb	214.15	4.25%
QC value within limits for K 766.490 Radial Recovery = 100.83%						
Mg 279.077 IEC†	156.2	5218.6 ug/L	265.19	5218.6 ppb	265.19	5.08%
QC value within limits for Mg 279.077 IEC Recovery = 104.37%						
Mn 257.610†	464286.6	515.08 ug/L	16.079	515.08 ppb	16.079	3.12%
QC value within limits for Mn 257.610 Recovery = 103.02%						
Mo 202.031†	7380.3	522.02 ug/L	12.979	522.02 ppb	12.979	2.49%
QC value within limits for Mo 202.031 Recovery = 104.40%						
Na 589.592 Radial†	34328.7	10278 ug/L	436.3	10278 ppb	436.3	4.24%
QC value within limits for Na 589.592 Radial Recovery = 102.78%						
Ni 231.604†	20802.4	517.67 ug/L	13.835	517.67 ppb	13.835	2.67%
QC value within limits for Ni 231.604 Recovery = 103.53%						
P 214.914†	4203.1	2460.7 ug/L	60.80	2460.7 ppb	60.80	2.47%
QC value within limits for P 214.914 Recovery = 98.43%						
Pb 220.353†	4209.8	517.20 ug/L	11.495	517.20 ppb	11.495	2.22%
QC value within limits for Pb 220.353 Recovery = 103.44%						
S 181.975 Axial†	737.6	1042.9 ug/L	31.55	1042.9 ppb	31.55	3.03%
QC value within limits for S 181.975 Axial Recovery = 104.29%						
Sb 206.836†	1496.1	531.15 ug/L	11.360	531.15 ppb	11.360	2.14%
QC value within limits for Sb 206.836 Recovery = 106.23%						
Se 196.026†	802.4	535.43 ug/L	14.717	535.43 ppb	14.717	2.75%
QC value within limits for Se 196.026 Recovery = 107.09%						
Si 251.611†	82483.5	2620.5 ug/L	60.62	2620.5 ppb	60.62	2.31%
QC value within limits for Si 251.611 Recovery = 104.82%						
Sn 189.927†	2940.7	521.79 ug/L	14.819	521.79 ppb	14.819	2.84%
QC value within limits for Sn 189.927 Recovery = 104.36%						
Sr 421.552†	78539.0	507.24 ug/L	21.735	507.24 ppb	21.735	4.28%
QC value within limits for Sr 421.552 Recovery = 101.45%						
Ti 334.940†	323132.9	520.33 ug/L	16.139	520.33 ppb	16.139	3.10%
QC value within limits for Ti 334.940 Recovery = 104.07%						
Tl 190.801†	1675.4	517.18 ug/L	11.880	517.18 ppb	11.880	2.30%
QC value within limits for Tl 190.801 Recovery = 103.44%						
U 409.014†	17991.2	528.99 ug/L	8.715	528.99 ppb	8.715	1.65%
QC value within limits for U 409.014 Recovery = 105.80%						
V 292.402†	75635.4	523.63 ug/L	12.330	523.63 ppb	12.330	2.35%
QC value within limits for V 292.402 Recovery = 104.73%						
Zn 213.857†	54621.9	512.13 ug/L	12.918	512.13 ppb	12.918	2.52%
QC value within limits for Zn 213.857 Recovery = 102.43%						
SiO2†	82544.0	5617.9 ug/L	210.31	5617.9 ppb	210.31	3.74%
QC value within limits for SiO2 Recovery = 105.06%						

All analyte(s) passed QC.

Sequence No.: 96
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/12/2010 02:19:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Rep1#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5083.1	5083.1	101	%			02:21:11
1	Y RADIAL	5456.5	5456.5	100.5	%			02:21:11
1	Al 396.153Radial†	-1.8	-1.2	-0.8923	ug/L	-0.8923	ppb	02:21:11
1	Ca 317.933Radial†	22.4	2.4	3.9101	ug/L	3.9101	ppb	02:21:31
1	Fe 238.204 Radial†	8.7	-0.2	-1.9018	ug/L	-1.9018	ppb	02:21:31
1	K 766.490 Radial†	2689.4	74.0	13.560	ug/L	13.560	ppb	02:21:11
1	Mg 279.077 IEC†	-1.2	-3.1	-104.58	ug/L	-104.58	ppb	02:21:31
1	Na 589.592 Radial†	-1285.9	6.6	1.9794	ug/L	1.9794	ppb	02:21:11
1	Sr 421.552†	17.3	36.7	0.2367	ug/L	0.2367	ppb	02:21:11
1	Sc 361.383	864412.7	864412.7	101.41	%			02:22:28
1	Y 371.029	732531.7	732531.7	101.36	%			02:22:28
1	Ag 328.068†	403.9	40.3	0.1765	ug/L	0.1765	ppb	02:22:33
1	As 188.979†	-20.7	3.2	1.3721	ug/L	1.3721	ppb	02:22:53
1	B 249.677†	-475.5	162.9	3.6319	ug/L	3.6319	ppb	02:22:53
1	Ba 233.527†	-14.0	-2.4	-0.0202	ug/L	-0.0202	ppb	02:22:53
1	Be 313.107†	-4469.5	178.0	0.0681	ug/L	0.0681	ppb	02:22:33
1	Cd 226.502†	-191.2	15.6	0.1748	ug/L	0.1748	ppb	02:22:53
1	Co 228.616†	-69.5	6.2	0.1259	ug/L	0.1259	ppb	02:22:53
1	Cr 267.716†	95.0	10.4	0.1127	ug/L	0.1127	ppb	02:22:53
1	Cu 324.752†	6260.9	-238.4	-0.7171	ug/L	-0.7171	ppb	02:22:33
1	Mn 257.610†	449.0	-2.1	0.0017	ug/L	0.0017	ppb	02:22:53
1	Mo 202.031†	23.8	-0.3	-0.0183	ug/L	-0.0183	ppb	02:22:53
1	Ni 231.604†	78.5	9.4	0.2342	ug/L	0.2342	ppb	02:22:53
1	P 214.914†	218.6	-14.4	-8.6190	ug/L	-8.6190	ppb	02:22:53
1	Pb 220.353†	-51.5	12.6	1.5434	ug/L	1.5434	ppb	02:22:53
1	S 181.975 Axial†	50.9	7.2	10.137	ug/L	10.137	ppb	02:22:53
1	Sb 206.836†	44.4	15.8	5.4221	ug/L	5.4221	ppb	02:22:53
1	Se 196.026†	-34.4	-1.9	-1.2107	ug/L	-1.2107	ppb	02:22:53
1	Si 251.611†	507.7	-49.8	-1.5855	ug/L	-1.5855	ppb	02:22:53
1	Sn 189.927†	7.9	0.1	0.0250	ug/L	0.0250	ppb	02:22:53
1	Ti 334.940†	-1316.6	76.2	0.1284	ug/L	0.1284	ppb	02:22:33
1	Tl 190.801†	-34.6	-1.3	-0.3832	ug/L	-0.3832	ppb	02:22:53
1	U 409.014†	-1779.3	257.1	7.5830	ug/L	7.5830	ppb	02:22:28
1	V 292.402†	-1415.6	-86.2	-0.5760	ug/L	-0.5760	ppb	02:22:33
1	Zn 213.857†	620.0	-8.8	-0.0837	ug/L	-0.0837	ppb	02:22:53
1	SiO2†	531.5	-47.6	-3.2465	ug/L	-3.2465	ppb	02:23:59
2	Sc Radial	4963.2	4963.2	98.6	%			02:21:36
2	Y RADIAL	5348.1	5348.1	98.50	%			02:21:36
2	Al 396.153Radial†	-22.7	-22.4	-17.290	ug/L	-17.290	ppb	02:21:36
2	Ca 317.933Radial†	13.3	-6.3	-10.104	ug/L	-10.104	ppb	02:21:57
2	Fe 238.204 Radial†	9.3	0.6	4.9482	ug/L	4.9482	ppb	02:21:57
2	K 766.490 Radial†	2746.9	196.7	36.073	ug/L	36.073	ppb	02:21:36
2	Mg 279.077 IEC†	1.7	-0.1	-4.9519	ug/L	-4.9519	ppb	02:21:57
2	Na 589.592 Radial†	-1288.3	-26.6	-7.9575	ug/L	-7.9575	ppb	02:21:36
2	Sr 421.552†	-3.4	16.1	0.1038	ug/L	0.1038	ppb	02:21:36
2	Sc 361.383	847934.4	847934.4	99.476	%			02:22:58
2	Y 371.029	719044.9	719044.9	99.499	%			02:22:58
2	Ag 328.068†	275.9	-80.6	-0.3736	ug/L	-0.3736	ppb	02:23:04
2	As 188.979†	-23.5	0.0	0.0053	ug/L	0.0053	ppb	02:23:24
2	B 249.677†	-500.8	128.4	2.8634	ug/L	2.8634	ppb	02:23:24
2	Ba 233.527†	-1.9	9.5	0.0726	ug/L	0.0726	ppb	02:23:24
2	Be 313.107†	-4554.8	6.6	0.0027	ug/L	0.0027	ppb	02:23:04
2	Cd 226.502†	-177.6	25.6	0.2840	ug/L	0.2840	ppb	02:23:24
2	Co 228.616†	-84.7	-10.5	-0.2151	ug/L	-0.2151	ppb	02:23:24
2	Cr 267.716†	88.0	5.2	0.0567	ug/L	0.0567	ppb	02:23:24
2	Cu 324.752†	6406.0	27.5	0.0813	ug/L	0.0813	ppb	02:23:04
2	Mn 257.610†	443.6	1.1	0.0020	ug/L	0.0020	ppb	02:23:24
2	Mo 202.031†	24.4	0.8	0.0579	ug/L	0.0579	ppb	02:23:24
2	Ni 231.604†	61.0	-6.6	-0.1649	ug/L	-0.1649	ppb	02:23:24

2	P 214.914†	221.0	-7.7	-4.7313 ug/L	-4.7313 ppb	02:23:24
2	Pb 220.353†	-42.5	20.7	2.5273 ug/L	2.5273 ppb	02:23:24
2	S 181.975 Axial†	48.4	5.6	7.9552 ug/L	7.9552 ppb	02:23:24
2	Sb 206.836†	46.7	19.0	6.5426 ug/L	6.5426 ppb	02:23:24
2	Se 196.026†	-21.7	10.2	6.5737 ug/L	6.5737 ppb	02:23:24
2	Si 251.611†	492.4	-55.5	-1.7668 ug/L	-1.7668 ppb	02:23:24
2	Sn 189.927†	14.9	7.3	1.2914 ug/L	1.2914 ppb	02:23:24
2	Ti 334.940†	-1314.5	53.1	0.0840 ug/L	0.0840 ppb	02:23:04
2	Tl 190.801†	-39.3	-6.7	-2.0436 ug/L	-2.0436 ppb	02:23:24
2	U 409.014†	-1933.1	68.4	2.0161 ug/L	2.0161 ppb	02:22:58
2	V 292.402†	-1393.0	-90.6	-0.6148 ug/L	-0.6148 ppb	02:23:04
2	Zn 213.857†	634.6	17.7	0.1674 ug/L	0.1674 ppb	02:23:24
2	SiO2†	526.7	-42.3	-2.8847 ug/L	-2.8847 ppb	02:24:04
3	Sc Radial	5196.4	5196.4	103 %		02:22:02
3	Y RADIAL	5564.7	5564.7	102.5 %		02:22:02
3	Al 396.153Radial†	-16.5	-15.3	-11.778 ug/L	-11.778 ppb	02:22:02
3	Ca 317.933Radial†	18.4	-2.0	-3.1831 ug/L	-3.1831 ppb	02:22:22
3	Fe 238.204 Radial†	7.6	-1.5	-12.841 ug/L	-12.841 ppb	02:22:22
3	K 766.490 Radial†	2747.7	72.4	13.271 ug/L	13.271 ppb	02:22:02
3	Mg 279.077 IEC†	1.9	-0.0	-0.6583 ug/L	-0.6583 ppb	02:22:22
3	Na 589.592 Radial†	-1281.5	38.7	11.593 ug/L	11.593 ppb	02:22:02
3	Sr 421.552†	-15.7	4.3	0.0278 ug/L	0.0278 ppb	02:22:02
3	Sc 361.383	867605.1	867605.1	101.78 %		02:23:29
3	Y 371.029	734643.5	734643.5	101.66 %		02:23:29
3	Ag 328.068†	364.4	-0.0	-0.0066 ug/L	-0.0066 ppb	02:23:34
3	As 188.979†	-21.8	2.2	0.9467 ug/L	0.9467 ppb	02:23:54
3	B 249.677†	-497.7	142.9	3.1875 ug/L	3.1875 ppb	02:23:54
3	Ba 233.527†	-18.6	-6.9	-0.0539 ug/L	-0.0539 ppb	02:23:54
3	Be 313.107†	-4545.5	119.6	0.0460 ug/L	0.0460 ppb	02:23:34
3	Cd 226.502†	-191.0	16.4	0.1843 ug/L	0.1843 ppb	02:23:54
3	Co 228.616†	-84.0	-7.8	-0.1610 ug/L	-0.1610 ppb	02:23:54
3	Cr 267.716†	60.7	-23.6	-0.2648 ug/L	-0.2648 ppb	02:23:54
3	Cu 324.752†	6397.7	-126.6	-0.3813 ug/L	-0.3813 ppb	02:23:34
3	Mn 257.610†	444.1	-8.5	-0.0109 ug/L	-0.0109 ppb	02:23:54
3	Mo 202.031†	19.2	-4.9	-0.3447 ug/L	-0.3447 ppb	02:23:54
3	Ni 231.604†	56.9	-12.1	-0.3004 ug/L	-0.3004 ppb	02:23:54
3	P 214.914†	219.7	-14.0	-8.4776 ug/L	-8.4776 ppb	02:23:54
3	Pb 220.353†	-68.4	-3.8	-0.4663 ug/L	-0.4663 ppb	02:23:54
3	S 181.975 Axial†	47.8	4.0	5.6180 ug/L	5.6180 ppb	02:23:54
3	Sb 206.836†	33.1	4.6	1.5856 ug/L	1.5856 ppb	02:23:54
3	Se 196.026†	-28.1	4.4	2.8237 ug/L	2.8237 ppb	02:23:54
3	Si 251.611†	508.0	-51.3	-1.6308 ug/L	-1.6308 ppb	02:23:54
3	Sn 189.927†	11.8	3.9	0.6988 ug/L	0.6988 ppb	02:23:54
3	Ti 334.940†	-1283.1	113.9	0.1817 ug/L	0.1817 ppb	02:23:34
3	Tl 190.801†	-43.0	-9.4	-2.8939 ug/L	-2.8939 ppb	02:23:54
3	U 409.014†	-1926.8	118.6	3.5004 ug/L	3.5004 ppb	02:23:29
3	V 292.402†	-1314.6	18.1	0.1272 ug/L	0.1272 ppb	02:23:34
3	Zn 213.857†	613.9	-17.1	-0.1585 ug/L	-0.1585 ppb	02:23:54
3	SiO2†	507.6	-73.0	-4.9717 ug/L	-4.9717 ppb	02:24:09

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	859984.0	100.89	%	1.238				1.23%
Sc Radial	5080.9	101	%	2.3				2.30%
Y 371.029	728740.0	100.84	%	1.171				1.16%
Y RADIAL	5456.4	100.5	%	2.00				1.99%
Ag 328.068†	-13.5	-0.0679	ug/L	0.28012	-0.0679	ppb	0.28012	412.50%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.0	-9.9868	ug/L	8.34448	-9.9868	ppb	8.34448	83.55%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.8	0.7747	ug/L	0.69945	0.7747	ppb	0.69945	90.29%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	144.8	3.2276	ug/L	0.38583	3.2276	ppb	0.38583	11.95%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	0.1	-0.0005	ug/L	0.06553	-0.0005	ppb	0.06553	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	101.4	0.0389	ug/L	0.03326	0.0389	ppb	0.03326	85.43%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.0	-3.1258	ug/L	7.00741	-3.1258	ppb	7.00741	224.18%

QC value within limits for Ca 317.933Radial Recovery = Not calculated
Cd 226.502† 19.2 0.2144 ug/L 0.06046 0.2144 ppb 0.06046 28.20%
QC value within limits for Cd 226.502 Recovery = Not calculated
Co 228.616† -4.1 -0.0834 ug/L 0.18328 -0.0834 ppb 0.18328 219.65%
QC value within limits for Co 228.616 Recovery = Not calculated
Cr 267.716† -2.6 -0.0318 ug/L 0.20371 -0.0318 ppb 0.20371 639.92%
QC value within limits for Cr 267.716 Recovery = Not calculated
Cu 324.752† -112.5 -0.3390 ug/L 0.40088 -0.3390 ppb 0.40088 118.25%
QC value within limits for Cu 324.752 Recovery = Not calculated
Fe 238.204 Radial† -0.4 -3.2649 ug/L 8.97274 -3.2649 ppb 8.97274 274.82%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated
K 766.490 Radial† 114.3 20.968 ug/L 13.0823 20.968 ppb 13.0823 62.39%
QC value within limits for K 766.490 Radial Recovery = Not calculated
Mg 279.077 IEC† -1.1 -36.730 ug/L 58.7988 -36.730 ppb 58.7988 160.08%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated
Mn 257.610† -3.2 -0.0024 ug/L 0.00734 -0.0024 ppb 0.00734 308.89%
QC value within limits for Mn 257.610 Recovery = Not calculated
Mo 202.031† -1.4 -0.1017 ug/L 0.21389 -0.1017 ppb 0.21389 210.32%
QC value within limits for Mo 202.031 Recovery = Not calculated
Na 589.592 Radial† 6.3 1.8715 ug/L 9.77557 1.8715 ppb 9.77557 522.33%
QC value within limits for Na 589.592 Radial Recovery = Not calculated
Ni 231.604† -3.1 -0.0770 ug/L 0.27791 -0.0770 ppb 0.27791 360.75%
QC value within limits for Ni 231.604 Recovery = Not calculated
P 214.914† -12.0 -7.2760 ug/L 2.20486 -7.2760 ppb 2.20486 30.30%
QC value within limits for P 214.914 Recovery = Not calculated
Pb 220.353† 9.8 1.2015 ug/L 1.52582 1.2015 ppb 1.52582 127.00%
QC value within limits for Pb 220.353 Recovery = Not calculated
S 181.975 Axial† 5.6 7.9035 ug/L 2.26015 7.9035 ppb 2.26015 28.60%
QC value within limits for S 181.975 Axial Recovery = Not calculated
Sb 206.836† 13.2 4.5168 ug/L 2.59954 4.5168 ppb 2.59954 57.55%
QC value within limits for Sb 206.836 Recovery = Not calculated
Se 196.026† 4.3 2.7289 ug/L 3.89304 2.7289 ppb 3.89304 142.66%
QC value within limits for Se 196.026 Recovery = Not calculated
Si 251.611† -52.2 -1.6610 ug/L 0.09436 -1.6610 ppb 0.09436 5.68%
QC value within limits for Si 251.611 Recovery = Not calculated
Sn 189.927† 3.8 0.6717 ug/L 0.63363 0.6717 ppb 0.63363 94.33%
QC value within limits for Sn 189.927 Recovery = Not calculated
Sr 421.552† 19.0 0.1228 ug/L 0.10573 0.1228 ppb 0.10573 86.11%
QC value within limits for Sr 421.552 Recovery = Not calculated
Ti 334.940† 81.1 0.1314 ug/L 0.04894 0.1314 ppb 0.04894 37.26%
QC value within limits for Ti 334.940 Recovery = Not calculated
Tl 190.801† -5.8 -1.7736 ug/L 1.27695 -1.7736 ppb 1.27695 72.00%
QC value within limits for Tl 190.801 Recovery = Not calculated
U 409.014† 148.0 4.3665 ug/L 2.88273 4.3665 ppb 2.88273 66.02%
QC value within limits for U 409.014 Recovery = Not calculated
V 292.402† -52.9 -0.3546 ug/L 0.41763 -0.3546 ppb 0.41763 117.79%
QC value within limits for V 292.402 Recovery = Not calculated
Zn 213.857† -2.8 -0.0249 ug/L 0.17071 -0.0249 ppb 0.17071 685.27%
QC value within limits for Zn 213.857 Recovery = Not calculated
SiO2† -54.3 -3.7010 ug/L 1.11525 -3.7010 ppb 1.11525 30.13%
QC value within limits for SiO2 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 97
Sample ID: 243492007|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 101
Date Collected: 1/12/2010 02:26:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492007|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5254.4	5254.4	104	%			02:28:33
1	Y RADIAL	6135.9	6135.9	113.0	%			02:28:33
1	Al 396.153Radial†	92121.6	88281.0	68108	ug/L	68108	ppb	02:28:13
1	Ca 317.933Radial†	12134.3	11608.6	18575	ug/L	18575	ppb	02:28:13
1	Fe 238.204 Radial†	13406.5	12838.6	111110	ug/L	111110	ppb	02:28:13
1	K 766.490 Radial†	85085.6	78947.5	14439	ug/L	14439	ppb	02:28:13
1	Mg 279.077 IEC†	439.6	419.4	13896	ug/L	13896	ppb	02:28:33
1	Na 589.592 Radial†	975.7	2215.5	663.34	ug/L	663.34	ppb	02:28:13
1	Sr 421.552†	31251.3	29967.7	193.42	ug/L	193.42	ppb	02:28:13
1	Sc 361.383	875993.7	875993.7	102.77	%			02:29:31
1	Y 371.029	807039.9	807039.9	111.68	%			02:29:31
1	Ag 328.068†	-7064.1	-7231.8	3.4170	ug/L	3.4170	ppb	02:29:36
1	As 188.979†	-70.0	-44.5	18.443	ug/L	18.443	ppb	02:29:56
1	B 249.677†	1237.6	1836.1	29.532	ug/L	29.532	ppb	02:29:36
1	Ba 233.527†	129232.1	125762.5	986.34	ug/L	986.34	ppb	02:29:36
1	Be 313.107†	-6129.2	-1378.8	7.0602	ug/L	7.0602	ppb	02:29:36
1	Cd 226.502†	874.8	1055.4	0.2609	ug/L	0.2609	ppb	02:29:56
1	Co 228.616†	2499.6	2506.9	43.091	ug/L	43.091	ppb	02:29:56
1	Cr 267.716†	14282.1	13814.2	157.02	ug/L	157.02	ppb	02:29:36
1	Cu 324.752†	23181.6	16145.0	54.244	ug/L	54.244	ppb	02:29:36
1	Mn 257.610†	2571841.1	2502121.4	2785.7	ug/L	2785.7	ppb	02:29:31
1	Mo 202.031†	-30.9	-53.7	4.0229	ug/L	4.0229	ppb	02:29:56
1	Ni 231.604†	3759.0	3589.8	89.356	ug/L	89.356	ppb	02:29:56
1	P 214.914†	1609.2	1336.0	733.61	ug/L	733.61	ppb	02:29:56
1	Pb 220.353†	748.8	791.9	101.14	ug/L	101.14	ppb	02:29:56
1	S 181.975 Axial†	606.8	547.4	761.97	ug/L	761.97	ppb	02:29:56
1	Sb 206.836†	71.7	41.9	1.6340	ug/L	1.6340	ppb	02:29:56
1	Se 196.026†	-503.2	-457.7	63.067	ug/L	63.067	ppb	02:29:56
1	Si 251.611†	900481.3	875675.6	27889	ug/L	27889	ppb	02:29:31
1	Sn 189.927†	-124.9	-129.2	-18.361	ug/L	-18.361	ppb	02:29:56
1	Ti 334.940†	2129888.0	2073892.1	3342.3	ug/L	3342.3	ppb	02:29:31
1	Tl 190.801†	-194.1	-156.0	-12.555	ug/L	-12.555	ppb	02:29:56
1	U 409.014†	-7448.1	-5235.8	-167.47	ug/L	-167.47	ppb	02:29:31
1	V 292.402†	33521.5	33928.3	210.95	ug/L	210.95	ppb	02:29:36
1	Zn 213.857†	27061.9	25712.7	231.78	ug/L	231.78	ppb	02:29:36
1	SiO2†	904085.9	879161.8	59987	ug/L	59987	ppb	02:31:05
2	Sc Radial	5206.8	5206.8	103	%			02:28:58
2	Y RADIAL	6111.7	6111.7	112.6	%			02:28:58
2	Al 396.153Radial†	92312.6	89273.3	68873	ug/L	68873	ppb	02:28:38
2	Ca 317.933Radial†	12169.0	11748.5	18799	ug/L	18799	ppb	02:28:38
2	Fe 238.204 Radial†	13383.4	12933.7	111930	ug/L	111930	ppb	02:28:38
2	K 766.490 Radial†	85165.4	79770.6	14590	ug/L	14590	ppb	02:28:38
2	Mg 279.077 IEC†	445.2	428.6	14203	ug/L	14203	ppb	02:28:58
2	Na 589.592 Radial†	1049.9	2295.8	687.39	ug/L	687.39	ppb	02:28:38
2	Sr 421.552†	31393.1	30378.8	196.07	ug/L	196.07	ppb	02:28:38
2	Sc 361.383	876521.7	876521.7	102.83	%			02:30:02
2	Y 371.029	806138.5	806138.5	111.55	%			02:30:02
2	Ag 328.068†	-7224.7	-7383.8	3.0014	ug/L	3.0014	ppb	02:30:07
2	As 188.979†	-64.5	-39.1	20.974	ug/L	20.974	ppb	02:30:27
2	B 249.677†	1262.3	1859.4	29.971	ug/L	29.971	ppb	02:30:07
2	Ba 233.527†	130894.0	127303.0	998.41	ug/L	998.41	ppb	02:30:07
2	Be 313.107†	-6104.5	-1351.1	7.0880	ug/L	7.0880	ppb	02:30:07
2	Cd 226.502†	879.9	1059.8	0.2232	ug/L	0.2232	ppb	02:30:27
2	Co 228.616†	2467.6	2474.4	42.403	ug/L	42.403	ppb	02:30:27
2	Cr 267.716†	14491.8	14009.7	159.23	ug/L	159.23	ppb	02:30:07
2	Cu 324.752†	23516.8	16457.4	55.228	ug/L	55.228	ppb	02:30:07
2	Mn 257.610†	2580675.1	2509204.9	2793.6	ug/L	2793.6	ppb	02:30:02
2	Mo 202.031†	-24.1	-47.1	4.5475	ug/L	4.5475	ppb	02:30:27
2	Ni 231.604†	3776.3	3604.4	89.720	ug/L	89.720	ppb	02:30:27

2	P 214.914†	1606.5	1332.5	730.82 ug/L	730.82 ppb	02:30:27
2	Pb 220.353†	707.0	750.9	96.201 ug/L	96.201 ppb	02:30:27
2	S 181.975 Axial†	603.3	543.7	756.56 ug/L	756.56 ppb	02:30:27
2	Sb 206.836†	83.0	52.8	5.3855 ug/L	5.3855 ppb	02:30:27
2	Se 196.026†	-499.3	-453.6	68.377 ug/L	68.377 ppb	02:30:27
2	Si 251.611†	904704.4	879254.7	28003 ug/L	28003 ppb	02:30:02
2	Sn 189.927†	-113.1	-117.7	-16.279 ug/L	-16.279 ppb	02:30:27
2	Ti 334.940†	2136002.6	2078590.1	3349.8 ug/L	3349.8 ppb	02:30:02
2	Tl 190.801†	-189.0	-151.0	-10.936 ug/L	-10.936 ppb	02:30:27
2	U 409.014†	-7807.0	-5580.5	-177.73 ug/L	-177.73 ppb	02:30:02
2	V 292.402†	34044.4	34417.1	214.14 ug/L	214.14 ppb	02:30:07
2	Zn 213.857†	27385.7	26011.8	234.53 ug/L	234.53 ppb	02:30:07
2	SiO2†	909417.9	883817.2	60304 ug/L	60304 ppb	02:31:10
3	Sc Radial	5205.0	5205.0	103 %		02:29:24
3	Y RADIAL	6093.3	6093.3	112.2 %		02:29:24
3	Al 396.153Radial†	89874.6	86945.0	67077 ug/L	67077 ppb	02:29:04
3	Ca 317.933Radial†	11870.4	11463.6	18343 ug/L	18343 ppb	02:29:04
3	Fe 238.204 Radial†	12998.8	12566.1	108750 ug/L	108750 ppb	02:29:04
3	K 766.490 Radial†	82813.7	77523.5	14178 ug/L	14178 ppb	02:29:04
3	Mg 279.077 IEC†	443.9	427.6	14172 ug/L	14172 ppb	02:29:24
3	Na 589.592 Radial†	965.9	2214.8	663.14 ug/L	663.14 ppb	02:29:04
3	Sr 421.552†	30361.8	29391.4	189.70 ug/L	189.70 ppb	02:29:04
3	Sc 361.383	884100.1	884100.1	103.72 %		02:30:33
3	Y 371.029	813862.6	813862.6	112.62 %		02:30:33
3	Ag 328.068†	-7141.6	-7243.5	2.5987 ug/L	2.5987 ppb	02:30:38
3	As 188.979†	-75.7	-49.3	15.896 ug/L	15.896 ppb	02:30:58
3	B 249.677†	1171.0	1760.8	28.096 ug/L	28.096 ppb	02:30:38
3	Ba 233.527†	129297.8	124672.9	977.75 ug/L	977.75 ppb	02:30:38
3	Be 313.107†	-6169.1	-1362.5	7.0779 ug/L	7.0779 ppb	02:30:38
3	Cd 226.502†	853.3	1026.8	0.1861 ug/L	0.1861 ppb	02:30:58
3	Co 228.616†	2471.8	2457.9	42.111 ug/L	42.111 ppb	02:30:58
3	Cr 267.716†	14269.1	13674.2	155.41 ug/L	155.41 ppb	02:30:38
3	Cu 324.752†	23269.4	16022.8	53.756 ug/L	53.756 ppb	02:30:38
3	Mn 257.610†	2593525.2	2500081.7	2783.2 ug/L	2783.2 ppb	02:30:33
3	Mo 202.031†	-10.7	-34.0	5.2520 ug/L	5.2520 ppb	02:30:58
3	Ni 231.604†	3764.0	3561.1	88.642 ug/L	88.642 ppb	02:30:58
3	P 214.914†	1587.9	1301.0	713.99 ug/L	713.99 ppb	02:30:58
3	Pb 220.353†	714.7	752.5	96.308 ug/L	96.308 ppb	02:30:58
3	S 181.975 Axial†	618.0	552.8	769.73 ug/L	769.73 ppb	02:30:58
3	Sb 206.836†	59.9	29.8	-2.4613 ug/L	-2.4613 ppb	02:30:58
3	Se 196.026†	-501.8	-451.8	59.283 ug/L	59.283 ppb	02:30:58
3	Si 251.611†	911020.1	877802.3	27957 ug/L	27957 ppb	02:30:33
3	Sn 189.927†	-125.3	-128.5	-18.313 ug/L	-18.313 ppb	02:30:58
3	Ti 334.940†	2152844.3	2077022.2	3347.2 ug/L	3347.2 ppb	02:30:33
3	Tl 190.801†	-180.0	-140.7	-7.8320 ug/L	-7.8320 ppb	02:30:58
3	U 409.014†	-7670.8	-5384.1	-171.57 ug/L	-171.57 ppb	02:30:33
3	V 292.402†	33521.3	33629.0	209.28 ug/L	209.28 ppb	02:30:38
3	Zn 213.857†	26968.7	25381.4	228.88 ug/L	228.88 ppb	02:30:38
3	SiO2†	907383.1	874274.5	59653 ug/L	59653 ppb	02:31:16

Mean Data: 243492007|936808|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	878871.8	103.11	%	0.532				0.52%
Sc Radial	5222.1	104	%	0.6				0.54%
Y 371.029	809013.7	111.95	%	0.584				0.52%
Y RADIAL	6113.7	112.6	%	0.39				0.35%
Ag 328.068†	-7286.4	3.0057	ug/L	0.40915	3.0057	ppb	0.40915	13.61%
Al 396.153Radial†	88166.4	68019	ug/L	901.4	68019	ppb	901.4	1.33%
As 188.979†	-44.3	18.438	ug/L	2.5389	18.438	ppb	2.5389	13.77%
B 249.677†	1818.8	29.199	ug/L	0.9808	29.199	ppb	0.9808	3.36%
Ba 233.527†	125912.8	987.50	ug/L	10.379	987.50	ppb	10.379	1.05%
Be 313.107†	-1364.1	7.0754	ug/L	0.01404	7.0754	ppb	0.01404	0.20%
Ca 317.933Radial†	11606.9	18572	ug/L	227.9	18572	ppb	227.9	1.23%
Cd 226.502†	1047.3	0.2234	ug/L	0.03741	0.2234	ppb	0.03741	16.74%
Co 228.616†	2479.7	42.535	ug/L	0.5030	42.535	ppb	0.5030	1.18%
Cr 267.716†	13832.7	157.22	ug/L	1.919	157.22	ppb	1.919	1.22%
Cu 324.752†	16208.4	54.409	ug/L	0.7493	54.409	ppb	0.7493	1.38%
Fe 238.204 Radial†	12779.5	110600	ug/L	1651.4	110600	ppb	1651.4	1.49%
K 766.490 Radial†	78747.2	14403	ug/L	208.3	14403	ppb	208.3	1.45%

Mg 279.077 IEC†	425.2	14090 ug/L	168.9	14090 ppb	168.9	1.20%
Mn 257.610†	2503802.7	2787.5 ug/L	5.46	2787.5 ppb	5.46	0.20%
Mo 202.031†	-45.0	4.6075 ug/L	0.61673	4.6075 ppb	0.61673	13.39%
Na 589.592 Radial†	2242.0	671.29 ug/L	13.944	671.29 ppb	13.944	2.08%
Ni 231.604†	3585.1	89.239 ug/L	0.5482	89.239 ppb	0.5482	0.61%
P 214.914†	1323.2	726.14 ug/L	10.613	726.14 ppb	10.613	1.46%
Pb 220.353†	765.1	97.882 ug/L	2.8194	97.882 ppb	2.8194	2.88%
S 181.975 Axial†	548.0	762.75 ug/L	6.619	762.75 ppb	6.619	0.87%
Sb 206.836†	41.5	1.5194 ug/L	3.92464	1.5194 ppb	3.92464	258.30%
Se 196.026†	-454.3	63.576 ug/L	4.5683	63.576 ppb	4.5683	7.19%
Si 251.611†	877577.5	27949 ug/L	57.3	27949 ppb	57.3	0.21%
Sn 189.927†	-125.1	-17.651 ug/L	1.1884	-17.651 ppb	1.1884	6.73%
Sr 421.552†	29912.6	193.06 ug/L	3.202	193.06 ppb	3.202	1.66%
Ti 334.940†	2076501.4	3346.4 ug/L	3.85	3346.4 ppb	3.85	0.12%
Tl 190.801†	-149.2	-10.441 ug/L	2.4003	-10.441 ppb	2.4003	22.99%
U 409.014†	-5400.1	-172.26 ug/L	5.168	-172.26 ppb	5.168	3.00%
V 292.402†	33991.5	211.45 ug/L	2.472	211.45 ppb	2.472	1.17%
Zn 213.857†	25702.0	231.73 ug/L	2.823	231.73 ppb	2.823	1.22%
SiO2†	879084.5	59981 ug/L	325.6	59981 ppb	325.6	0.54%

Sequence No.: 101
Sample ID: 1202004428|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 105
Date Collected: 1/12/2010 02:54:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004428|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5237.4	5237.4	104	%			02:56:42
1	Y RADIAL	6924.7	6924.7	127.5	%			02:56:42
1	Al 396.153Radial†	48337.9	46473.6	35853	ug/L	35853	ppb	02:56:42
1	Ca 317.933Radial†	5382.7	5155.3	8248.9	ug/L	8248.9	ppb	02:56:42
1	Fe 238.204 Radial†	9157.2	8795.0	76114	ug/L	76114	ppb	02:56:42
1	K 766.490 Radial†	31005.4	27219.1	4961.9	ug/L	4961.9	ppb	02:56:42
1	Mg 279.077 IEC†	212.8	202.6	6691.0	ug/L	6691.0	ppb	02:57:02
1	Na 589.592 Radial†	4224.4	5341.8	1599.4	ug/L	1599.4	ppb	02:56:42
1	Sr 421.552†	9768.2	9410.8	60.722	ug/L	60.722	ppb	02:56:42
1	Sc 361.383	875178.5	875178.5	102.67	%			02:58:00
1	Y 371.029	907660.0	907660.0	125.60	%			02:58:00
1	Ag 328.068†	-4708.3	-4943.8	2.3156	ug/L	2.3156	ppb	02:58:05
1	As 188.979†	-27.4	-3.1	23.885	ug/L	23.885	ppb	02:58:25
1	B 249.677†	179.3	806.5	10.213	ug/L	10.213	ppb	02:58:05
1	Ba 233.527†	51151.9	49831.8	391.99	ug/L	391.99	ppb	02:58:05
1	Be 313.107†	-7631.5	-2847.5	3.8278	ug/L	3.8278	ppb	02:58:05
1	Cd 226.502†	515.2	705.9	-0.0614	ug/L	-0.0614	ppb	02:58:25
1	Co 228.616†	919.7	970.4	14.383	ug/L	14.383	ppb	02:58:25
1	Cr 267.716†	10595.2	10236.1	116.14	ug/L	116.14	ppb	02:58:05
1	Cu 324.752†	16116.0	9284.3	31.939	ug/L	31.939	ppb	02:58:05
1	Mn 257.610†	2152063.0	2095601.1	2331.4	ug/L	2331.4	ppb	02:58:00
1	Mo 202.031†	138.9	111.6	13.188	ug/L	13.188	ppb	02:58:25
1	Ni 231.604†	1366.5	1262.9	31.435	ug/L	31.435	ppb	02:58:25
1	P 214.914†	1243.0	980.7	541.17	ug/L	541.17	ppb	02:58:25
1	Pb 220.353†	469.9	521.1	64.306	ug/L	64.306	ppb	02:58:25
1	S 181.975 Axial†	243.5	194.1	267.99	ug/L	267.99	ppb	02:58:25
1	Sb 206.836†	43.4	14.3	-2.9726	ug/L	-2.9726	ppb	02:58:25
1	Se 196.026†	-353.8	-312.5	43.304	ug/L	43.304	ppb	02:58:25
1	Si 251.611†	867997.0	844853.1	26907	ug/L	26907	ppb	02:58:00
1	Sn 189.927†	-46.1	-52.5	-6.8477	ug/L	-6.8477	ppb	02:58:25
1	Ti 334.940†	1377639.5	1343154.8	2164.4	ug/L	2164.4	ppb	02:58:00
1	Tl 190.801†	-158.2	-121.2	-11.650	ug/L	-11.650	ppb	02:58:25
1	U 409.014†	-11377.5	-9069.7	-276.49	ug/L	-276.49	ppb	02:58:00
1	V 292.402†	11865.1	12866.0	73.598	ug/L	73.598	ppb	02:58:05
1	Zn 213.857†	27516.7	26180.2	240.00	ug/L	240.00	ppb	02:58:05
1	SiO2†	874925.1	851579.6	58104	ug/L	58104	ppb	02:59:34
2	Sc Radial	5259.1	5259.1	104	%			02:57:08
2	Y RADIAL	6945.2	6945.2	127.9	%			02:57:08
2	Al 396.153Radial†	48418.0	46358.1	35764	ug/L	35764	ppb	02:57:08
2	Ca 317.933Radial†	5395.1	5145.7	8233.7	ug/L	8233.7	ppb	02:57:08
2	Fe 238.204 Radial†	9172.2	8773.0	75924	ug/L	75924	ppb	02:57:08
2	K 766.490 Radial†	30907.9	27002.4	4922.2	ug/L	4922.2	ppb	02:57:08
2	Mg 279.077 IEC†	211.5	200.6	6623.8	ug/L	6623.8	ppb	02:57:28
2	Na 589.592 Radial†	4263.8	5362.8	1605.7	ug/L	1605.7	ppb	02:57:08
2	Sr 421.552†	9716.3	9322.3	60.151	ug/L	60.151	ppb	02:57:08
2	Sc 361.383	878051.5	878051.5	103.01	%			02:58:31
2	Y 371.029	909732.4	909732.4	125.89	%			02:58:31
2	Ag 328.068†	-4793.3	-5011.2	1.9460	ug/L	1.9460	ppb	02:58:36
2	As 188.979†	-41.3	-16.5	18.040	ug/L	18.040	ppb	02:58:56
2	B 249.677†	217.1	842.6	11.036	ug/L	11.036	ppb	02:58:36
2	Ba 233.527†	51611.5	50115.0	394.19	ug/L	394.19	ppb	02:58:36
2	Be 313.107†	-7584.6	-2777.6	3.8492	ug/L	3.8492	ppb	02:58:36
2	Cd 226.502†	515.4	704.5	-0.0568	ug/L	-0.0568	ppb	02:58:56
2	Co 228.616†	933.5	980.9	14.607	ug/L	14.607	ppb	02:58:56
2	Cr 267.716†	10638.1	10244.0	116.23	ug/L	116.23	ppb	02:58:36
2	Cu 324.752†	16025.0	9144.6	31.511	ug/L	31.511	ppb	02:58:36
2	Mn 257.610†	2156784.1	2093325.9	2328.9	ug/L	2328.9	ppb	02:58:31
2	Mo 202.031†	148.2	120.1	13.782	ug/L	13.782	ppb	02:58:56
2	Ni 231.604†	1391.8	1283.2	31.939	ug/L	31.939	ppb	02:58:56

2	P 214.914†	1265.2	998.3	552.17 ug/L	552.17 ppb	02:58:56
2	Pb 220.353†	468.4	518.1	63.946 ug/L	63.946 ppb	02:58:56
2	S 181.975 Axial†	248.6	198.3	273.97 ug/L	273.97 ppb	02:58:56
2	Sb 206.836†	65.5	35.7	4.3944 ug/L	4.3944 ppb	02:58:56
2	Se 196.026†	-362.1	-319.5	38.213 ug/L	38.213 ppb	02:58:56
2	Si 251.611†	870496.0	844512.8	26896 ug/L	26896 ppb	02:58:31
2	Sn 189.927†	-36.4	-43.0	-5.1621 ug/L	-5.1621 ppb	02:58:56
2	Ti 334.940†	1380670.8	1341707.1	2162.1 ug/L	2162.1 ppb	02:58:31
2	Tl 190.801†	-160.9	-123.3	-12.314 ug/L	-12.314 ppb	02:58:56
2	U 409.014†	-11375.2	-9031.2	-275.33 ug/L	-275.33 ppb	02:58:31
2	V 292.402†	12038.6	12996.6	74.531 ug/L	74.531 ppb	02:58:36
2	Zn 213.857†	27763.4	26332.0	241.45 ug/L	241.45 ppb	02:58:36
2	SiO2†	869717.1	843735.4	57569 ug/L	57569 ppb	02:59:39
3	Sc Radial	5181.2	5181.2	103 %		02:57:33
3	Y RADIAL	6905.4	6905.4	127.2 %		02:57:33
3	Al 396.153Radial†	47956.2	46606.8	35956 ug/L	35956 ppb	02:57:33
3	Ca 317.933Radial†	5369.2	5198.3	8317.8 ug/L	8317.8 ppb	02:57:33
3	Fe 238.204 Radial†	9102.6	8837.5	76481 ug/L	76481 ppb	02:57:33
3	K 766.490 Radial†	30602.2	27150.5	4949.3 ug/L	4949.3 ppb	02:57:33
3	Mg 279.077 IEC†	209.1	201.3	6644.7 ug/L	6644.7 ppb	02:57:53
3	Na 589.592 Radial†	4196.8	5359.1	1604.6 ug/L	1604.6 ppb	02:57:33
3	Sr 421.552†	9718.8	9464.7	61.070 ug/L	61.070 ppb	02:57:33
3	Sc 361.383	878093.9	878093.9	103.01 %		02:59:02
3	Y 371.029	907800.2	907800.2	125.62 %		02:59:02
3	Ag 328.068†	-4772.3	-4990.7	2.2224 ug/L	2.2224 ppb	02:59:07
3	As 188.979†	-35.8	-11.1	20.482 ug/L	20.482 ppb	02:59:27
3	B 249.677†	232.6	857.7	11.317 ug/L	11.317 ppb	02:59:07
3	Ba 233.527†	51285.7	49796.3	391.73 ug/L	391.73 ppb	02:59:07
3	Be 313.107†	-7484.8	-2680.4	3.8984 ug/L	3.8984 ppb	02:59:07
3	Cd 226.502†	533.3	721.8	0.0776 ug/L	0.0776 ppb	02:59:27
3	Co 228.616†	917.0	964.9	14.256 ug/L	14.256 ppb	02:59:27
3	Cr 267.716†	10537.8	10146.2	115.15 ug/L	115.15 ppb	02:59:07
3	Cu 324.752†	15943.7	9064.9	31.304 ug/L	31.304 ppb	02:59:07
3	Mn 257.610†	2161866.7	2098158.7	2334.3 ug/L	2334.3 ppb	02:59:02
3	Mo 202.031†	130.4	102.9	12.599 ug/L	12.599 ppb	02:59:27
3	Ni 231.604†	1375.3	1267.1	31.539 ug/L	31.539 ppb	02:59:27
3	P 214.914†	1257.4	990.7	547.16 ug/L	547.16 ppb	02:59:27
3	Pb 220.353†	464.1	513.9	63.411 ug/L	63.411 ppb	02:59:27
3	S 181.975 Axial†	246.3	196.1	270.73 ug/L	270.73 ppb	02:59:27
3	Sb 206.836†	47.0	17.7	-1.8440 ug/L	-1.8440 ppb	02:59:27
3	Se 196.026†	-343.5	-301.4	51.635 ug/L	51.635 ppb	02:59:27
3	Si 251.611†	873232.4	847128.3	26980 ug/L	26980 ppb	02:59:02
3	Sn 189.927†	-47.0	-53.3	-6.9704 ug/L	-6.9704 ppb	02:59:27
3	Ti 334.940†	1384177.8	1345046.8	2167.5 ug/L	2167.5 ppb	02:59:02
3	Tl 190.801†	-148.1	-110.9	-8.4398 ug/L	-8.4398 ppb	02:59:27
3	U 409.014†	-11466.9	-9119.7	-278.00 ug/L	-278.00 ppb	02:59:02
3	V 292.402†	12043.7	13001.0	74.447 ug/L	74.447 ppb	02:59:07
3	Zn 213.857†	27522.5	26096.9	239.17 ug/L	239.17 ppb	02:59:07
3	SiO2†	875122.9	848942.3	57924 ug/L	57924 ppb	02:59:45

Mean Data: 1202004428|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	877107.9	102.90	%	0.196				0.19%
Sc Radial	5225.9	104	%	0.8				0.77%
Y 371.029	908397.5	125.70	%	0.160				0.13%
Y RADIAL	6925.1	127.5	%	0.37				0.29%
Ag 328.068†	-4981.9	2.1613	ug/L	0.19221	2.1613	ppb	0.19221	8.89%
Al 396.153Radial†	46479.5	35858	ug/L	96.0	35858	ppb	96.0	0.27%
As 188.979†	-10.2	20.802	ug/L	2.9357	20.802	ppb	2.9357	14.11%
B 249.677†	835.6	10.855	ug/L	0.5734	10.855	ppb	0.5734	5.28%
Ba 233.527†	49914.4	392.64	ug/L	1.355	392.64	ppb	1.355	0.35%
Be 313.107†	-2768.5	3.8585	ug/L	0.03620	3.8585	ppb	0.03620	0.94%
Ca 317.933Radial†	5166.4	8266.8	ug/L	44.80	8266.8	ppb	44.80	0.54%
Cd 226.502†	710.7	-0.0135	ug/L	0.07896	-0.0135	ppb	0.07896	584.37%
Co 228.616†	972.1	14.416	ug/L	0.1777	14.416	ppb	0.1777	1.23%
Cr 267.716†	10208.8	115.84	ug/L	0.601	115.84	ppb	0.601	0.52%
Cu 324.752†	9164.6	31.585	ug/L	0.3242	31.585	ppb	0.3242	1.03%
Fe 238.204 Radial†	8801.8	76173	ug/L	283.6	76173	ppb	283.6	0.37%
K 766.490 Radial†	27124.0	4944.5	ug/L	20.29	4944.5	ppb	20.29	0.41%

Mg 279.077 IEC†	201.5	6653.2 ug/L	34.41	6653.2 ppb	34.41	0.52%
Mn 257.610†	2095695.2	2331.5 ug/L	2.71	2331.5 ppb	2.71	0.12%
Mo 202.031†	111.5	13.190 ug/L	0.5913	13.190 ppb	0.5913	4.48%
Na 589.592 Radial†	5354.6	1603.2 ug/L	3.35	1603.2 ppb	3.35	0.21%
Ni 231.604†	1271.1	31.638 ug/L	0.2662	31.638 ppb	0.2662	0.84%
P 214.914†	989.9	546.83 ug/L	5.508	546.83 ppb	5.508	1.01%
Pb 220.353†	517.7	63.888 ug/L	0.4505	63.888 ppb	0.4505	0.71%
S 181.975 Axial†	196.2	270.90 ug/L	2.990	270.90 ppb	2.990	1.10%
Sb 206.836†	22.6	-0.1407 ug/L	3.96789	-0.1407 ppb	3.96789	>999.9%
Se 196.026†	-311.2	44.384 ug/L	6.7761	44.384 ppb	6.7761	15.27%
Si 251.611†	845498.1	26928 ug/L	45.3	26928 ppb	45.3	0.17%
Sn 189.927†	-49.6	-6.3268 ug/L	1.01048	-6.3268 ppb	1.01048	15.97%
Sr 421.552†	9399.3	60.647 ug/L	0.4641	60.647 ppb	0.4641	0.77%
Ti 334.940†	1343302.9	2164.7 ug/L	2.70	2164.7 ppb	2.70	0.12%
Tl 190.801†	-118.5	-10.802 ug/L	2.0721	-10.802 ppb	2.0721	19.18%
U 409.014†	-9073.6	-276.61 ug/L	1.340	-276.61 ppb	1.340	0.48%
V 292.402†	12954.5	74.192 ug/L	0.5164	74.192 ppb	0.5164	0.70%
Zn 213.857†	26203.0	240.20 ug/L	1.152	240.20 ppb	1.152	0.48%
SiO2†	848085.8	57866 ug/L	272.4	57866 ppb	272.4	0.47%

Sequence No.: 102
Sample ID: 1202004429|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 106
Date Collected: 1/12/2010 03:01:57
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004429|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5211.6	5211.6	104	%			03:04:10
1	Y RADIAL	7006.6	7006.6	129.0	%			03:04:10
1	Al 396.153Radial†	131568.2	127119.0	98047	ug/L	98047	ppb	03:03:50
1	Ca 317.933Radial†	10312.3	9943.7	15911	ug/L	15911	ppb	03:03:50
1	Fe 238.204 Radial†	12848.1	12404.6	107370	ug/L	107370	ppb	03:03:50
1	K 766.490 Radial†	83187.3	77783.7	14215	ug/L	14215	ppb	03:03:50
1	Mg 279.077 IEC†	574.6	553.3	18378	ug/L	18378	ppb	03:04:10
1	Na 589.592 Radial†	23058.4	23559.0	7053.8	ug/L	7053.8	ppb	03:03:50
1	Sr 421.552†	90530.6	87488.2	564.96	ug/L	564.96	ppb	03:03:50
1	Sc 361.383	870685.3	870685.3	102.15	%			03:05:09
1	Y 371.029	923496.1	923496.1	127.79	%			03:05:09
1	Ag 328.068†	101990.7	99490.6	494.93	ug/L	494.93	ppb	03:05:09
1	As 188.979†	1071.1	1072.2	499.23	ug/L	499.23	ppb	03:05:30
1	B 249.677†	21633.5	21811.0	473.95	ug/L	473.95	ppb	03:05:09
1	Ba 233.527†	115748.9	113329.2	889.99	ug/L	889.99	ppb	03:05:09
1	Be 313.107†	1319653.5	1296521.9	501.03	ug/L	501.03	ppb	03:05:09
1	Cd 226.502†	44418.5	43689.7	474.08	ug/L	474.08	ppb	03:05:09
1	Co 228.616†	24737.8	24292.9	490.49	ug/L	490.49	ppb	03:05:30
1	Cr 267.716†	60581.9	59226.3	665.04	ug/L	665.04	ppb	03:05:09
1	Cu 324.752†	192475.5	182020.7	549.88	ug/L	549.88	ppb	03:05:09
1	Mn 257.610†	2870133.5	2809406.4	3125.8	ug/L	3125.8	ppb	03:05:09
1	Mo 202.031†	6993.3	6822.7	489.72	ug/L	489.72	ppb	03:05:30
1	Ni 231.604†	21392.8	20875.5	519.50	ug/L	519.50	ppb	03:05:30
1	P 214.914†	2407.6	2127.2	1124.4	ug/L	1124.4	ppb	03:05:30
1	Pb 220.353†	4613.2	4579.7	572.56	ug/L	572.56	ppb	03:05:30
1	S 181.975 Axial†	3867.2	3742.9	5278.5	ug/L	5278.5	ppb	03:05:30
1	Sb 206.836†	1114.9	1063.6	370.62	ug/L	370.62	ppb	03:05:30
1	Se 196.026†	285.2	311.2	549.61	ug/L	549.61	ppb	03:05:30
1	Si 251.611†	1084867.8	1061531.6	33802	ug/L	33802	ppb	03:05:09
1	Sn 189.927†	2761.2	2695.6	481.64	ug/L	481.64	ppb	03:05:30
1	Ti 334.940†	1959413.4	1919633.8	3092.7	ug/L	3092.7	ppb	03:05:09
1	Tl 190.801†	1405.7	1409.0	465.24	ug/L	465.24	ppb	03:05:30
1	U 409.014†	3970.9	5899.1	160.30	ug/L	160.30	ppb	03:05:09
1	V 292.402†	90545.5	89953.4	601.97	ug/L	601.97	ppb	03:05:09
1	Zn 213.857†	85448.4	83033.4	770.88	ug/L	770.88	ppb	03:05:09
1	SiO2†	1096667.1	1073061.8	73204	ug/L	73204	ppb	03:06:31
2	Sc Radial	5153.9	5153.9	102	%			03:04:35
2	Y RADIAL	6947.1	6947.1	128.0	%			03:04:35
2	Al 396.153Radial†	130906.7	127895.8	98646	ug/L	98646	ppb	03:04:15
2	Ca 317.933Radial†	10215.2	9960.5	15938	ug/L	15938	ppb	03:04:15
2	Fe 238.204 Radial†	12725.7	12424.1	107530	ug/L	107530	ppb	03:04:15
2	K 766.490 Radial†	82355.8	77871.0	14231	ug/L	14231	ppb	03:04:15
2	Mg 279.077 IEC†	572.4	557.3	18512	ug/L	18512	ppb	03:04:35
2	Na 589.592 Radial†	22714.5	23472.4	7027.9	ug/L	7027.9	ppb	03:04:15
2	Sr 421.552†	89804.1	87757.6	566.70	ug/L	566.70	ppb	03:04:15
2	Sc 361.383	873599.8	873599.8	102.49	%			03:05:37
2	Y 371.029	924304.0	924304.0	127.90	%			03:05:37
2	Ag 328.068†	102572.3	99724.9	496.06	ug/L	496.06	ppb	03:05:37
2	As 188.979†	1061.2	1059.1	493.59	ug/L	493.59	ppb	03:05:57
2	B 249.677†	21846.6	21948.2	477.00	ug/L	477.00	ppb	03:05:37
2	Ba 233.527†	116232.4	113422.9	890.72	ug/L	890.72	ppb	03:05:37
2	Be 313.107†	1323767.4	1296225.7	500.93	ug/L	500.93	ppb	03:05:37
2	Cd 226.502†	44368.9	43496.2	471.91	ug/L	471.91	ppb	03:05:37
2	Co 228.616†	24700.8	24176.0	488.09	ug/L	488.09	ppb	03:05:57
2	Cr 267.716†	60644.7	59089.7	663.51	ug/L	663.51	ppb	03:05:37
2	Cu 324.752†	193650.3	182538.3	551.43	ug/L	551.43	ppb	03:05:37
2	Mn 257.610†	2882390.3	2811991.5	3128.6	ug/L	3128.6	ppb	03:05:37
2	Mo 202.031†	7013.1	6819.1	489.49	ug/L	489.49	ppb	03:05:57
2	Ni 231.604†	21369.6	20783.0	517.20	ug/L	517.20	ppb	03:05:57

2	P 214.914†	2416.9	2128.4	1124.8 ug/L	1124.8 ppb	03:05:57
2	Pb 220.353†	4621.1	4572.3	571.76 ug/L	571.76 ppb	03:05:57
2	S 181.975 Axial†	3848.1	3711.7	5234.2 ug/L	5234.2 ppb	03:05:57
2	Sb 206.836†	1116.2	1061.2	369.70 ug/L	369.70 ppb	03:05:57
2	Se 196.026†	286.5	311.5	550.41 ug/L	550.41 ppb	03:05:57
2	Si 251.611†	1090145.4	1063137.7	33853 ug/L	33853 ppb	03:05:37
2	Sn 189.927†	2750.7	2676.3	478.23 ug/L	478.23 ppb	03:05:57
2	Ti 334.940†	1969275.9	1922857.2	3097.9 ug/L	3097.9 ppb	03:05:37
2	Tl 190.801†	1420.2	1418.6	468.24 ug/L	468.24 ppb	03:05:57
2	U 409.014†	3969.2	5884.5	159.85 ug/L	159.85 ppb	03:05:37
2	V 292.402†	90757.1	89864.2	601.33 ug/L	601.33 ppb	03:05:37
2	Zn 213.857†	85785.5	83083.3	771.35 ug/L	771.35 ppb	03:05:37
2	SiO2†	1086586.6	1059644.1	72288 ug/L	72288 ppb	03:06:37
3	Sc Radial	5133.7	5133.7	102 %		03:05:01
3	Y RADIAL	6905.5	6905.5	127.2 %		03:05:01
3	Al 396.153Radial†	130518.5	128017.8	98740 ug/L	98740 ppb	03:04:41
3	Ca 317.933Radial†	10211.5	9996.0	15995 ug/L	15995 ppb	03:04:41
3	Fe 238.204 Radial†	12699.6	12447.3	107740 ug/L	107740 ppb	03:04:41
3	K 766.490 Radial†	82295.8	78128.4	14278 ug/L	14278 ppb	03:04:41
3	Mg 279.077 IEC†	569.0	556.2	18477 ug/L	18477 ppb	03:05:01
3	Na 589.592 Radial†	22626.8	23473.6	7028.3 ug/L	7028.3 ppb	03:04:41
3	Sr 421.552†	89547.0	87850.3	567.30 ug/L	567.30 ppb	03:04:41
3	Sc 361.383	872773.1	872773.1	102.39 %		03:06:04
3	Y 371.029	924048.7	924048.7	127.87 %		03:06:04
3	Ag 328.068†	101996.9	99257.8	493.97 ug/L	493.97 ppb	03:06:04
3	As 188.979†	1072.5	1071.1	498.83 ug/L	498.83 ppb	03:06:24
3	B 249.677†	21662.0	21788.1	473.40 ug/L	473.40 ppb	03:06:04
3	Ba 233.527†	116050.0	113352.2	890.18 ug/L	890.18 ppb	03:06:04
3	Be 313.107†	1321071.7	1294816.3	500.39 ug/L	500.39 ppb	03:06:04
3	Cd 226.502†	44292.5	43462.6	471.52 ug/L	471.52 ppb	03:06:04
3	Co 228.616†	24802.3	24298.0	490.59 ug/L	490.59 ppb	03:06:24
3	Cr 267.716†	60873.9	59369.5	666.64 ug/L	666.64 ppb	03:06:04
3	Cu 324.752†	193151.5	182230.1	550.52 ug/L	550.52 ppb	03:06:04
3	Mn 257.610†	2875044.6	2807481.0	3123.7 ug/L	3123.7 ppb	03:06:04
3	Mo 202.031†	7036.4	6848.4	491.57 ug/L	491.57 ppb	03:06:24
3	Ni 231.604†	21436.3	20867.9	519.31 ug/L	519.31 ppb	03:06:24
3	P 214.914†	2425.0	2138.5	1131.0 ug/L	1131.0 ppb	03:06:24
3	Pb 220.353†	4652.4	4607.2	576.04 ug/L	576.04 ppb	03:06:24
3	S 181.975 Axial†	3885.3	3751.6	5290.7 ug/L	5290.7 ppb	03:06:24
3	Sb 206.836†	1114.4	1060.5	369.52 ug/L	369.52 ppb	03:06:24
3	Se 196.026†	291.0	316.2	554.06 ug/L	554.06 ppb	03:06:24
3	Si 251.611†	1086934.9	1061009.7	33785 ug/L	33785 ppb	03:06:04
3	Sn 189.927†	2754.2	2682.3	479.30 ug/L	479.30 ppb	03:06:24
3	Ti 334.940†	1965782.3	1921265.1	3095.4 ug/L	3095.4 ppb	03:06:04
3	Tl 190.801†	1427.5	1427.0	470.77 ug/L	470.77 ppb	03:06:24
3	U 409.014†	3995.4	5913.7	160.69 ug/L	160.69 ppb	03:06:04
3	V 292.402†	90551.1	89746.8	600.53 ug/L	600.53 ppb	03:06:04
3	Zn 213.857†	85419.5	82805.1	768.69 ug/L	768.69 ppb	03:06:04
3	SiO2†	1087775.7	1061809.6	72436 ug/L	72436 ppb	03:06:42

Mean Data: 1202004429|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	872352.7	102.34	%	0.176				0.17%
Sc Radial	5166.4	103	%	0.8				0.78%
Y 371.029	923949.6	127.85	%	0.057				0.04%
Y RADIAL	6953.1	128.1	%	0.94				0.73%
Ag 328.068†	99491.1	494.99	ug/L	1.047	494.99	ppb	1.047	0.21%
Al 396.153Radial†	127677.6	98478	ug/L	376.1	98478	ppb	376.1	0.38%
As 188.979†	1067.5	497.22	ug/L	3.150	497.22	ppb	3.150	0.63%
B 249.677†	21849.1	474.78	ug/L	1.938	474.78	ppb	1.938	0.41%
Ba 233.527†	113368.1	890.30	ug/L	0.382	890.30	ppb	0.382	0.04%
Be 313.107†	1295854.6	500.78	ug/L	0.346	500.78	ppb	0.346	0.07%
Ca 317.933Radial†	9966.7	15948	ug/L	42.7	15948	ppb	42.7	0.27%
Cd 226.502†	43549.5	472.50	ug/L	1.378	472.50	ppb	1.378	0.29%
Co 228.616†	24255.6	489.72	ug/L	1.418	489.72	ppb	1.418	0.29%
Cr 267.716†	59228.5	665.06	ug/L	1.565	665.06	ppb	1.565	0.24%
Cu 324.752†	182263.0	550.61	ug/L	0.782	550.61	ppb	0.782	0.14%
Fe 238.204 Radial†	12425.3	107550	ug/L	184.9	107550	ppb	184.9	0.17%
K 766.490 Radial†	77927.7	14241	ug/L	32.9	14241	ppb	32.9	0.23%

Mg 279.077 IEC†	555.6	18456 ug/L	69.5	18456 ppb	69.5	0.38%
Mn 257.610†	2809626.3	3126.0 ug/L	2.50	3126.0 ppb	2.50	0.08%
Mo 202.031†	6830.1	490.26 ug/L	1.141	490.26 ppb	1.141	0.23%
Na 589.592 Radial†	23501.7	7036.7 ug/L	14.87	7036.7 ppb	14.87	0.21%
Ni 231.604†	20842.1	518.67 ug/L	1.278	518.67 ppb	1.278	0.25%
P 214.914†	2131.3	1126.7 ug/L	3.72	1126.7 ppb	3.72	0.33%
Pb 220.353†	4586.4	573.45 ug/L	2.275	573.45 ppb	2.275	0.40%
S 181.975 Axial†	3735.4	5267.8 ug/L	29.72	5267.8 ppb	29.72	0.56%
Sb 206.836†	1061.7	369.95 ug/L	0.592	369.95 ppb	0.592	0.16%
Se 196.026†	313.0	551.36 ug/L	2.372	551.36 ppb	2.372	0.43%
Si 251.611†	1061893.0	33814 ug/L	35.3	33814 ppb	35.3	0.10%
Sn 189.927†	2684.7	479.72 ug/L	1.740	479.72 ppb	1.740	0.36%
Sr 421.552†	87698.7	566.32 ug/L	1.214	566.32 ppb	1.214	0.21%
Ti 334.940†	1921252.0	3095.3 ug/L	2.59	3095.3 ppb	2.59	0.08%
Tl 190.801†	1418.2	468.08 ug/L	2.772	468.08 ppb	2.772	0.59%
U 409.014†	5899.1	160.28 ug/L	0.417	160.28 ppb	0.417	0.26%
V 292.402†	89854.8	601.28 ug/L	0.721	601.28 ppb	0.721	0.12%
Zn 213.857†	82973.9	770.31 ug/L	1.422	770.31 ppb	1.422	0.18%
SiO2†	1064838.5	72642 ug/L	491.5	72642 ppb	491.5	0.68%

Sequence No.: 103
Sample ID: 1202004431|936808|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 107
Date Collected: 1/12/2010 03:08:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004431|936808|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4929.8	4929.8	97.9	%			03:11:07
1	Y RADIAL	6608.4	6608.4	121.7	%			03:11:07
1	Al 396.153Radial†	107553.2	109854.5	84728	ug/L	84728	ppb	03:10:47
1	Ca 317.933Radial†	8586.0	8749.9	14001	ug/L	14001	ppb	03:10:47
1	Fe 238.204 Radial†	11341.4	11575.1	100190	ug/L	100190	ppb	03:10:47
1	K 766.490 Radial†	74904.2	73916.3	13512	ug/L	13512	ppb	03:10:47
1	Mg 279.077 IEC†	476.1	484.4	16085	ug/L	16085	ppb	03:11:07
1	Na 589.592 Radial†	21457.1	23196.5	6945.3	ug/L	6945.3	ppb	03:10:47
1	Sr 421.552†	89705.4	91643.8	591.81	ug/L	591.81	ppb	03:10:47
1	Sc 361.383	876021.0	876021.0	102.77	%			03:12:06
1	Y 371.029	918427.8	918427.8	127.09	%			03:12:06
1	Ag 328.068†	104969.3	101780.6	503.09	ug/L	503.09	ppb	03:12:06
1	As 188.979†	1077.9	1072.5	497.91	ug/L	497.91	ppb	03:12:26
1	B 249.677†	22209.7	22242.7	484.29	ug/L	484.29	ppb	03:12:06
1	Ba 233.527†	119443.1	116233.5	912.36	ug/L	912.36	ppb	03:12:06
1	Be 313.107†	1344176.7	1312514.7	507.12	ug/L	507.12	ppb	03:12:06
1	Cd 226.502†	45301.0	44283.5	481.41	ug/L	481.41	ppb	03:12:06
1	Co 228.616†	24989.7	24390.4	492.60	ug/L	492.60	ppb	03:12:26
1	Cr 267.716†	64279.5	62462.9	701.03	ug/L	701.03	ppb	03:12:06
1	Cu 324.752†	194610.8	182950.6	552.26	ug/L	552.26	ppb	03:12:06
1	Mn 257.610†	2389111.1	2324240.9	2587.2	ug/L	2587.2	ppb	03:12:06
1	Mo 202.031†	7113.9	6898.3	494.56	ug/L	494.56	ppb	03:12:26
1	Ni 231.604†	21324.3	20681.3	514.67	ug/L	514.67	ppb	03:12:26
1	P 214.914†	2466.1	2169.8	1152.3	ug/L	1152.3	ppb	03:12:26
1	Pb 220.353†	4497.7	4439.8	553.26	ug/L	553.26	ppb	03:12:26
1	S 181.975 Axial†	3932.1	3783.1	5337.9	ug/L	5337.9	ppb	03:12:26
1	Sb 206.836†	1250.0	1188.3	413.94	ug/L	413.94	ppb	03:12:26
1	Se 196.026†	349.2	371.7	565.06	ug/L	565.06	ppb	03:12:26
1	Si 251.611†	1080747.5	1051053.4	33468	ug/L	33468	ppb	03:12:06
1	Sn 189.927†	2824.1	2740.3	489.17	ug/L	489.17	ppb	03:12:26
1	Ti 334.940†	1970308.2	1918550.9	3090.9	ug/L	3090.9	ppb	03:12:06
1	Tl 190.801†	1458.9	1452.4	476.01	ug/L	476.01	ppb	03:12:26
1	U 409.014†	5203.9	7075.2	195.73	ug/L	195.73	ppb	03:12:06
1	V 292.402†	88514.7	87437.5	585.98	ug/L	585.98	ppb	03:12:06
1	Zn 213.857†	83516.6	80644.2	749.01	ug/L	749.01	ppb	03:12:06
1	SiO2†	1074552.3	1045004.0	71289	ug/L	71289	ppb	03:13:28
2	Sc Radial	5185.2	5185.2	103	%			03:11:32
2	Y RADIAL	6908.9	6908.9	127.2	%			03:11:32
2	Al 396.153Radial†	108429.4	105296.0	81211	ug/L	81211	ppb	03:11:12
2	Ca 317.933Radial†	8647.3	8377.6	13405	ug/L	13405	ppb	03:11:12
2	Fe 238.204 Radial†	11450.9	11111.0	96171	ug/L	96171	ppb	03:11:12
2	K 766.490 Radial†	75598.9	70823.7	12945	ug/L	12945	ppb	03:11:12
2	Mg 279.077 IEC†	487.6	471.6	15660	ug/L	15660	ppb	03:11:32
2	Na 589.592 Radial†	21614.0	22269.7	6667.8	ug/L	6667.8	ppb	03:11:12
2	Sr 421.552†	90634.4	88034.2	568.51	ug/L	568.51	ppb	03:11:12
2	Sc 361.383	877623.1	877623.1	102.96	%			03:12:34
2	Y 371.029	921439.1	921439.1	127.51	%			03:12:34
2	Ag 328.068†	105252.9	101869.6	502.20	ug/L	502.20	ppb	03:12:34
2	As 188.979†	1076.2	1068.9	495.57	ug/L	495.57	ppb	03:12:54
2	B 249.677†	22302.6	22293.4	485.83	ug/L	485.83	ppb	03:12:34
2	Ba 233.527†	119776.2	116344.9	913.09	ug/L	913.09	ppb	03:12:34
2	Be 313.107†	1347180.6	1313044.6	507.32	ug/L	507.32	ppb	03:12:34
2	Cd 226.502†	45382.4	44282.1	481.81	ug/L	481.81	ppb	03:12:34
2	Co 228.616†	24960.5	24317.7	491.17	ug/L	491.17	ppb	03:12:54
2	Cr 267.716†	64351.7	62418.8	700.46	ug/L	700.46	ppb	03:12:34
2	Cu 324.752†	194739.1	182729.6	551.38	ug/L	551.38	ppb	03:12:34
2	Mn 257.610†	2390007.9	2320868.2	2583.0	ug/L	2583.0	ppb	03:12:34
2	Mo 202.031†	7123.1	6894.7	494.02	ug/L	494.02	ppb	03:12:54
2	Ni 231.604†	21335.5	20654.3	514.00	ug/L	514.00	ppb	03:12:54

2	P 214.914†	2460.0	2159.4	1148.5 ug/L	1148.5 ppb	03:12:54
2	Pb 220.353†	4528.4	4461.6	555.56 ug/L	555.56 ppb	03:12:54
2	S 181.975 Axial†	3946.4	3789.9	5348.2 ug/L	5348.2 ppb	03:12:54
2	Sb 206.836†	1246.3	1182.6	412.03 ug/L	412.03 ppb	03:12:54
2	Se 196.026†	352.9	374.7	553.99 ug/L	553.99 ppb	03:12:54
2	Si 251.611†	1081376.0	1049744.0	33427 ug/L	33427 ppb	03:12:34
2	Sn 189.927†	2818.9	2730.3	487.23 ug/L	487.23 ppb	03:12:54
2	Ti 334.940†	1973697.1	1918342.6	3090.6 ug/L	3090.6 ppb	03:12:34
2	Tl 190.801†	1451.6	1442.7	473.02 ug/L	473.02 ppb	03:12:54
2	U 409.014†	5370.4	7227.7	200.69 ug/L	200.69 ppb	03:12:34
2	V 292.402†	88794.0	87551.5	587.37 ug/L	587.37 ppb	03:12:34
2	Zn 213.857†	83754.9	80727.3	750.19 ug/L	750.19 ppb	03:12:34
2	SiO2†	1074074.8	1042631.5	71127 ug/L	71127 ppb	03:13:33
3	Sc Radial	5228.2	5228.2	104 %		03:11:58
3	Y RADIAL	6976.9	6976.9	128.5 %		03:11:58
3	Al 396.153Radial†	106359.4	102435.6	79004 ug/L	79004 ppb	03:11:38
3	Ca 317.933Radial†	8520.6	8186.4	13099 ug/L	13099 ppb	03:11:38
3	Fe 238.204 Radial†	11180.1	10758.7	93122 ug/L	93122 ppb	03:11:38
3	K 766.490 Radial†	74177.8	68850.7	12584 ug/L	12584 ppb	03:11:38
3	Mg 279.077 IEC†	490.2	470.2	15619 ug/L	15619 ppb	03:11:58
3	Na 589.592 Radial†	21025.2	21529.9	6446.3 ug/L	6446.3 ppb	03:11:38
3	Sr 421.552†	88336.9	85097.0	549.54 ug/L	549.54 ppb	03:11:38
3	Sc 361.383	873831.8	873831.8	102.51 %		03:13:01
3	Y 371.029	918411.9	918411.9	127.09 %		03:13:01
3	Ag 328.068†	104742.2	101815.0	500.97 ug/L	500.97 ppb	03:13:01
3	As 188.979†	1073.1	1070.4	495.63 ug/L	495.63 ppb	03:13:21
3	B 249.677†	22317.1	22401.6	488.55 ug/L	488.55 ppb	03:13:01
3	Ba 233.527†	118869.7	115965.4	910.01 ug/L	910.01 ppb	03:13:01
3	Be 313.107†	1342001.0	1313669.0	507.56 ug/L	507.56 ppb	03:13:01
3	Cd 226.502†	44998.1	44098.5	480.09 ug/L	480.09 ppb	03:13:01
3	Co 228.616†	24914.6	24378.1	492.45 ug/L	492.45 ppb	03:13:21
3	Cr 267.716†	63983.6	62330.9	699.42 ug/L	699.42 ppb	03:13:01
3	Cu 324.752†	194232.6	183056.2	552.20 ug/L	552.20 ppb	03:13:01
3	Mn 257.610†	2377485.4	2318724.3	2580.3 ug/L	2580.3 ppb	03:13:01
3	Mo 202.031†	7108.4	6910.3	494.91 ug/L	494.91 ppb	03:13:21
3	Ni 231.604†	21287.5	20697.4	515.07 ug/L	515.07 ppb	03:13:21
3	P 214.914†	2440.3	2150.6	1144.8 ug/L	1144.8 ppb	03:13:21
3	Pb 220.353†	4502.0	4455.0	554.57 ug/L	554.57 ppb	03:13:21
3	S 181.975 Axial†	3937.8	3798.2	5360.3 ug/L	5360.3 ppb	03:13:21
3	Sb 206.836†	1249.6	1191.0	415.01 ug/L	415.01 ppb	03:13:21
3	Se 196.026†	349.8	373.3	543.21 ug/L	543.21 ppb	03:13:21
3	Si 251.611†	1076503.0	1049547.5	33420 ug/L	33420 ppb	03:13:01
3	Sn 189.927†	2811.7	2735.1	488.00 ug/L	488.00 ppb	03:13:21
3	Ti 334.940†	1965386.8	1918553.2	3090.9 ug/L	3090.9 ppb	03:13:01
3	Tl 190.801†	1453.4	1450.6	475.43 ug/L	475.43 ppb	03:13:21
3	U 409.014†	5143.2	7028.6	195.17 ug/L	195.17 ppb	03:13:01
3	V 292.402†	88300.9	87444.7	587.11 ug/L	587.11 ppb	03:13:01
3	Zn 213.857†	83131.8	80472.4	748.06 ug/L	748.06 ppb	03:13:01
3	SiO2†	1077544.9	1050542.6	71667 ug/L	71667 ppb	03:13:39

Mean Data: 1202004431|936808|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	875825.3	102.75	%	0.223				0.22%
Sc Radial	5114.4	102	%	3.2				3.15%
Y 371.029	919426.3	127.23	%	0.241				0.19%
Y RADIAL	6831.4	125.8	%	3.61				2.87%
Ag 328.068†	101821.8	502.09	ug/L	1.063	502.09	ppb	1.063	0.21%
Al 396.153Radial†	105862.1	81647	ug/L	2886.7	81647	ppb	2886.7	3.54%
As 188.979†	1070.6	496.37	ug/L	1.332	496.37	ppb	1.332	0.27%
B 249.677†	22312.5	486.23	ug/L	2.157	486.23	ppb	2.157	0.44%
Ba 233.527†	116181.3	911.82	ug/L	1.608	911.82	ppb	1.608	0.18%
Be 313.107†	1313076.1	507.34	ug/L	0.220	507.34	ppb	0.220	0.04%
Ca 317.933Radial†	8438.0	13502	ug/L	458.5	13502	ppb	458.5	3.40%
Cd 226.502†	44221.4	481.10	ug/L	0.902	481.10	ppb	0.902	0.19%
Co 228.616†	24362.1	492.08	ug/L	0.786	492.08	ppb	0.786	0.16%
Cr 267.716†	62404.2	700.30	ug/L	0.817	700.30	ppb	0.817	0.12%
Cu 324.752†	182912.1	551.95	ug/L	0.490	551.95	ppb	0.490	0.09%
Fe 238.204 Radial†	11148.3	96493	ug/L	3543.6	96493	ppb	3543.6	3.67%
K 766.490 Radial†	71196.9	13014	ug/L	467.9	13014	ppb	467.9	3.60%

Mg 279.077 IEC†	475.4	15788 ug/L	257.9	15788 ppb	257.9	1.63%
Mn 257.610†	2321277.8	2583.5 ug/L	3.47	2583.5 ppb	3.47	0.13%
Mo 202.031†	6901.1	494.49 ug/L	0.448	494.49 ppb	0.448	0.09%
Na 589.592 Radial†	22332.0	6686.5 ug/L	250.03	6686.5 ppb	250.03	3.74%
Ni 231.604†	20677.7	514.58 ug/L	0.541	514.58 ppb	0.541	0.11%
P 214.914†	2159.9	1148.5 ug/L	3.77	1148.5 ppb	3.77	0.33%
Pb 220.353†	4452.1	554.46 ug/L	1.152	554.46 ppb	1.152	0.21%
S 181.975 Axial†	3790.4	5348.8 ug/L	11.21	5348.8 ppb	11.21	0.21%
Sb 206.836†	1187.3	413.66 ug/L	1.510	413.66 ppb	1.510	0.37%
Se 196.026†	373.3	554.09 ug/L	10.928	554.09 ppb	10.928	1.97%
Si 251.611†	1050115.0	33438 ug/L	26.1	33438 ppb	26.1	0.08%
Sn 189.927†	2735.2	488.13 ug/L	0.974	488.13 ppb	0.974	0.20%
Sr 421.552†	88258.3	569.95 ug/L	21.176	569.95 ppb	21.176	3.72%
Ti 334.940†	1918482.2	3090.8 ug/L	0.20	3090.8 ppb	0.20	0.01%
Tl 190.801†	1448.6	474.82 ug/L	1.587	474.82 ppb	1.587	0.33%
U 409.014†	7110.5	197.20 ug/L	3.038	197.20 ppb	3.038	1.54%
V 292.402†	87477.9	586.82 ug/L	0.739	586.82 ppb	0.739	0.13%
Zn 213.857†	80614.7	749.09 ug/L	1.064	749.09 ppb	1.064	0.14%
SiO2†	1046059.4	71361 ug/L	277.0	71361 ppb	277.0	0.39%

Sequence No.: 104
Sample ID: 1202004430|936808|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 108
Date Collected: 1/12/2010 03:15:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004430|936808|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5037.7	5037.7	100	%			03:17:45
1	Y RADIAL	5614.2	5614.2	103.4	%			03:17:45
1	Al 396.153Radial†	10082.1	10078.0	7775.0	ug/L	7775.0	ppb	03:17:45
1	Ca 317.933Radial†	1071.6	1051.3	1682.2	ug/L	1682.2	ppb	03:18:05
1	Fe 238.204 Radial†	2045.4	2035.6	17616	ug/L	17616	ppb	03:18:05
1	K 766.490 Radial†	9186.3	6591.8	1203.2	ug/L	1203.2	ppb	03:17:45
1	Mg 279.077 IEC†	48.8	46.8	1546.8	ug/L	1546.8	ppb	03:18:05
1	Na 589.592 Radial†	-136.8	1143.8	342.45	ug/L	342.45	ppb	03:17:45
1	Sr 421.552†	2238.4	2256.8	14.564	ug/L	14.564	ppb	03:17:45
1	Sc 361.383	851704.5	851704.5	99.919	%			03:19:02
1	Y 371.029	747861.5	747861.5	103.49	%			03:19:02
1	Ag 328.068†	-807.2	-1165.8	0.4456	ug/L	0.4456	ppb	03:19:02
1	As 188.979†	-28.4	-4.8	4.2131	ug/L	4.2131	ppb	03:19:22
1	B 249.677†	-267.2	364.4	6.3214	ug/L	6.3214	ppb	03:19:02
1	Ba 233.527†	11797.0	11818.0	92.954	ug/L	92.954	ppb	03:19:02
1	Be 313.107†	-6037.2	-1456.8	0.8073	ug/L	0.8073	ppb	03:19:02
1	Cd 226.502†	-27.4	176.6	0.1355	ug/L	0.1355	ppb	03:19:22
1	Co 228.616†	246.7	321.6	5.1066	ug/L	5.1066	ppb	03:19:22
1	Cr 267.716†	2217.2	2135.7	24.275	ug/L	24.275	ppb	03:19:02
1	Cu 324.752†	8348.8	1943.4	6.7729	ug/L	6.7729	ppb	03:19:02
1	Mn 257.610†	394869.8	394746.4	439.52	ug/L	439.52	ppb	03:19:02
1	Mo 202.031†	39.2	15.6	2.3252	ug/L	2.3252	ppb	03:19:22
1	Ni 231.604†	405.1	337.5	8.3996	ug/L	8.3996	ppb	03:19:22
1	P 214.914†	518.9	289.5	163.46	ug/L	163.46	ppb	03:19:22
1	Pb 220.353†	60.7	124.1	15.199	ug/L	15.199	ppb	03:19:22
1	S 181.975 Axial†	109.8	66.8	93.136	ug/L	93.136	ppb	03:19:22
1	Sb 206.836†	46.4	18.5	4.1972	ug/L	4.1972	ppb	03:19:22
1	Se 196.026†	-93.3	-61.4	17.066	ug/L	17.066	ppb	03:19:22
1	Si 251.611†	173297.6	172888.3	5506.2	ug/L	5506.2	ppb	03:19:02
1	Sn 189.927†	-4.4	-12.0	-1.5932	ug/L	-1.5932	ppb	03:19:22
1	Ti 334.940†	370807.6	372484.0	600.19	ug/L	600.19	ppb	03:19:02
1	Tl 190.801†	-65.8	-33.0	-4.0309	ug/L	-4.0309	ppb	03:19:22
1	U 409.014†	-3805.6	-1797.1	-55.075	ug/L	-55.075	ppb	03:19:02
1	V 292.402†	2196.7	3508.2	20.556	ug/L	20.556	ppb	03:19:02
1	Zn 213.857†	6239.0	5623.9	51.421	ug/L	51.421	ppb	03:19:02
1	SiO2†	174557.5	174128.0	11881	ug/L	11881	ppb	03:20:19
2	Sc Radial	5200.0	5200.0	103	%			03:18:10
2	Y RADIAL	5801.0	5801.0	106.8	%			03:18:10
2	Al 396.153Radial†	10294.2	9968.7	7690.7	ug/L	7690.7	ppb	03:18:10
2	Ca 317.933Radial†	1077.7	1023.8	1638.1	ug/L	1638.1	ppb	03:18:30
2	Fe 238.204 Radial†	2061.6	1987.4	17199	ug/L	17199	ppb	03:18:30
2	K 766.490 Radial†	9226.8	6344.4	1157.8	ug/L	1157.8	ppb	03:18:10
2	Mg 279.077 IEC†	48.5	45.0	1487.0	ug/L	1487.0	ppb	03:18:30
2	Na 589.592 Radial†	-113.5	1170.6	350.48	ug/L	350.48	ppb	03:18:10
2	Sr 421.552†	2265.8	2213.6	14.285	ug/L	14.285	ppb	03:18:10
2	Sc 361.383	855769.3	855769.3	100.40	%			03:19:28
2	Y 371.029	751894.0	751894.0	104.04	%			03:19:28
2	Ag 328.068†	-883.9	-1238.4	-0.0227	ug/L	-0.0227	ppb	03:19:28
2	As 188.979†	-26.3	-2.6	5.1108	ug/L	5.1108	ppb	03:19:48
2	B 249.677†	-362.1	271.2	4.2859	ug/L	4.2859	ppb	03:19:28
2	Ba 233.527†	11872.4	11837.0	93.087	ug/L	93.087	ppb	03:19:28
2	Be 313.107†	-5994.9	-1385.9	0.8330	ug/L	0.8330	ppb	03:19:28
2	Cd 226.502†	-25.1	179.1	0.2058	ug/L	0.2058	ppb	03:19:48
2	Co 228.616†	235.5	309.2	4.8610	ug/L	4.8610	ppb	03:19:48
2	Cr 267.716†	2245.9	2153.8	24.469	ug/L	24.469	ppb	03:19:28
2	Cu 324.752†	8302.0	1857.1	6.4932	ug/L	6.4932	ppb	03:19:28
2	Mn 257.610†	396440.3	394433.7	439.13	ug/L	439.13	ppb	03:19:28
2	Mo 202.031†	44.1	20.2	2.6218	ug/L	2.6218	ppb	03:19:48
2	Ni 231.604†	393.6	324.1	8.0651	ug/L	8.0651	ppb	03:19:48

2	P 214.914†	534.0	302.1	171.53 ug/L	171.53 ppb	03:19:48
2	Pb 220.353†	75.8	138.8	17.020 ug/L	17.020 ppb	03:19:48
2	S 181.975 Axial†	105.2	61.8	86.039 ug/L	86.039 ppb	03:19:48
2	Sb 206.836†	41.4	13.3	2.4145 ug/L	2.4145 ppb	03:19:48
2	Se 196.026†	-93.1	-60.7	16.133 ug/L	16.133 ppb	03:19:48
2	Si 251.611†	174077.6	172841.4	5504.7 ug/L	5504.7 ppb	03:19:28
2	Sn 189.927†	-5.1	-12.7	-1.7330 ug/L	-1.7330 ppb	03:19:48
2	Ti 334.940†	372211.9	372120.1	599.61 ug/L	599.61 ppb	03:19:28
2	Tl 190.801†	-61.1	-28.0	-2.5134 ug/L	-2.5134 ppb	03:19:48
2	U 409.014†	-3839.0	-1812.2	-55.474 ug/L	-55.474 ppb	03:19:28
2	V 292.402†	2198.2	3499.3	20.563 ug/L	20.563 ppb	03:19:28
2	Zn 213.857†	6310.6	5665.5	51.858 ug/L	51.858 ppb	03:19:28
2	SiO2†	172931.7	171678.8	11714 ug/L	11714 ppb	03:20:24
3	Sc Radial	4996.8	4996.8	99.2 %		03:18:35
3	Y RADIAL	5610.1	5610.1	103.3 %		03:18:35
3	Al 396.153Radial†	9942.2	10019.4	7729.8 ug/L	7729.8 ppb	03:18:35
3	Ca 317.933Radial†	1071.1	1059.6	1695.5 ug/L	1695.5 ppb	03:18:55
3	Fe 238.204 Radial†	2044.4	2051.2	17752 ug/L	17752 ppb	03:18:55
3	K 766.490 Radial†	9043.5	6523.0	1190.6 ug/L	1190.6 ppb	03:18:35
3	Mg 279.077 IEC†	47.4	45.8	1512.2 ug/L	1512.2 ppb	03:18:55
3	Na 589.592 Radial†	-171.3	1107.8	331.70 ug/L	331.70 ppb	03:18:35
3	Sr 421.552†	2187.1	2223.5	14.349 ug/L	14.349 ppb	03:18:35
3	Sc 361.383	858004.5	858004.5	100.66 %		03:19:53
3	Y 371.029	754877.1	754877.1	104.46 %		03:19:53
3	Ag 328.068†	-844.0	-1196.4	0.3426 ug/L	0.3426 ppb	03:19:53
3	As 188.979†	-32.3	-8.5	2.6425 ug/L	2.6425 ppb	03:20:13
3	B 249.677†	-374.7	259.5	3.9699 ug/L	3.9699 ppb	03:19:53
3	Ba 233.527†	11877.2	11811.0	92.904 ug/L	92.904 ppb	03:19:53
3	Be 313.107†	-6024.3	-1399.6	0.8270 ug/L	0.8270 ppb	03:19:53
3	Cd 226.502†	-33.9	170.4	0.0531 ug/L	0.0531 ppb	03:20:13
3	Co 228.616†	236.7	309.8	4.8655 ug/L	4.8655 ppb	03:20:13
3	Cr 267.716†	2316.6	2218.2	25.197 ug/L	25.197 ppb	03:19:53
3	Cu 324.752†	8362.8	1895.9	6.6345 ug/L	6.6345 ppb	03:19:53
3	Mn 257.610†	396861.5	393823.4	438.52 ug/L	438.52 ppb	03:19:53
3	Mo 202.031†	44.0	20.0	2.6478 ug/L	2.6478 ppb	03:20:13
3	Ni 231.604†	382.9	312.4	7.7750 ug/L	7.7750 ppb	03:20:13
3	P 214.914†	519.9	286.7	161.66 ug/L	161.66 ppb	03:20:13
3	Pb 220.353†	59.6	122.6	14.992 ug/L	14.992 ppb	03:20:13
3	S 181.975 Axial†	112.1	68.4	95.281 ug/L	95.281 ppb	03:20:13
3	Sb 206.836†	41.5	13.3	2.4198 ug/L	2.4198 ppb	03:20:13
3	Se 196.026†	-102.3	-69.6	12.168 ug/L	12.168 ppb	03:20:13
3	Si 251.611†	174193.1	172504.4	5494.0 ug/L	5494.0 ppb	03:19:53
3	Sn 189.927†	-3.6	-11.3	-1.4582 ug/L	-1.4582 ppb	03:20:13
3	Ti 334.940†	372954.3	371891.8	599.24 ug/L	599.24 ppb	03:19:53
3	Tl 190.801†	-60.3	-27.0	-2.2075 ug/L	-2.2075 ppb	03:20:13
3	U 409.014†	-3605.7	-1570.5	-48.408 ug/L	-48.408 ppb	03:19:53
3	V 292.402†	2192.7	3488.1	20.416 ug/L	20.416 ppb	03:19:53
3	Zn 213.857†	6292.2	5630.9	51.478 ug/L	51.478 ppb	03:19:53
3	SiO2†	172358.3	170660.3	11644 ug/L	11644 ppb	03:20:29

Mean Data: 1202004430|936808|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	855159.4	100.32	%	0.375				0.37%
Sc Radial	5078.2	101	%	2.1				2.12%
Y 371.029	751544.2	104.00	%	0.487				0.47%
Y RADIAL	5675.1	104.5	%	2.01				1.92%
Ag 328.068†	-1200.2	0.2552	ug/L	0.24611	0.2552	ppb	0.24611	96.44%
Al 396.153Radial†	10022.0	7731.8	ug/L	42.18	7731.8	ppb	42.18	0.55%
As 188.979†	-5.3	3.9888	ug/L	1.24935	3.9888	ppb	1.24935	31.32%
B 249.677†	298.4	4.8590	ug/L	1.27622	4.8590	ppb	1.27622	26.26%
Ba 233.527†	11822.0	92.982	ug/L	0.0946	92.982	ppb	0.0946	0.10%
Be 313.107†	-1414.1	0.8225	ug/L	0.01343	0.8225	ppb	0.01343	1.63%
Ca 317.933Radial†	1044.9	1671.9	ug/L	30.03	1671.9	ppb	30.03	1.80%
Cd 226.502†	175.4	0.1315	ug/L	0.07642	0.1315	ppb	0.07642	58.12%
Co 228.616†	313.6	4.9444	ug/L	0.14050	4.9444	ppb	0.14050	2.84%
Cr 267.716†	2169.2	24.647	ug/L	0.4860	24.647	ppb	0.4860	1.97%
Cu 324.752†	1898.8	6.6336	ug/L	0.13984	6.6336	ppb	0.13984	2.11%
Fe 238.204 Radial†	2024.7	17522	ug/L	288.0	17522	ppb	288.0	1.64%
K 766.490 Radial†	6486.4	1183.8	ug/L	23.41	1183.8	ppb	23.41	1.98%

Mg 279.077 IEC†	45.9	1515.3 ug/L	30.01	1515.3 ppb	30.01	1.98%
Mn 257.610†	394334.5	439.06 ug/L	0.508	439.06 ppb	0.508	0.12%
Mo 202.031†	18.6	2.5316 ug/L	0.17921	2.5316 ppb	0.17921	7.08%
Na 589.592 Radial†	1140.7	341.54 ug/L	9.423	341.54 ppb	9.423	2.76%
Ni 231.604†	324.6	8.0799 ug/L	0.31259	8.0799 ppb	0.31259	3.87%
P 214.914†	292.7	165.55 ug/L	5.257	165.55 ppb	5.257	3.18%
Pb 220.353†	128.5	15.737 ug/L	1.1160	15.737 ppb	1.1160	7.09%
S 181.975 Axial†	65.7	91.485 ug/L	4.8374	91.485 ppb	4.8374	5.29%
Sb 206.836†	15.0	3.0105 ug/L	1.02769	3.0105 ppb	1.02769	34.14%
Se 196.026†	-63.9	15.122 ug/L	2.6008	15.122 ppb	2.6008	17.20%
Si 251.611†	172744.7	5501.6 ug/L	6.67	5501.6 ppb	6.67	0.12%
Sn 189.927†	-12.0	-1.5948 ug/L	0.13738	-1.5948 ppb	0.13738	8.61%
Sr 421.552†	2231.3	14.399 ug/L	0.1463	14.399 ppb	0.1463	1.02%
Ti 334.940†	372165.3	599.68 ug/L	0.481	599.68 ppb	0.481	0.08%
Tl 190.801†	-29.4	-2.9173 ug/L	0.97652	-2.9173 ppb	0.97652	33.47%
U 409.014†	-1726.6	-52.986 ug/L	3.9696	-52.986 ppb	3.9696	7.49%
V 292.402†	3498.5	20.512 ug/L	0.0829	20.512 ppb	0.0829	0.40%
Zn 213.857†	5640.1	51.586 ug/L	0.2375	51.586 ppb	0.2375	0.46%
SiO2†	172155.7	11746 ug/L	121.6	11746 ppb	121.6	1.04%

Sequence No.: 105
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/12/2010 03:22:41
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5045.3	5045.3	100	%			03:24:33
1	Y RADIAL	5404.9	5404.9	99.55	%			03:24:33
1	Al 396.153Radial†	6601.7	6589.3	5057.7	ug/L	5057.7	ppb	03:24:33
1	Ca 317.933Radial†	3228.4	3202.2	5123.8	ug/L	5123.8	ppb	03:24:53
1	Fe 238.204 Radial†	615.0	604.9	5250.6	ug/L	5250.6	ppb	03:24:53
1	K 766.490 Radial†	30514.5	27863.8	5090.8	ug/L	5090.8	ppb	03:24:33
1	Mg 279.077 IEC†	162.4	160.2	5352.3	ug/L	5352.3	ppb	03:24:53
1	Na 589.592 Radial†	33213.8	34428.4	10308	ug/L	10308	ppb	03:24:33
1	Sr 421.552†	79031.3	78894.1	509.53	ug/L	509.53	ppb	03:24:33
1	Sc 361.383	844293.8	844293.8	99.049	%			03:25:51
1	Y 371.029	703084.9	703084.9	97.290	%			03:25:51
1	Ag 328.068†	114065.7	114802.6	531.89	ug/L	531.89	ppb	03:25:56
1	As 188.979†	1182.2	1217.2	529.62	ug/L	529.62	ppb	03:26:16
1	B 249.677†	22197.9	23042.8	511.67	ug/L	511.67	ppb	03:25:56
1	Ba 233.527†	66436.9	67086.1	525.06	ug/L	525.06	ppb	03:25:56
1	Be 313.107†	1357961.2	1375581.3	525.31	ug/L	525.31	ppb	03:25:51
1	Cd 226.502†	46737.3	47390.0	525.76	ug/L	525.76	ppb	03:25:56
1	Co 228.616†	25424.1	25742.9	527.05	ug/L	527.05	ppb	03:25:56
1	Cr 267.716†	46688.6	47053.5	526.70	ug/L	526.70	ppb	03:25:56
1	Cu 324.752†	177541.6	172833.6	516.80	ug/L	516.80	ppb	03:25:56
1	Mn 257.610†	467865.7	471911.7	523.53	ug/L	523.53	ppb	03:25:51
1	Mo 202.031†	7491.8	7540.0	533.31	ug/L	533.31	ppb	03:26:16
1	Ni 231.604†	21063.3	21197.5	527.50	ug/L	527.50	ppb	03:25:56
1	P 214.914†	4476.2	4289.3	2512.0	ug/L	2512.0	ppb	03:26:16
1	Pb 220.353†	4191.4	4295.0	527.65	ug/L	527.65	ppb	03:26:16
1	S 181.975 Axial†	796.9	761.6	1076.8	ug/L	1076.8	ppb	03:26:16
1	Sb 206.836†	1534.5	1521.3	540.20	ug/L	540.20	ppb	03:26:16
1	Se 196.026†	779.1	818.6	546.12	ug/L	546.12	ppb	03:26:16
1	Si 251.611†	83702.1	83955.1	2667.3	ug/L	2667.3	ppb	03:25:56
1	Sn 189.927†	2984.1	3005.1	533.22	ug/L	533.22	ppb	03:26:16
1	Ti 334.940†	317254.4	321674.2	517.97	ug/L	517.97	ppb	03:25:56
1	Tl 190.801†	1664.4	1713.2	528.78	ug/L	528.78	ppb	03:26:16
1	U 409.014†	15973.3	18138.2	533.30	ug/L	533.30	ppb	03:25:56
1	V 292.402†	74624.7	76650.7	530.73	ug/L	530.73	ppb	03:25:56
1	Zn 213.857†	55623.0	55536.7	520.70	ug/L	520.70	ppb	03:25:56
1	SiO2†	84458.4	84697.4	5764.5	ug/L	5764.5	ppb	03:27:23
2	Sc Radial	5011.9	5011.9	99.5	%			03:24:58
2	Y RADIAL	5374.7	5374.7	98.99	%			03:24:58
2	Al 396.153Radial†	6591.3	6622.6	5083.5	ug/L	5083.5	ppb	03:24:58
2	Ca 317.933Radial†	3244.9	3240.3	5184.7	ug/L	5184.7	ppb	03:25:18
2	Fe 238.204 Radial†	620.7	614.7	5335.5	ug/L	5335.5	ppb	03:25:18
2	K 766.490 Radial†	30246.6	27797.4	5078.6	ug/L	5078.6	ppb	03:24:58
2	Mg 279.077 IEC†	166.3	165.1	5517.3	ug/L	5517.3	ppb	03:25:18
2	Na 589.592 Radial†	32954.0	34388.0	10296	ug/L	10296	ppb	03:24:58
2	Sr 421.552†	78787.7	79174.3	511.34	ug/L	511.34	ppb	03:24:58
2	Sc 361.383	846990.3	846990.3	99.366	%			03:26:22
2	Y 371.029	706257.1	706257.1	97.729	%			03:26:22
2	Ag 328.068†	114761.2	115135.9	533.46	ug/L	533.46	ppb	03:26:27
2	As 188.979†	1176.2	1207.3	525.35	ug/L	525.35	ppb	03:26:47
2	B 249.677†	22471.2	23246.5	516.20	ug/L	516.20	ppb	03:26:27
2	Ba 233.527†	66784.3	67222.1	526.13	ug/L	526.13	ppb	03:26:27
2	Be 313.107†	1362260.1	1375543.0	525.30	ug/L	525.30	ppb	03:26:22
2	Cd 226.502†	46938.5	47442.3	526.33	ug/L	526.33	ppb	03:26:27
2	Co 228.616†	25567.0	25804.9	528.31	ug/L	528.31	ppb	03:26:27
2	Cr 267.716†	46930.5	47146.9	527.75	ug/L	527.75	ppb	03:26:27
2	Cu 324.752†	179084.2	173815.3	519.74	ug/L	519.74	ppb	03:26:27
2	Mn 257.610†	468520.5	471067.0	522.60	ug/L	522.60	ppb	03:26:22
2	Mo 202.031†	7487.9	7512.0	531.33	ug/L	531.33	ppb	03:26:47
2	Ni 231.604†	21100.2	21167.0	526.74	ug/L	526.74	ppb	03:26:27

2	P 214.914†	4482.2	4281.0	2506.2 ug/L	2506.2 ppb	03:26:47
2	Pb 220.353†	4196.1	4286.3	526.57 ug/L	526.57 ppb	03:26:47
2	S 181.975 Axial†	788.5	750.5	1061.1 ug/L	1061.1 ppb	03:26:47
2	Sb 206.836†	1533.0	1514.8	537.94 ug/L	537.94 ppb	03:26:47
2	Se 196.026†	785.4	822.4	548.87 ug/L	548.87 ppb	03:26:47
2	Si 251.611†	84198.0	84185.1	2674.6 ug/L	2674.6 ppb	03:26:27
2	Sn 189.927†	2988.9	3000.3	532.37 ug/L	532.37 ppb	03:26:47
2	Ti 334.940†	319431.3	322845.2	519.85 ug/L	519.85 ppb	03:26:27
2	Tl 190.801†	1677.0	1720.6	531.04 ug/L	531.04 ppb	03:26:47
2	U 409.014†	16221.5	18336.7	539.14 ug/L	539.14 ppb	03:26:27
2	V 292.402†	75200.3	76990.2	533.02 ug/L	533.02 ppb	03:26:27
2	Zn 213.857†	56062.3	55800.0	523.19 ug/L	523.19 ppb	03:26:27
2	SiO2†	84912.8	84883.3	5777.3 ug/L	5777.3 ppb	03:27:28
3	Sc Radial	4987.5	4987.5	99.1 %		03:25:24
3	Y RADIAL	5294.0	5294.0	97.51 %		03:25:24
3	Al 396.153Radial†	6560.7	6624.2	5084.9 ug/L	5084.9 ppb	03:25:24
3	Ca 317.933Radial†	3230.4	3241.6	5186.9 ug/L	5186.9 ppb	03:25:44
3	Fe 238.204 Radial†	613.6	610.6	5300.0 ug/L	5300.0 ppb	03:25:44
3	K 766.490 Radial†	30082.8	27780.9	5075.7 ug/L	5075.7 ppb	03:25:24
3	Mg 279.077 IEC†	161.2	160.8	5373.9 ug/L	5373.9 ppb	03:25:44
3	Na 589.592 Radial†	32527.3	34119.5	10216 ug/L	10216 ppb	03:25:24
3	Sr 421.552†	77652.9	78416.5	506.45 ug/L	506.45 ppb	03:25:24
3	Sc 361.383	849291.1	849291.1	99.636 %		03:26:53
3	Y 371.029	709062.9	709062.9	98.117 %		03:26:53
3	Ag 328.068†	114591.9	114653.1	531.22 ug/L	531.22 ppb	03:26:58
3	As 188.979†	1173.6	1201.6	522.87 ug/L	522.87 ppb	03:27:18
3	B 249.677†	22399.3	23113.1	513.23 ug/L	513.23 ppb	03:26:58
3	Ba 233.527†	66820.7	67076.5	524.99 ug/L	524.99 ppb	03:26:58
3	Be 313.107†	1367681.3	1377270.0	525.96 ug/L	525.96 ppb	03:26:53
3	Cd 226.502†	47009.7	47385.8	525.71 ug/L	525.71 ppb	03:26:58
3	Co 228.616†	25566.8	25735.0	526.87 ug/L	526.87 ppb	03:26:58
3	Cr 267.716†	47028.9	47117.7	527.42 ug/L	527.42 ppb	03:26:58
3	Cu 324.752†	178831.3	173073.3	517.52 ug/L	517.52 ppb	03:26:58
3	Mn 257.610†	468389.9	469658.5	521.04 ug/L	521.04 ppb	03:26:53
3	Mo 202.031†	7473.9	7477.5	528.89 ug/L	528.89 ppb	03:27:18
3	Ni 231.604†	21134.5	21143.9	526.17 ug/L	526.17 ppb	03:26:58
3	P 214.914†	4474.9	4261.4	2494.7 ug/L	2494.7 ppb	03:27:18
3	Pb 220.353†	4207.1	4285.9	526.52 ug/L	526.52 ppb	03:27:18
3	S 181.975 Axial†	788.6	748.5	1058.3 ug/L	1058.3 ppb	03:27:18
3	Sb 206.836†	1529.9	1507.5	535.37 ug/L	535.37 ppb	03:27:18
3	Se 196.026†	781.3	816.1	544.69 ug/L	544.69 ppb	03:27:18
3	Si 251.611†	84226.6	83984.3	2668.3 ug/L	2668.3 ppb	03:26:58
3	Sn 189.927†	2990.8	2994.0	531.26 ug/L	531.26 ppb	03:27:18
3	Ti 334.940†	319686.3	322230.3	518.87 ug/L	518.87 ppb	03:26:58
3	Tl 190.801†	1674.3	1713.3	528.80 ug/L	528.80 ppb	03:27:18
3	U 409.014†	16237.4	18308.4	538.31 ug/L	538.31 ppb	03:26:58
3	V 292.402†	75263.4	76848.4	532.02 ug/L	532.02 ppb	03:26:58
3	Zn 213.857†	55879.4	55463.6	520.02 ug/L	520.02 ppb	03:26:58
3	SiO2†	83080.1	82812.3	5636.0 ug/L	5636.0 ppb	03:27:34

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	846858.4	99.350	%	0.2934				0.30%
Sc Radial	5014.9	99.6	%	0.58				0.58%
Y 371.029	706135.0	97.712	%	0.4139				0.42%
Y RADIAL	5357.9	98.68	%	1.055				1.07%
Ag 328.068†	114863.9	532.19	ug/L	1.148	532.19	ppb	1.148	0.22%
QC value within limits for Ag 328.068 Recovery = 106.44%								
Al 396.153Radial†	6612.0	5075.4	ug/L	15.32	5075.4	ppb	15.32	0.30%
QC value within limits for Al 396.153Radial Recovery = 101.51%								
As 188.979†	1208.7	525.95	ug/L	3.417	525.95	ppb	3.417	0.65%
QC value within limits for As 188.979 Recovery = 105.19%								
B 249.677†	23134.1	513.70	ug/L	2.300	513.70	ppb	2.300	0.45%
QC value within limits for B 249.677 Recovery = 102.74%								
Ba 233.527†	67128.2	525.39	ug/L	0.639	525.39	ppb	0.639	0.12%
QC value within limits for Ba 233.527 Recovery = 105.08%								
Be 313.107†	1376131.4	525.52	ug/L	0.376	525.52	ppb	0.376	0.07%
QC value within limits for Be 313.107 Recovery = 105.10%								
Ca 317.933Radial†	3228.0	5165.1	ug/L	35.79	5165.1	ppb	35.79	0.69%

QC value within limits for Ca 317.933Radial Recovery = 103.30%

Cd 226.502†	47406.0	525.93 ug/L	0.346	525.93 ppb	0.346	0.07%
QC value within limits for Cd 226.502 Recovery = 105.19%						
Co 228.616†	25760.9	527.41 ug/L	0.783	527.41 ppb	0.783	0.15%
QC value within limits for Co 228.616 Recovery = 105.48%						
Cr 267.716†	47106.0	527.29 ug/L	0.535	527.29 ppb	0.535	0.10%
QC value within limits for Cr 267.716 Recovery = 105.46%						
Cu 324.752†	173240.7	518.02 ug/L	1.531	518.02 ppb	1.531	0.30%
QC value within limits for Cu 324.752 Recovery = 103.60%						
Fe 238.204 Radial†	610.1	5295.4 ug/L	42.65	5295.4 ppb	42.65	0.81%
QC value within limits for Fe 238.204 Radial Recovery = 105.91%						
K 766.490 Radial†	27814.0	5081.7 ug/L	8.01	5081.7 ppb	8.01	0.16%
QC value within limits for K 766.490 Radial Recovery = 101.63%						
Mg 279.077 IEC†	162.1	5414.5 ug/L	89.69	5414.5 ppb	89.69	1.66%
QC value within limits for Mg 279.077 IEC Recovery = 108.29%						
Mn 257.610†	470879.1	522.39 ug/L	1.260	522.39 ppb	1.260	0.24%
QC value within limits for Mn 257.610 Recovery = 104.48%						
Mo 202.031†	7509.8	531.18 ug/L	2.211	531.18 ppb	2.211	0.42%
QC value within limits for Mo 202.031 Recovery = 106.24%						
Na 589.592 Radial†	34311.9	10273 ug/L	50.3	10273 ppb	50.3	0.49%
QC value within limits for Na 589.592 Radial Recovery = 102.73%						
Ni 231.604†	21169.4	526.80 ug/L	0.670	526.80 ppb	0.670	0.13%
QC value within limits for Ni 231.604 Recovery = 105.36%						
P 214.914†	4277.2	2504.3 ug/L	8.80	2504.3 ppb	8.80	0.35%
QC value within limits for P 214.914 Recovery = 100.17%						
Pb 220.353†	4289.1	526.92 ug/L	0.639	526.92 ppb	0.639	0.12%
QC value within limits for Pb 220.353 Recovery = 105.38%						
S 181.975 Axial†	753.5	1065.4 ug/L	9.95	1065.4 ppb	9.95	0.93%
QC value within limits for S 181.975 Axial Recovery = 106.54%						
Sb 206.836†	1514.5	537.84 ug/L	2.416	537.84 ppb	2.416	0.45%
QC value within limits for Sb 206.836 Recovery = 107.57%						
Se 196.026†	819.0	546.56 ug/L	2.123	546.56 ppb	2.123	0.39%
QC value within limits for Se 196.026 Recovery = 109.31%						
Si 251.611†	84041.5	2670.1 ug/L	3.99	2670.1 ppb	3.99	0.15%
QC value within limits for Si 251.611 Recovery = 106.80%						
Sn 189.927†	2999.8	532.28 ug/L	0.980	532.28 ppb	0.980	0.18%
QC value within limits for Sn 189.927 Recovery = 106.46%						
Sr 421.552†	78828.3	509.11 ug/L	2.475	509.11 ppb	2.475	0.49%
QC value within limits for Sr 421.552 Recovery = 101.82%						
Ti 334.940†	322249.9	518.90 ug/L	0.939	518.90 ppb	0.939	0.18%
QC value within limits for Ti 334.940 Recovery = 103.78%						
Tl 190.801†	1715.7	529.54 ug/L	1.301	529.54 ppb	1.301	0.25%
QC value within limits for Tl 190.801 Recovery = 105.91%						
U 409.014†	18261.1	536.92 ug/L	3.161	536.92 ppb	3.161	0.59%
QC value within limits for U 409.014 Recovery = 107.38%						
V 292.402†	76829.7	531.92 ug/L	1.146	531.92 ppb	1.146	0.22%
QC value within limits for V 292.402 Recovery = 106.38%						
Zn 213.857†	55600.1	521.30 ug/L	1.668	521.30 ppb	1.668	0.32%
QC value within limits for Zn 213.857 Recovery = 104.26%						
SiO2†	84131.0	5725.9 ug/L	78.13	5725.9 ppb	78.13	1.36%
QC value within limits for SiO2 Recovery = 107.08%						

All analyte(s) passed QC.

Sequence No.: 106
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/12/2010 03:29:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5068.8	5068.8	101	%			03:31:36
1	Y RADIAL	5413.4	5413.4	99.70	%			03:31:36
1	Al 396.153Radial†	-16.4	-15.6	-12.006	ug/L	-12.006	ppb	03:31:36
1	Ca 317.933Radial†	12.5	-7.4	-11.831	ug/L	-11.831	ppb	03:31:56
1	Fe 238.204 Radial†	12.0	3.0	26.099	ug/L	26.099	ppb	03:31:56
1	K 766.490 Radial†	2793.1	184.5	33.844	ug/L	33.844	ppb	03:31:36
1	Mg 279.077 IEC†	2.9	1.0	34.003	ug/L	34.003	ppb	03:31:56
1	Na 589.592 Radial†	-1297.2	-8.1	-2.4374	ug/L	-2.4374	ppb	03:31:36
1	Sr 421.552†	32.4	51.7	0.3340	ug/L	0.3340	ppb	03:31:36
1	Sc 361.383	841433.7	841433.7	98.714	%			03:32:53
1	Y 371.029	713597.1	713597.1	98.745	%			03:32:53
1	Ag 328.068†	385.1	32.1	0.1548	ug/L	0.1548	ppb	03:32:53
1	As 188.979†	-19.2	4.2	1.8278	ug/L	1.8278	ppb	03:33:13
1	B 249.677†	-418.3	208.1	4.6370	ug/L	4.6370	ppb	03:33:13
1	Ba 233.527†	-6.5	4.8	0.0385	ug/L	0.0385	ppb	03:33:13
1	Be 313.107†	-4511.9	14.7	0.0057	ug/L	0.0057	ppb	03:32:53
1	Cd 226.502†	-195.3	6.3	0.0677	ug/L	0.0677	ppb	03:33:13
1	Co 228.616†	-76.2	-2.5	-0.0529	ug/L	-0.0529	ppb	03:33:13
1	Cr 267.716†	76.9	-5.3	-0.0597	ug/L	-0.0597	ppb	03:33:13
1	Cu 324.752†	6355.7	26.3	0.0787	ug/L	0.0787	ppb	03:32:53
1	Mn 257.610†	424.0	-15.3	-0.0155	ug/L	-0.0155	ppb	03:33:13
1	Mo 202.031†	13.9	-9.6	-0.6802	ug/L	-0.6802	ppb	03:33:13
1	Ni 231.604†	73.6	6.6	0.1636	ug/L	0.1636	ppb	03:33:13
1	P 214.914†	219.8	-7.2	-4.4456	ug/L	-4.4456	ppb	03:33:13
1	Pb 220.353†	-66.9	-4.4	-0.5464	ug/L	-0.5464	ppb	03:33:13
1	S 181.975 Axial†	43.7	1.2	1.7418	ug/L	1.7418	ppb	03:33:13
1	Sb 206.836†	39.0	11.6	3.9592	ug/L	3.9592	ppb	03:33:13
1	Se 196.026†	-19.9	11.8	7.7146	ug/L	7.7146	ppb	03:33:13
1	Si 251.611†	623.2	80.8	2.5823	ug/L	2.5823	ppb	03:33:13
1	Sn 189.927†	7.7	0.1	0.0161	ug/L	0.0161	ppb	03:33:13
1	Ti 334.940†	-1336.4	20.7	0.0283	ug/L	0.0283	ppb	03:32:53
1	Tl 190.801†	-43.2	-10.9	-3.3366	ug/L	-3.3366	ppb	03:33:13
1	U 409.014†	-1908.4	78.4	2.3100	ug/L	2.3100	ppb	03:32:53
1	V 292.402†	-1292.3	0.6	-0.0050	ug/L	-0.0050	ppb	03:32:53
1	Zn 213.857†	628.2	16.2	0.1492	ug/L	0.1492	ppb	03:33:13
1	SiO2†	618.9	55.3	3.7920	ug/L	3.7920	ppb	03:34:09
2	Sc Radial	5079.4	5079.4	101	%			03:32:01
2	Y RADIAL	5459.4	5459.4	100.6	%			03:32:01
2	Al 396.153Radial†	-12.5	-11.7	-9.0396	ug/L	-9.0396	ppb	03:32:01
2	Ca 317.933Radial†	15.5	-4.4	-7.0327	ug/L	-7.0327	ppb	03:32:21
2	Fe 238.204 Radial†	6.8	-2.1	-18.189	ug/L	-18.189	ppb	03:32:21
2	K 766.490 Radial†	2745.2	131.2	24.065	ug/L	24.065	ppb	03:32:01
2	Mg 279.077 IEC†	1.0	-0.9	-29.856	ug/L	-29.856	ppb	03:32:21
2	Na 589.592 Radial†	-1314.4	-22.6	-6.7659	ug/L	-6.7659	ppb	03:32:01
2	Sr 421.552†	-7.4	12.1	0.0785	ug/L	0.0785	ppb	03:32:01
2	Sc 361.383	843036.6	843036.6	98.902	%			03:33:18
2	Y 371.029	716130.9	716130.9	99.095	%			03:33:18
2	Ag 328.068†	297.8	-56.9	-0.2692	ug/L	-0.2692	ppb	03:33:18
2	As 188.979†	-28.9	-5.6	-2.4371	ug/L	-2.4371	ppb	03:33:38
2	B 249.677†	-421.8	205.4	4.5807	ug/L	4.5807	ppb	03:33:38
2	Ba 233.527†	-5.8	5.6	0.0426	ug/L	0.0426	ppb	03:33:38
2	Be 313.107†	-4522.1	13.0	0.0049	ug/L	0.0049	ppb	03:33:18
2	Cd 226.502†	-170.6	31.6	0.3531	ug/L	0.3531	ppb	03:33:38
2	Co 228.616†	-77.0	-3.2	-0.0654	ug/L	-0.0654	ppb	03:33:38
2	Cr 267.716†	94.4	12.2	0.1357	ug/L	0.1357	ppb	03:33:38
2	Cu 324.752†	6267.5	-75.1	-0.2262	ug/L	-0.2262	ppb	03:33:18
2	Mn 257.610†	421.3	-18.9	-0.0217	ug/L	-0.0217	ppb	03:33:38
2	Mo 202.031†	20.6	-2.9	-0.2031	ug/L	-0.2031	ppb	03:33:38
2	Ni 231.604†	61.0	-6.2	-0.1554	ug/L	-0.1554	ppb	03:33:38

2	P 214.914†	219.2	-8.2	-4.9482 ug/L	-4.9482 ppb	03:33:38
2	Pb 220.353†	-57.0	5.7	0.6952 ug/L	0.6952 ppb	03:33:38
2	S 181.975 Axial†	51.1	8.7	12.268 ug/L	12.268 ppb	03:33:38
2	Sb 206.836†	39.0	11.5	3.9219 ug/L	3.9219 ppb	03:33:38
2	Se 196.026†	-28.5	3.2	1.9967 ug/L	1.9967 ppb	03:33:38
2	Si 251.611†	619.0	75.4	2.4028 ug/L	2.4028 ppb	03:33:38
2	Sn 189.927†	6.7	-0.9	-0.1672 ug/L	-0.1672 ppb	03:33:38
2	Ti 334.940†	-1364.6	-5.3	-0.0075 ug/L	-0.0075 ppb	03:33:18
2	Tl 190.801†	-27.7	4.9	1.4898 ug/L	1.4898 ppb	03:33:38
2	U 409.014†	-1945.4	44.6	1.3181 ug/L	1.3181 ppb	03:33:18
2	V 292.402†	-1308.0	-12.8	-0.0858 ug/L	-0.0858 ppb	03:33:18
2	Zn 213.857†	620.3	6.9	0.0686 ug/L	0.0686 ppb	03:33:38
2	SiO2†	671.8	107.6	7.3477 ug/L	7.3477 ppb	03:34:14
3	Sc Radial	5032.9	5032.9	100.0 %		03:32:26
3	Y RADIAL	5432.7	5432.7	100.1 %		03:32:26
3	Al 396.153Radial†	14.3	15.0	11.534 ug/L	11.534 ppb	03:32:26
3	Ca 317.933Radial†	16.6	-3.2	-5.0511 ug/L	-5.0511 ppb	03:32:46
3	Fe 238.204 Radial†	9.0	0.1	1.2048 ug/L	1.2048 ppb	03:32:46
3	K 766.490 Radial†	2645.7	56.9	10.430 ug/L	10.430 ppb	03:32:26
3	Mg 279.077 IEC†	2.9	1.0	32.475 ug/L	32.475 ppb	03:32:46
3	Na 589.592 Radial†	-1321.2	-41.3	-12.379 ug/L	-12.379 ppb	03:32:26
3	Sr 421.552†	12.3	31.8	0.2053 ug/L	0.2053 ppb	03:32:26
3	Sc 361.383	841037.1	841037.1	98.667 %		03:33:44
3	Y 371.029	715401.7	715401.7	98.995 %		03:33:44
3	Ag 328.068†	314.3	-39.4	-0.1866 ug/L	-0.1866 ppb	03:33:44
3	As 188.979†	-18.9	4.5	1.9384 ug/L	1.9384 ppb	03:34:04
3	B 249.677†	-419.8	206.4	4.6014 ug/L	4.6014 ppb	03:34:04
3	Ba 233.527†	-17.5	-6.3	-0.0513 ug/L	-0.0513 ppb	03:34:04
3	Be 313.107†	-4437.9	87.5	0.0337 ug/L	0.0337 ppb	03:33:44
3	Cd 226.502†	-177.8	23.9	0.2661 ug/L	0.2661 ppb	03:34:04
3	Co 228.616†	-83.6	-10.1	-0.2052 ug/L	-0.2052 ppb	03:34:04
3	Cr 267.716†	96.4	14.4	0.1588 ug/L	0.1588 ppb	03:34:04
3	Cu 324.752†	6258.1	-69.6	-0.2094 ug/L	-0.2094 ppb	03:33:44
3	Mn 257.610†	435.1	-3.9	-0.0055 ug/L	-0.0055 ppb	03:34:04
3	Mo 202.031†	30.8	7.5	0.5310 ug/L	0.5310 ppb	03:34:04
3	Ni 231.604†	71.3	4.3	0.1080 ug/L	0.1080 ppb	03:34:04
3	P 214.914†	237.8	11.2	6.8783 ug/L	6.8783 ppb	03:34:04
3	Pb 220.353†	-63.0	-0.5	-0.0601 ug/L	-0.0601 ppb	03:34:04
3	S 181.975 Axial†	49.3	7.0	9.8506 ug/L	9.8506 ppb	03:34:04
3	Sb 206.836†	34.3	6.8	2.3337 ug/L	2.3337 ppb	03:34:04
3	Se 196.026†	-26.0	5.6	3.6377 ug/L	3.6377 ppb	03:34:04
3	Si 251.611†	617.7	75.6	2.4003 ug/L	2.4003 ppb	03:34:04
3	Sn 189.927†	7.1	-0.5	-0.0880 ug/L	-0.0880 ppb	03:34:04
3	Ti 334.940†	-1253.5	104.1	0.1634 ug/L	0.1634 ppb	03:33:44
3	Tl 190.801†	-35.1	-2.7	-0.8337 ug/L	-0.8337 ppb	03:34:04
3	U 409.014†	-1902.2	83.7	2.4698 ug/L	2.4698 ppb	03:33:44
3	V 292.402†	-1429.9	-139.5	-0.9393 ug/L	-0.9393 ppb	03:33:44
3	Zn 213.857†	634.8	23.2	0.2187 ug/L	0.2187 ppb	03:34:04
3	SiO2†	662.0	99.2	6.7554 ug/L	6.7554 ppb	03:34:19

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	841835.8	98.761	%	0.1242				0.13%
Sc Radial	5060.4	100	%	0.5				0.48%
Y 371.029	715043.2	98.945	%	0.1805				0.18%
Y RADIAL	5435.1	100.1	%	0.43				0.42%
Ag 328.068†	-21.4	-0.1003	ug/L	0.22477	-0.1003	ppb	0.22477	224.07%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-4.1	-3.1706	ug/L	12.82070	-3.1706	ppb	12.82070	404.37%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	1.0	0.4430	ug/L	2.49490	0.4430	ppb	2.49490	563.16%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	206.6	4.6064	ug/L	0.02847	4.6064	ppb	0.02847	0.62%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	1.4	0.0099	ug/L	0.05304	0.0099	ppb	0.05304	533.68%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	38.4	0.0148	ug/L	0.01642	0.0148	ppb	0.01642	111.10%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-5.0	-7.9715	ug/L	3.48585	-7.9715	ppb	3.48585	43.73%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              20.6      0.2290 ug/L       0.14627      0.2290 ppb       0.14627  63.88%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -5.2     -0.1079 ug/L       0.08453     -0.1079 ppb       0.08453  78.38%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               7.1      0.0783 ug/L       0.12002      0.0783 ppb       0.12002 153.34%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -39.5     -0.1190 ug/L       0.17142     -0.1190 ppb       0.17142 144.10%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.4      3.0383 ug/L      22.20094      3.0383 ppb      22.20094 730.70%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       124.2     22.779 ug/L       11.7595      22.779 ppb       11.7595  51.62%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.4     12.207 ug/L       36.4361      12.207 ppb       36.4361 298.48%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -12.7     -0.0142 ug/L       0.00820     -0.0142 ppb       0.00820  57.69%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              -1.7     -0.1175 ug/L       0.61014     -0.1175 ppb       0.61014 519.45%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -24.0     -7.1942 ug/L       4.98484     -7.1942 ppb       4.98484  69.29%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               1.6      0.0387 ug/L       0.17038      0.0387 ppb       0.17038 439.84%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†               -1.4     -0.8385 ug/L       6.68764     -0.8385 ppb       6.68764 797.57%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               0.3      0.0296 ug/L       0.62564      0.0296 ppb       0.62564 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          5.6      7.9535 ug/L       5.51358      7.9535 ppb       5.51358  69.32%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               9.9      3.4049 ug/L       0.92791      3.4049 ppb       0.92791  27.25%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               6.9      4.4497 ug/L       2.94418      4.4497 ppb       2.94418  66.17%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              77.3      2.4618 ug/L       0.10438      2.4618 ppb       0.10438   4.24%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -0.4     -0.0797 ug/L       0.09195     -0.0797 ppb       0.09195 115.37%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              31.9      0.2060 ug/L       0.12777      0.2060 ppb       0.12777  62.04%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              39.9      0.0614 ug/L       0.09012      0.0614 ppb       0.09012 146.81%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -2.9     -0.8935 ug/L       2.41377     -0.8935 ppb       2.41377 270.14%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               68.9      2.0326 ug/L       0.62393      2.0326 ppb       0.62393  30.70%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -50.6     -0.3434 ug/L       0.51766     -0.3434 ppb       0.51766 150.75%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              15.4      0.1455 ug/L       0.07515      0.1455 ppb       0.07515  51.65%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    87.4      5.9650 ug/L       1.90506      5.9650 ppb       1.90506  31.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

1/14/2010 09:58:48 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): -0.000 Slit adjustment: 5

Analysis Begun

Start Time: 1/14/2010 10:00:33 **Plasma On Time: 1/11/2010 06:15:31**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601 **Autosampler Model: S10**

Sample Information File: C:\pe\Optima3\Sample Information\011410.sif
Batch ID:
Results Data Set: 011410
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 1/13/2010 13:20:34**
IEC File: 011110.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 1/14/2010 10:00:35**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

	Net	Corrected	Calib.	Analysis

Repl#	Analyte	Intensity	Intensity	Conc.	Units	Time
1	Sc Radial	4932.2	4932.2	103	%	10:02:28
1	Y RADIAL	5261.2	5261.2	102.6	%	10:02:28
1	Al 396.153Radial†	-7.8	-7.6	[0.00]	ug/L	10:02:28
1	Ca 317.933Radial†	16.3	15.8	[0.00]	ug/L	10:02:48
1	Fe 238.204 Radial†	8.9	8.6	[0.00]	ug/L	10:02:48
1	K 766.490 Radial†	2718.4	2640.8	[0.00]	ug/L	10:02:28
1	Mg 279.077 IEC†	-0.9	-0.9	[0.00]	ug/L	10:02:48
1	Na 589.592 Radial†	-1571.2	-1526.4	[0.00]	ug/L	10:02:28
1	Sr 421.552†	12.7	12.4	[0.00]	ug/L	10:02:28
1	Sc 361.383	832827.7	832827.7	102.33	%	10:03:44
1	Y 371.029	701724.3	701724.3	102.30	%	10:03:44
1	Ag 328.068†	297.6	290.8	[0.00]	ug/L	10:03:44
1	As 188.979†	-17.5	-17.1	[0.00]	ug/L	10:04:04
1	B 249.677†	-522.9	-511.0	[0.00]	ug/L	10:04:04
1	Ba 233.527†	-2.6	-2.6	[0.00]	ug/L	10:04:04
1	Be 313.107†	-4305.8	-4207.8	[0.00]	ug/L	10:03:44
1	Cd 226.502†	-196.0	-191.6	[0.00]	ug/L	10:04:04
1	Co 228.616†	-70.4	-68.8	[0.00]	ug/L	10:04:04
1	Cr 267.716†	98.2	95.9	[0.00]	ug/L	10:04:04
1	Cu 324.752†	6282.2	6139.2	[0.00]	ug/L	10:03:44
1	Mn 257.610†	401.9	392.7	[0.00]	ug/L	10:04:04
1	Mo 202.031†	18.7	18.2	[0.00]	ug/L	10:04:04
1	Ni 231.604†	81.1	79.3	[0.00]	ug/L	10:04:04
1	P 214.914†	234.2	228.9	[0.00]	ug/L	10:04:04
1	Pb 220.353†	-63.3	-61.9	[0.00]	ug/L	10:04:04
1	S 181.975 Axial†	44.1	43.1	[0.00]	ug/L	10:04:04
1	Sb 206.836†	38.8	37.9	[0.00]	ug/L	10:04:04
1	Se 196.026†	-37.7	-36.8	[0.00]	ug/L	10:04:04
1	Si 251.611†	455.1	444.7	[0.00]	ug/L	10:04:04
1	Sn 189.927†	8.2	8.0	[0.00]	ug/L	10:04:04
1	Ti 334.940†	-1420.0	-1387.7	[0.00]	ug/L	10:03:44
1	Tl 190.801†	-42.9	-41.9	[0.00]	ug/L	10:04:04
1	U 409.014†	-1985.4	-1940.2	[0.00]	ug/L	10:03:44
1	V 292.402†	-1388.2	-1356.6	[0.00]	ug/L	10:03:44
1	Zn 213.857†	840.0	820.9	[0.00]	ug/L	10:04:04
1	SiO2†	437.7	427.7	[0.00]	ug/L	10:05:00
2	Sc Radial	4791.8	4791.8	100	%	10:02:53
2	Y RADIAL	5129.8	5129.8	100.0	%	10:02:53
2	Al 396.153Radial†	9.0	9.0	[0.00]	ug/L	10:02:53
2	Ca 317.933Radial†	16.0	16.0	[0.00]	ug/L	10:03:13
2	Fe 238.204 Radial†	9.4	9.4	[0.00]	ug/L	10:03:13
2	K 766.490 Radial†	2747.3	2747.0	[0.00]	ug/L	10:02:53
2	Mg 279.077 IEC†	2.9	2.9	[0.00]	ug/L	10:03:13
2	Na 589.592 Radial†	-1583.6	-1583.4	[0.00]	ug/L	10:02:53
2	Sr 421.552†	39.6	39.6	[0.00]	ug/L	10:02:53
2	Sc 361.383	807814.0	807814.0	99.256	%	10:04:10
2	Y 371.029	680196.8	680196.8	99.160	%	10:04:10
2	Ag 328.068†	231.7	233.4	[0.00]	ug/L	10:04:10
2	As 188.979†	-24.5	-24.7	[0.00]	ug/L	10:04:30
2	B 249.677†	-502.7	-506.4	[0.00]	ug/L	10:04:30
2	Ba 233.527†	17.5	17.6	[0.00]	ug/L	10:04:30
2	Be 313.107†	-4286.9	-4319.0	[0.00]	ug/L	10:04:10
2	Cd 226.502†	-195.2	-196.7	[0.00]	ug/L	10:04:30
2	Co 228.616†	-74.9	-75.5	[0.00]	ug/L	10:04:30
2	Cr 267.716†	93.2	93.9	[0.00]	ug/L	10:04:30
2	Cu 324.752†	6375.5	6423.2	[0.00]	ug/L	10:04:10
2	Mn 257.610†	403.8	406.9	[0.00]	ug/L	10:04:30
2	Mo 202.031†	21.5	21.7	[0.00]	ug/L	10:04:30
2	Ni 231.604†	65.5	66.0	[0.00]	ug/L	10:04:30
2	P 214.914†	226.7	228.4	[0.00]	ug/L	10:04:30
2	Pb 220.353†	-71.2	-71.7	[0.00]	ug/L	10:04:30
2	S 181.975 Axial†	46.3	46.6	[0.00]	ug/L	10:04:30
2	Sb 206.836†	31.8	32.0	[0.00]	ug/L	10:04:30
2	Se 196.026†	-27.8	-28.0	[0.00]	ug/L	10:04:30
2	Si 251.611†	443.7	447.0	[0.00]	ug/L	10:04:30
2	Sn 189.927†	3.7	3.7	[0.00]	ug/L	10:04:30
2	Ti 334.940†	-1403.0	-1413.5	[0.00]	ug/L	10:04:10
2	Tl 190.801†	-49.5	-49.8	[0.00]	ug/L	10:04:30
2	U 409.014†	-2107.3	-2123.1	[0.00]	ug/L	10:04:10
2	V 292.402†	-1387.8	-1398.2	[0.00]	ug/L	10:04:10

2	Zn 213.857†	866.0	872.4	[0.00] ug/L	10:04:30
2	SiO2†	456.3	459.8	[0.00] ug/L	10:05:05
3	Sc Radial	4649.9	4649.9	97.0 %	10:03:18
3	Y RADIAL	4997.5	4997.5	97.43 %	10:03:18
3	Al 396.153Radial†	-10.8	-11.1	[0.00] ug/L	10:03:18
3	Ca 317.933Radial†	13.2	13.6	[0.00] ug/L	10:03:38
3	Fe 238.204 Radial†	11.3	11.7	[0.00] ug/L	10:03:38
3	K 766.490 Radial†	2886.7	2974.5	[0.00] ug/L	10:03:18
3	Mg 279.077 IEC†	2.4	2.5	[0.00] ug/L	10:03:38
3	Na 589.592 Radial†	-1544.0	-1591.0	[0.00] ug/L	10:03:18
3	Sr 421.552†	-0.3	-0.3	[0.00] ug/L	10:03:18
3	Sc 361.383	800955.3	800955.3	98.414 %	10:04:35
3	Y 371.029	675961.5	675961.5	98.542 %	10:04:35
3	Ag 328.068†	315.4	320.5	[0.00] ug/L	10:04:35
3	As 188.979†	-14.5	-14.7	[0.00] ug/L	10:04:55
3	B 249.677†	-529.6	-538.2	[0.00] ug/L	10:04:55
3	Ba 233.527†	-10.4	-10.6	[0.00] ug/L	10:04:55
3	Be 313.107†	-4340.0	-4410.0	[0.00] ug/L	10:04:35
3	Cd 226.502†	-201.2	-204.4	[0.00] ug/L	10:04:55
3	Co 228.616†	-72.6	-73.8	[0.00] ug/L	10:04:55
3	Cr 267.716†	95.8	97.4	[0.00] ug/L	10:04:55
3	Cu 324.752†	6231.4	6331.8	[0.00] ug/L	10:04:35
3	Mn 257.610†	406.7	413.3	[0.00] ug/L	10:04:55
3	Mo 202.031†	17.8	18.1	[0.00] ug/L	10:04:55
3	Ni 231.604†	78.9	80.1	[0.00] ug/L	10:04:55
3	P 214.914†	222.8	226.4	[0.00] ug/L	10:04:55
3	Pb 220.353†	-59.2	-60.1	[0.00] ug/L	10:04:55
3	S 181.975 Axial†	48.8	49.6	[0.00] ug/L	10:04:55
3	Sb 206.836†	27.8	28.2	[0.00] ug/L	10:04:55
3	Se 196.026†	-25.8	-26.3	[0.00] ug/L	10:04:55
3	Si 251.611†	438.8	445.9	[0.00] ug/L	10:04:55
3	Sn 189.927†	6.6	6.7	[0.00] ug/L	10:04:55
3	Ti 334.940†	-1338.3	-1359.8	[0.00] ug/L	10:04:35
3	Tl 190.801†	-39.3	-39.9	[0.00] ug/L	10:04:55
3	U 409.014†	-2026.9	-2059.5	[0.00] ug/L	10:04:35
3	V 292.402†	-1443.4	-1466.7	[0.00] ug/L	10:04:35
3	Zn 213.857†	873.6	887.7	[0.00] ug/L	10:04:55
3	SiO2†	473.6	481.2	[0.00] ug/L	10:05:10

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	813865.7	16775.85	2.06%	100.00	%
Sc Radial	4791.3	141.16	2.95%	100	%
Y 371.029	685960.9	13814.83	2.01%	100.00	%
Y RADIAL	5129.5	131.87	2.57%	100.0	%
Ag 328.068†	281.6	44.28	15.72%	[0.00]	ug/L
Al 396.153Radial†	-3.2	10.73	330.84%	[0.00]	ug/L
As 188.979†	-18.8	5.17	27.44%	[0.00]	ug/L
B 249.677†	-518.5	17.16	3.31%	[0.00]	ug/L
Ba 233.527†	1.5	14.54	984.68%	[0.00]	ug/L
Be 313.107†	-4312.2	101.26	2.35%	[0.00]	ug/L
Ca 317.933Radial†	15.1	1.36	8.95%	[0.00]	ug/L
Cd 226.502†	-197.6	6.48	3.28%	[0.00]	ug/L
Co 228.616†	-72.7	3.45	4.75%	[0.00]	ug/L
Cr 267.716†	95.7	1.76	1.83%	[0.00]	ug/L
Cu 324.752†	6298.1	145.00	2.30%	[0.00]	ug/L
Fe 238.204 Radial†	9.9	1.58	16.03%	[0.00]	ug/L
K 766.490 Radial†	2787.4	170.52	6.12%	[0.00]	ug/L
Mg 279.077 IEC†	1.5	2.09	138.88%	[0.00]	ug/L
Mn 257.610†	404.3	10.52	2.60%	[0.00]	ug/L
Mo 202.031†	19.3	2.03	10.49%	[0.00]	ug/L
Na 589.592 Radial†	-1566.9	35.34	2.26%	[0.00]	ug/L
Ni 231.604†	75.1	7.95	10.58%	[0.00]	ug/L
P 214.914†	227.9	1.33	0.58%	[0.00]	ug/L
Pb 220.353†	-64.6	6.25	9.67%	[0.00]	ug/L
S 181.975 Axial†	46.5	3.27	7.03%	[0.00]	ug/L
Sb 206.836†	32.7	4.88	14.92%	[0.00]	ug/L
Se 196.026†	-30.4	5.67	18.67%	[0.00]	ug/L
Si 251.611†	445.9	1.12	0.25%	[0.00]	ug/L

Sn 189.927†	6.1	2.19	35.85%	[0.00] ug/L
Sr 421.552†	17.2	20.42	118.60%	[0.00] ug/L
Ti 334.940†	-1387.0	26.86	1.94%	[0.00] ug/L
Tl 190.801†	-43.9	5.24	11.95%	[0.00] ug/L
U 409.014†	-2041.0	92.87	4.55%	[0.00] ug/L
V 292.402†	-1407.1	55.58	3.95%	[0.00] ug/L
Zn 213.857†	860.3	35.02	4.07%	[0.00] ug/L
SiO2†	456.2	26.92	5.90%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 1/14/2010 10:07:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4980.0	4980.0	104	%	10:09:19
1	Y RADIAL	5307.1	5307.1	103.5	%	10:09:19
1	K 766.490 Radial†	7918.1	4830.8	[1000]	ug/L	10:09:13
1	Sr 421.552†	14610.2	14039.5	[100]	ug/L	10:09:19
1	Sc 361.383	837270.7	837270.7	102.88	%	10:09:45
1	Y 371.029	701767.9	701767.9	102.30	%	10:09:45
1	Ag 328.068†	21370.5	20491.6	[100]	ug/L	10:09:45
1	As 188.979†	194.1	207.6	[100]	ug/L	10:10:06
1	B 249.677†	3466.3	3887.9	[100]	ug/L	10:09:45
1	Ba 233.527†	12482.1	12131.7	[100]	ug/L	10:09:45
1	Be 313.107†	252539.9	249792.7	[100]	ug/L	10:09:45
1	Cd 226.502†	8609.2	8566.1	[100]	ug/L	10:09:45
1	Co 228.616†	4577.8	4522.5	[100]	ug/L	10:10:06
1	Cr 267.716†	8714.4	8375.1	[100]	ug/L	10:09:45
1	Cu 324.752†	37947.5	30588.7	[100]	ug/L	10:09:45
1	Mn 257.610†	89195.1	86297.5	[100]	ug/L	10:09:45
1	Mo 202.031†	1376.9	1319.1	[100]	ug/L	10:10:06
1	Ni 231.604†	3914.8	3730.2	[100]	ug/L	10:10:06
1	P 214.914†	1011.4	755.2	[500]	ug/L	10:10:06
1	Pb 220.353†	733.9	778.0	[100]	ug/L	10:10:06
1	S 181.975 Axial†	175.5	124.2	[200]	ug/L	10:10:06
1	Sb 206.836†	305.9	264.6	[100]	ug/L	10:10:06
1	Se 196.026†	120.0	147.0	[100]	ug/L	10:10:06
1	Si 251.611†	15372.6	14497.0	[500]	ug/L	10:09:45
1	Sn 189.927†	556.5	534.8	[100]	ug/L	10:10:06
1	Ti 334.940†	57611.8	57388.3	[100]	ug/L	10:09:45
1	Tl 190.801†	289.2	325.0	[100]	ug/L	10:10:06
1	U 409.014†	1383.3	3385.6	[100]	ug/L	10:09:45
1	V 292.402†	12484.9	13543.0	[100]	ug/L	10:09:45
1	Zn 213.857†	11245.7	10071.0	[100]	ug/L	10:09:45
1	SiO2†	15354.0	14468.6	[1069.5]	ug/L	10:11:02
2	Sc Radial	5529.1	5529.1	115	%	10:09:29
2	Y RADIAL	5928.0	5928.0	115.6	%	10:09:29
2	K 766.490 Radial†	8050.8	4189.1	[1000]	ug/L	10:09:24
2	Sr 421.552†	14313.1	12385.9	[100]	ug/L	10:09:29
2	Sc 361.383	832734.2	832734.2	102.32	%	10:10:11
2	Y 371.029	698577.3	698577.3	101.84	%	10:10:11
2	Ag 328.068†	21291.7	20527.7	[100]	ug/L	10:10:11
2	As 188.979†	197.2	211.6	[100]	ug/L	10:10:31
2	B 249.677†	3455.5	3895.8	[100]	ug/L	10:10:11
2	Ba 233.527†	12395.8	12113.5	[100]	ug/L	10:10:11
2	Be 313.107†	251821.6	250427.9	[100]	ug/L	10:10:11
2	Cd 226.502†	8631.5	8633.5	[100]	ug/L	10:10:11
2	Co 228.616†	4599.0	4567.4	[100]	ug/L	10:10:31
2	Cr 267.716†	8700.5	8407.7	[100]	ug/L	10:10:11
2	Cu 324.752†	37968.5	30810.1	[100]	ug/L	10:10:11
2	Mn 257.610†	88708.7	86294.4	[100]	ug/L	10:10:11
2	Mo 202.031†	1391.7	1340.9	[100]	ug/L	10:10:31
2	Ni 231.604†	3938.1	3773.8	[100]	ug/L	10:10:31
2	P 214.914†	1007.6	756.9	[500]	ug/L	10:10:31
2	Pb 220.353†	742.9	790.6	[100]	ug/L	10:10:31
2	S 181.975 Axial†	176.2	125.8	[200]	ug/L	10:10:31
2	Sb 206.836†	312.7	272.9	[100]	ug/L	10:10:31
2	Se 196.026†	119.4	147.1	[100]	ug/L	10:10:31
2	Si 251.611†	15342.8	14549.2	[500]	ug/L	10:10:11
2	Sn 189.927†	551.0	532.4	[100]	ug/L	10:10:31
2	Ti 334.940†	57404.7	57491.0	[100]	ug/L	10:10:11
2	Tl 190.801†	283.1	320.6	[100]	ug/L	10:10:31
2	U 409.014†	1102.9	3118.9	[100]	ug/L	10:10:11

2	V 292.402†	12557.3	13679.9	[100] ug/L	10:10:11
2	Zn 213.857†	11200.1	10086.0	[100] ug/L	10:10:11
2	SiO2†	15330.9	14527.3	[1069.5] ug/L	10:11:07
3	Sc Radial	5123.1	5123.1	107 %	10:09:39
3	Y RADIAL	5481.5	5481.5	106.9 %	10:09:39
3	K 766.490 Radial†	7885.8	4587.7	[1000] ug/L	10:09:34
3	Sr 421.552†	14844.1	13865.4	[100] ug/L	10:09:39
3	Sc 361.383	816241.6	816241.6	100.29 %	10:10:37
3	Y 371.029	685532.0	685532.0	99.937 %	10:10:37
3	Ag 328.068†	20944.5	20601.9	[100] ug/L	10:10:37
3	As 188.979†	204.6	222.8	[100] ug/L	10:10:57
3	B 249.677†	3451.3	3959.8	[100] ug/L	10:10:37
3	Ba 233.527†	12220.9	12183.9	[100] ug/L	10:10:37
3	Be 313.107†	247937.0	251527.5	[100] ug/L	10:10:37
3	Cd 226.502†	8450.9	8623.9	[100] ug/L	10:10:37
3	Co 228.616†	4528.4	4587.9	[100] ug/L	10:10:57
3	Cr 267.716†	8574.0	8453.3	[100] ug/L	10:10:37
3	Cu 324.752†	37299.3	30892.6	[100] ug/L	10:10:37
3	Mn 257.610†	87464.8	86806.0	[100] ug/L	10:10:37
3	Mo 202.031†	1376.5	1353.2	[100] ug/L	10:10:57
3	Ni 231.604†	3869.5	3783.1	[100] ug/L	10:10:57
3	P 214.914†	985.0	754.3	[500] ug/L	10:10:57
3	Pb 220.353†	739.1	801.6	[100] ug/L	10:10:57
3	S 181.975 Axial†	183.5	136.5	[200] ug/L	10:10:57
3	Sb 206.836†	305.3	271.7	[100] ug/L	10:10:57
3	Se 196.026†	122.2	152.3	[100] ug/L	10:10:57
3	Si 251.611†	15075.9	14586.2	[500] ug/L	10:10:37
3	Sn 189.927†	550.4	542.7	[100] ug/L	10:10:57
3	Ti 334.940†	56613.6	57835.9	[100] ug/L	10:10:37
3	Tl 190.801†	282.8	325.9	[100] ug/L	10:10:57
3	U 409.014†	1143.5	3181.1	[100] ug/L	10:10:37
3	V 292.402†	12363.5	13734.6	[100] ug/L	10:10:37
3	Zn 213.857†	11042.7	10150.2	[100] ug/L	10:10:37
3	SiO2†	15409.6	14908.5	[1069.5] ug/L	10:11:12

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	828748.8	11066.56	1.34%	101.83	%
Sc Radial	5210.7	284.87	5.47%	109	%
Y 371.029	695292.4	8602.01	1.24%	101.36	%
Y RADIAL	5572.2	320.23	5.75%	108.6	%
Ag 328.068†	20540.4	56.27	0.27%	[100]	ug/L
As 188.979†	214.0	7.90	3.69%	[100]	ug/L
B 249.677†	3914.5	39.44	1.01%	[100]	ug/L
Ba 233.527†	12143.0	36.54	0.30%	[100]	ug/L
Be 313.107†	250582.7	877.71	0.35%	[100]	ug/L
Cd 226.502†	8607.8	36.48	0.42%	[100]	ug/L
Co 228.616†	4559.3	33.47	0.73%	[100]	ug/L
Cr 267.716†	8412.0	39.30	0.47%	[100]	ug/L
Cu 324.752†	30763.8	157.19	0.51%	[100]	ug/L
K 766.490 Radial†	4535.8	323.96	7.14%	[1000]	ug/L
Mn 257.610†	86466.0	294.45	0.34%	[100]	ug/L
Mo 202.031†	1337.7	17.25	1.29%	[100]	ug/L
Ni 231.604†	3762.4	28.22	0.75%	[100]	ug/L
P 214.914†	755.5	1.32	0.18%	[500]	ug/L
Pb 220.353†	790.1	11.80	1.49%	[100]	ug/L
S 181.975 Axial†	128.8	6.71	5.21%	[200]	ug/L
Sb 206.836†	269.7	4.47	1.66%	[100]	ug/L
Se 196.026†	148.8	3.00	2.02%	[100]	ug/L
Si 251.611†	14544.1	44.82	0.31%	[500]	ug/L
Sn 189.927†	536.6	5.40	1.01%	[100]	ug/L
Sr 421.552†	13430.3	908.65	6.77%	[100]	ug/L
Ti 334.940†	57571.7	234.43	0.41%	[100]	ug/L
Tl 190.801†	323.9	2.85	0.88%	[100]	ug/L
U 409.014†	3228.5	139.51	4.32%	[100]	ug/L
V 292.402†	13652.5	98.69	0.72%	[100]	ug/L
Zn 213.857†	10102.4	42.08	0.42%	[100]	ug/L
SiO2†	14634.8	238.87	1.63%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 1/14/2010 10:13:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4929.8	4929.8	103	%	10:15:14
1	Y RADIAL	5190.6	5190.6	101.2	%	10:15:14
1	Al 396.153Radial†	6303.0	6129.1	[5000]	ug/L	10:15:14
1	Ca 317.933Radial†	2996.8	2897.4	[5000]	ug/L	10:15:34
1	K 766.490 Radial†	28647.2	25054.8	[5000]	ug/L	10:15:14
1	Mg 279.077 IEC†	152.8	147.0	[5000]	ug/L	10:15:34
1	Sr 421.552†	73885.3	71791.9	[500]	ug/L	10:15:14
1	Sc 361.383	830892.7	830892.7	102.09	%	10:16:32
1	Y 371.029	689236.5	689236.5	100.48	%	10:16:32
1	Ag 328.068†	104357.3	101937.2	[500]	ug/L	10:16:37
1	As 188.979†	1102.7	1099.0	[500]	ug/L	10:16:57
1	B 249.677†	20425.2	20525.2	[500]	ug/L	10:16:37
1	Ba 233.527†	61818.7	60550.4	[500]	ug/L	10:16:37
1	Be 313.107†	1294357.2	1272144.9	[500]	ug/L	10:16:32
1	Cd 226.502†	44022.9	43318.4	[500]	ug/L	10:16:37
1	Co 228.616†	23705.0	23291.9	[500]	ug/L	10:16:37
1	Cr 267.716†	43629.2	42639.4	[500]	ug/L	10:16:37
1	Cu 324.752†	165248.6	155564.2	[500]	ug/L	10:16:37
1	Mn 257.610†	438168.5	428785.1	[500]	ug/L	10:16:32
1	Mo 202.031†	6899.3	6738.6	[500]	ug/L	10:16:57
1	Ni 231.604†	19726.4	19247.0	[500]	ug/L	10:16:37
1	P 214.914†	4192.8	3879.0	[2500]	ug/L	10:16:57
1	Pb 220.353†	3922.4	3906.6	[500]	ug/L	10:16:57
1	S 181.975 Axial†	745.0	683.3	[1000]	ug/L	10:16:57
1	Sb 206.836†	1412.1	1350.4	[500]	ug/L	10:16:57
1	Se 196.026†	735.8	751.1	[500]	ug/L	10:16:57
1	Si 251.611†	77658.3	75621.0	[2500]	ug/L	10:16:37
1	Sn 189.927†	2793.3	2730.0	[500]	ug/L	10:16:57
1	Ti 334.940†	294381.6	289736.0	[500]	ug/L	10:16:37
1	Tl 190.801†	1567.8	1579.6	[500]	ug/L	10:16:57
1	U 409.014†	14121.0	15872.6	[500]	ug/L	10:16:37
1	V 292.402†	69514.8	69497.4	[500]	ug/L	10:16:37
1	Zn 213.857†	53133.5	51184.4	[500]	ug/L	10:16:37
1	SiO2†	77763.0	75713.2	[5347.5]	ug/L	10:18:04
2	Sc Radial	4777.1	4777.1	99.7	%	10:15:39
2	Y RADIAL	5100.6	5100.6	99.44	%	10:15:39
2	Al 396.153Radial†	6154.2	6175.7	[5000]	ug/L	10:15:39
2	Ca 317.933Radial†	3002.0	2995.8	[5000]	ug/L	10:15:59
2	K 766.490 Radial†	27999.5	25295.4	[5000]	ug/L	10:15:39
2	Mg 279.077 IEC†	150.9	149.8	[5000]	ug/L	10:15:59
2	Sr 421.552†	72148.4	72345.9	[500]	ug/L	10:15:39
2	Sc 361.383	813390.3	813390.3	99.942	%	10:17:03
2	Y 371.029	674675.2	674675.2	98.355	%	10:17:03
2	Ag 328.068†	101748.0	101525.9	[500]	ug/L	10:17:08
2	As 188.979†	1119.8	1139.3	[500]	ug/L	10:17:28
2	B 249.677†	20227.6	20757.9	[500]	ug/L	10:17:08
2	Ba 233.527†	61227.8	61262.1	[500]	ug/L	10:17:08
2	Be 313.107†	1262980.3	1268030.8	[500]	ug/L	10:17:03
2	Cd 226.502†	43477.3	43700.3	[500]	ug/L	10:17:08
2	Co 228.616†	23499.6	23586.0	[500]	ug/L	10:17:08
2	Cr 267.716†	43151.2	43080.7	[500]	ug/L	10:17:08
2	Cu 324.752†	163492.3	157289.8	[500]	ug/L	10:17:08
2	Mn 257.610†	428858.8	428705.2	[500]	ug/L	10:17:03
2	Mo 202.031†	6898.6	6883.3	[500]	ug/L	10:17:28
2	Ni 231.604†	19540.8	19477.1	[500]	ug/L	10:17:08
2	P 214.914†	4206.1	3980.7	[2500]	ug/L	10:17:28
2	Pb 220.353†	3897.2	3964.0	[500]	ug/L	10:17:28
2	S 181.975 Axial†	731.7	685.6	[1000]	ug/L	10:17:28
2	Sb 206.836†	1417.2	1385.3	[500]	ug/L	10:17:28

2	Se 196.026†	749.8	780.6	[500] ug/L	10:17:28
2	Si 251.611†	76540.6	76139.4	[2500] ug/L	10:17:08
2	Sn 189.927†	2789.8	2785.3	[500] ug/L	10:17:28
2	Ti 334.940†	291309.0	292866.3	[500] ug/L	10:17:08
2	Tl 190.801†	1556.7	1601.5	[500] ug/L	10:17:28
2	U 409.014†	14027.3	16076.5	[500] ug/L	10:17:08
2	V 292.402†	68775.6	70223.0	[500] ug/L	10:17:08
2	Zn 213.857†	52288.1	51458.4	[500] ug/L	10:17:08
2	SiO2†	77113.5	76702.4	[5347.5] ug/L	10:18:09
3	Sc Radial	4874.5	4874.5	102 %	10:16:04
3	Y RADIAL	5184.3	5184.3	101.1 %	10:16:04
3	Al 396.153Radial†	6210.4	6107.7	[5000] ug/L	10:16:04
3	Ca 317.933Radial†	3057.7	2990.4	[5000] ug/L	10:16:24
3	K 766.490 Radial†	28049.8	24783.6	[5000] ug/L	10:16:04
3	Mg 279.077 IEC†	155.0	150.9	[5000] ug/L	10:16:24
3	Sr 421.552†	72713.9	71455.6	[500] ug/L	10:16:04
3	Sc 361.383	826948.9	826948.9	101.61 %	10:17:33
3	Y 371.029	686247.5	686247.5	100.04 %	10:17:33
3	Ag 328.068†	102096.8	100200.0	[500] ug/L	10:17:39
3	As 188.979†	1110.1	1111.4	[500] ug/L	10:17:59
3	B 249.677†	20441.9	20637.0	[500] ug/L	10:17:39
3	Ba 233.527†	61754.6	60776.1	[500] ug/L	10:17:39
3	Be 313.107†	1286750.3	1270704.7	[500] ug/L	10:17:33
3	Cd 226.502†	43825.7	43329.9	[500] ug/L	10:17:39
3	Co 228.616†	23631.5	23330.3	[500] ug/L	10:17:39
3	Cr 267.716†	43486.2	42702.4	[500] ug/L	10:17:39
3	Cu 324.752†	165207.2	156295.4	[500] ug/L	10:17:39
3	Mn 257.610†	435511.7	428217.1	[500] ug/L	10:17:33
3	Mo 202.031†	6888.2	6759.9	[500] ug/L	10:17:59
3	Ni 231.604†	19679.5	19293.0	[500] ug/L	10:17:39
3	P 214.914†	4189.0	3894.9	[2500] ug/L	10:17:59
3	Pb 220.353†	3901.8	3904.6	[500] ug/L	10:17:59
3	S 181.975 Axial†	731.1	673.1	[1000] ug/L	10:17:59
3	Sb 206.836†	1422.3	1367.1	[500] ug/L	10:17:59
3	Se 196.026†	737.7	756.4	[500] ug/L	10:17:59
3	Si 251.611†	77299.4	75630.6	[2500] ug/L	10:17:39
3	Sn 189.927†	2784.4	2734.2	[500] ug/L	10:17:59
3	Ti 334.940†	293777.6	290516.7	[500] ug/L	10:17:39
3	Tl 190.801†	1550.5	1569.9	[500] ug/L	10:17:59
3	U 409.014†	14287.5	16102.4	[500] ug/L	10:17:39
3	V 292.402†	69478.9	69786.9	[500] ug/L	10:17:39
3	Zn 213.857†	52806.6	51110.8	[500] ug/L	10:17:39
3	SiO2†	76942.4	75268.9	[5347.5] ug/L	10:18:14

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	823744.0	9180.84	1.11%	101.21	%
Sc Radial	4860.5	77.33	1.59%	101	%
Y 371.029	683386.4	7690.73	1.13%	99.625	%
Y RADIAL	5158.5	50.27	0.97%	100.6	%
Ag 328.068†	101221.0	907.86	0.90%	[500]	ug/L
Al 396.153Radial†	6137.5	34.81	0.57%	[5000]	ug/L
As 188.979†	1116.6	20.66	1.85%	[500]	ug/L
B 249.677†	20640.0	116.42	0.56%	[500]	ug/L
Ba 233.527†	60862.9	363.69	0.60%	[500]	ug/L
Be 313.107†	1270293.5	2087.65	0.16%	[500]	ug/L
Ca 317.933Radial†	2961.2	55.30	1.87%	[5000]	ug/L
Cd 226.502†	43449.5	217.26	0.50%	[500]	ug/L
Co 228.616†	23402.8	159.89	0.68%	[500]	ug/L
Cr 267.716†	42807.5	238.67	0.56%	[500]	ug/L
Cu 324.752†	156383.1	866.17	0.55%	[500]	ug/L
K 766.490 Radial†	25044.6	256.04	1.02%	[5000]	ug/L
Mg 279.077 IEC†	149.2	2.01	1.35%	[5000]	ug/L
Mn 257.610†	428569.1	307.43	0.07%	[500]	ug/L
Mo 202.031†	6794.0	78.11	1.15%	[500]	ug/L
Ni 231.604†	19339.0	121.75	0.63%	[500]	ug/L
P 214.914†	3918.2	54.72	1.40%	[2500]	ug/L
Pb 220.353†	3925.1	33.72	0.86%	[500]	ug/L
S 181.975 Axial†	680.7	6.68	0.98%	[1000]	ug/L

Sb 206.836†	1367.6	17.44	1.27%	[500] ug/L
Se 196.026†	762.7	15.73	2.06%	[500] ug/L
Si 251.611†	75797.0	296.59	0.39%	[2500] ug/L
Sn 189.927†	2749.8	30.78	1.12%	[500] ug/L
Sr 421.552†	71864.4	449.59	0.63%	[500] ug/L
Ti 334.940†	291039.6	1629.36	0.56%	[500] ug/L
Tl 190.801†	1583.7	16.20	1.02%	[500] ug/L
U 409.014†	16017.2	125.86	0.79%	[500] ug/L
V 292.402†	69835.8	365.24	0.52%	[500] ug/L
Zn 213.857†	51251.2	183.16	0.36%	[500] ug/L
SiO2†	75894.8	733.81	0.97%	[5347.5] ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 1/14/2010 10:20:25
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4690.2	4690.2	97.9	%	10:22:18
1	Y RADIAL	4982.5	4982.5	97.13	%	10:22:18
1	Al 396.153Radial†	11982.9	12244.5	[10000]	ug/L	10:22:18
1	Ca 317.933Radial†	5870.5	5982.0	[10000]	ug/L	10:22:18
1	Fe 238.204 Radial†	1078.9	1092.3	[10000]	ug/L	10:22:38
1	K 766.490 Radial†	51623.6	49949.3	[10000]	ug/L	10:22:18
1	Mg 279.077 IEC†	297.8	302.7	[10000]	ug/L	10:22:38
1	Na 589.592 Radial†	27020.8	29170.4	[10000]	ug/L	10:22:18
1	Sr 421.552†	136168.3	139087.2	[1000]	ug/L	10:22:18
1	Sc 361.383	814439.6	814439.6	100.07	%	10:23:37
1	Y 371.029	673675.1	673675.1	98.209	%	10:23:37
1	Ag 328.068†	204177.8	203752.3	[1000]	ug/L	10:23:37
1	As 188.979†	2200.8	2218.1	[1000]	ug/L	10:23:57
1	B 249.677†	40456.6	40946.7	[1000]	ug/L	10:23:37
1	Ba 233.527†	120600.9	120514.5	[1000]	ug/L	10:23:37
1	Be 313.107†	2508196.4	2510741.4	[1000]	ug/L	10:23:37
1	Cd 226.502†	84759.2	84897.1	[1000]	ug/L	10:23:37
1	Co 228.616†	45819.2	45859.6	[1000]	ug/L	10:23:37
1	Cr 267.716†	84726.1	84570.6	[1000]	ug/L	10:23:37
1	Cu 324.752†	319831.2	313307.8	[1000]	ug/L	10:23:37
1	Mn 257.610†	852948.2	851942.9	[1000]	ug/L	10:23:37
1	Mo 202.031†	13413.0	13384.3	[1000]	ug/L	10:23:57
1	Ni 231.604†	37945.9	37844.1	[1000]	ug/L	10:23:37
1	P 214.914†	8055.5	7822.0	[5000]	ug/L	10:23:57
1	Pb 220.353†	7685.7	7744.8	[1000]	ug/L	10:23:57
1	S 181.975 Axial†	1371.1	1323.7	[2000]	ug/L	10:23:57
1	Sb 206.836†	2764.6	2729.9	[1000]	ug/L	10:23:57
1	Se 196.026†	1460.7	1490.0	[1000]	ug/L	10:23:57
1	Si 251.611†	148140.7	147590.4	[5000]	ug/L	10:23:37
1	Sn 189.927†	5374.6	5364.6	[1000]	ug/L	10:23:57
1	Ti 334.940†	582360.0	583336.7	[1000]	ug/L	10:23:37
1	Tl 190.801†	3076.8	3118.6	[1000]	ug/L	10:23:57
1	U 409.014†	29281.6	31301.9	[1000]	ug/L	10:23:37
1	V 292.402†	137033.4	138344.0	[1000]	ug/L	10:23:37
1	Zn 213.857†	100708.8	99777.5	[1000]	ug/L	10:23:37
1	SiO2†	148537.3	147976.4	[10695]	ug/L	10:24:58
2	Sc Radial	4873.3	4873.3	102	%	10:22:43
2	Y RADIAL	5174.4	5174.4	100.9	%	10:22:43
2	Al 396.153Radial†	12498.1	12291.1	[10000]	ug/L	10:22:43
2	Ca 317.933Radial†	6084.7	5967.1	[10000]	ug/L	10:22:43
2	Fe 238.204 Radial†	1069.3	1041.4	[10000]	ug/L	10:23:03
2	K 766.490 Radial†	53520.3	49832.4	[10000]	ug/L	10:22:43
2	Mg 279.077 IEC†	295.9	289.4	[10000]	ug/L	10:23:03
2	Na 589.592 Radial†	28231.5	29323.4	[10000]	ug/L	10:22:43
2	Sr 421.552†	142182.7	139773.2	[1000]	ug/L	10:22:43
2	Sc 361.383	813929.7	813929.7	100.01	%	10:24:05
2	Y 371.029	672867.5	672867.5	98.091	%	10:24:05
2	Ag 328.068†	204607.6	204309.9	[1000]	ug/L	10:24:05
2	As 188.979†	2208.4	2227.1	[1000]	ug/L	10:24:25
2	B 249.677†	40698.6	41214.0	[1000]	ug/L	10:24:05
2	Ba 233.527†	120544.6	120533.6	[1000]	ug/L	10:24:05
2	Be 313.107†	2508154.4	2512269.3	[1000]	ug/L	10:24:05
2	Cd 226.502†	84839.9	85030.8	[1000]	ug/L	10:24:05
2	Co 228.616†	45918.6	45987.7	[1000]	ug/L	10:24:05
2	Cr 267.716†	84754.0	84651.6	[1000]	ug/L	10:24:05
2	Cu 324.752†	320965.6	314642.3	[1000]	ug/L	10:24:05
2	Mn 257.610†	854103.8	853632.3	[1000]	ug/L	10:24:05
2	Mo 202.031†	13509.4	13489.0	[1000]	ug/L	10:24:25
2	Ni 231.604†	37906.7	37828.6	[1000]	ug/L	10:24:05

2	P 214.914†	8100.6	7872.1	[5000] ug/L	10:24:25
2	Pb 220.353†	7779.2	7843.2	[1000] ug/L	10:24:25
2	S 181.975 Axial†	1390.3	1343.8	[2000] ug/L	10:24:25
2	Sb 206.836†	2780.7	2747.8	[1000] ug/L	10:24:25
2	Se 196.026†	1464.7	1495.0	[1000] ug/L	10:24:25
2	Si 251.611†	148405.5	147948.0	[5000] ug/L	10:24:05
2	Sn 189.927†	5409.7	5403.1	[1000] ug/L	10:24:25
2	Ti 334.940†	583495.0	584836.1	[1000] ug/L	10:24:05
2	Tl 190.801†	3089.7	3133.3	[1000] ug/L	10:24:25
2	U 409.014†	29091.9	31130.6	[1000] ug/L	10:24:05
2	V 292.402†	137117.4	138513.7	[1000] ug/L	10:24:05
2	Zn 213.857†	100718.8	99850.6	[1000] ug/L	10:24:05
2	SiO2†	150196.0	149728.0	[10695] ug/L	10:25:04
3	Sc Radial	4785.6	4785.6	99.9 %	10:23:08
3	Y RADIAL	5070.7	5070.7	98.85 %	10:23:08
3	Al 396.153Radial†	12308.5	12326.3	[10000] ug/L	10:23:08
3	Ca 317.933Radial†	5970.0	5961.9	[10000] ug/L	10:23:08
3	Fe 238.204 Radial†	1075.4	1066.8	[10000] ug/L	10:23:28
3	K 766.490 Radial†	52691.3	49966.3	[10000] ug/L	10:23:08
3	Mg 279.077 IEC†	296.6	295.5	[10000] ug/L	10:23:28
3	Na 589.592 Radial†	27587.6	29187.2	[10000] ug/L	10:23:08
3	Sr 421.552†	139476.2	139624.1	[1000] ug/L	10:23:08
3	Sc 361.383	814815.0	814815.0	100.12 %	10:24:33
3	Y 371.029	675692.6	675692.6	98.503 %	10:24:33
3	Ag 328.068†	203870.0	203350.9	[1000] ug/L	10:24:33
3	As 188.979†	2198.1	2214.4	[1000] ug/L	10:24:53
3	B 249.677†	40542.1	41013.4	[1000] ug/L	10:24:33
3	Ba 233.527†	120022.4	119881.1	[1000] ug/L	10:24:33
3	Be 313.107†	2512305.1	2513690.1	[1000] ug/L	10:24:33
3	Cd 226.502†	84731.6	84830.4	[1000] ug/L	10:24:33
3	Co 228.616†	45717.8	45737.2	[1000] ug/L	10:24:33
3	Cr 267.716†	84637.7	84443.3	[1000] ug/L	10:24:33
3	Cu 324.752†	319021.3	312351.6	[1000] ug/L	10:24:33
3	Mn 257.610†	850524.5	849129.2	[1000] ug/L	10:24:33
3	Mo 202.031†	13491.7	13456.6	[1000] ug/L	10:24:53
3	Ni 231.604†	37903.0	37783.7	[1000] ug/L	10:24:33
3	P 214.914†	8053.5	7816.2	[5000] ug/L	10:24:53
3	Pb 220.353†	7743.1	7798.6	[1000] ug/L	10:24:53
3	S 181.975 Axial†	1386.7	1338.6	[2000] ug/L	10:24:53
3	Sb 206.836†	2769.6	2733.7	[1000] ug/L	10:24:53
3	Se 196.026†	1449.6	1478.3	[1000] ug/L	10:24:53
3	Si 251.611†	147574.4	146956.5	[5000] ug/L	10:24:33
3	Sn 189.927†	5398.5	5386.1	[1000] ug/L	10:24:53
3	Ti 334.940†	580657.5	581368.0	[1000] ug/L	10:24:33
3	Tl 190.801†	3051.7	3092.1	[1000] ug/L	10:24:53
3	U 409.014†	28922.5	30929.8	[1000] ug/L	10:24:33
3	V 292.402†	137028.9	138276.4	[1000] ug/L	10:24:33
3	Zn 213.857†	100453.4	99476.1	[1000] ug/L	10:24:33
3	SiO2†	148591.1	147961.7	[10695] ug/L	10:25:09

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Calib Units
Sc 361.383	814394.8	444.37	0.05%	100.07	%
Sc Radial	4783.0	91.59	1.91%	99.8	%
Y 371.029	674078.4	1455.09	0.22%	98.268	%
Y RADIAL	5075.9	96.06	1.89%	98.95	%
Ag 328.068†	203804.4	481.64	0.24%	[1000]	ug/L
Al 396.153Radial†	12287.3	41.01	0.33%	[10000]	ug/L
As 188.979†	2219.9	6.54	0.29%	[1000]	ug/L
B 249.677†	41058.0	139.12	0.34%	[1000]	ug/L
Ba 233.527†	120309.7	371.35	0.31%	[1000]	ug/L
Be 313.107†	2512233.6	1474.72	0.06%	[1000]	ug/L
Ca 317.933Radial†	5970.3	10.42	0.17%	[10000]	ug/L
Cd 226.502†	84919.4	102.02	0.12%	[1000]	ug/L
Co 228.616†	45861.5	125.26	0.27%	[1000]	ug/L
Cr 267.716†	84555.2	104.97	0.12%	[1000]	ug/L
Cu 324.752†	313433.9	1150.59	0.37%	[1000]	ug/L
Fe 238.204 Radial†	1066.8	25.42	2.38%	[10000]	ug/L
K 766.490 Radial†	49916.0	72.91	0.15%	[10000]	ug/L

Mg 279.077 IEC†	295.8	6.68	2.26%	[10000] ug/L
Mn 257.610†	851568.1	2274.80	0.27%	[1000] ug/L
Mo 202.031†	13443.3	53.63	0.40%	[1000] ug/L
Na 589.592 Radial†	29227.0	83.93	0.29%	[10000] ug/L
Ni 231.604†	37818.8	31.32	0.08%	[1000] ug/L
P 214.914†	7836.7	30.71	0.39%	[5000] ug/L
Pb 220.353†	7795.5	49.25	0.63%	[1000] ug/L
S 181.975 Axial†	1335.4	10.40	0.78%	[2000] ug/L
Sb 206.836†	2737.1	9.40	0.34%	[1000] ug/L
Se 196.026†	1487.8	8.58	0.58%	[1000] ug/L
Si 251.611†	147498.3	502.08	0.34%	[5000] ug/L
Sn 189.927†	5384.6	19.28	0.36%	[1000] ug/L
Sr 421.552†	139494.8	360.84	0.26%	[1000] ug/L
Ti 334.940†	583180.3	1739.35	0.30%	[1000] ug/L
Tl 190.801†	3114.7	20.89	0.67%	[1000] ug/L
U 409.014†	31120.8	186.24	0.60%	[1000] ug/L
V 292.402†	138378.0	122.30	0.09%	[1000] ug/L
Zn 213.857†	99701.4	198.51	0.20%	[1000] ug/L
SiO2†	148555.4	1015.55	0.68%	[10695] ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 1/14/2010 10:27:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4711.4	4711.4	98.3	%	10:29:33
1	Y RADIAL	5017.2	5017.2	97.81	%	10:29:33
1	Al 396.153Radial†	61120.5	62159.8	[50000]	ug/L	10:29:13
1	Ca 317.933Radial†	29136.2	29615.0	[50000]	ug/L	10:29:13
1	Fe 238.204 Radial†	2111.7	2137.6	[20000]	ug/L	10:29:33
1	Mg 279.077 IEC†	1405.9	1428.2	[50000]	ug/L	10:29:33
1	Na 589.592 Radial†	60084.1	62669.5	[20000]	ug/L	10:29:13
1	Sc 361.383	788766.2	788766.2	96.916	%	10:30:30
1	Y 371.029	651054.6	651054.6	94.911	%	10:30:30
2	Sc Radial	4718.6	4718.6	98.5	%	10:29:58
2	Y RADIAL	4988.8	4988.8	97.26	%	10:29:58
2	Al 396.153Radial†	62059.7	63019.7	[50000]	ug/L	10:29:38
2	Ca 317.933Radial†	29491.9	29931.4	[50000]	ug/L	10:29:38
2	Fe 238.204 Radial†	2105.7	2128.3	[20000]	ug/L	10:29:58
2	Mg 279.077 IEC†	1402.5	1422.6	[50000]	ug/L	10:29:58
2	Na 589.592 Radial†	60640.6	63142.4	[20000]	ug/L	10:29:38
2	Sc 361.383	796056.9	796056.9	97.812	%	10:30:36
2	Y 371.029	656001.4	656001.4	95.632	%	10:30:36
3	Sc Radial	4726.9	4726.9	98.7	%	10:30:23
3	Y RADIAL	5015.9	5015.9	97.79	%	10:30:23
3	Al 396.153Radial†	61091.2	61927.3	[50000]	ug/L	10:30:03
3	Ca 317.933Radial†	29131.3	29513.3	[50000]	ug/L	10:30:03
3	Fe 238.204 Radial†	2093.3	2112.0	[20000]	ug/L	10:30:23
3	Mg 279.077 IEC†	1395.7	1413.3	[50000]	ug/L	10:30:23
3	Na 589.592 Radial†	59447.9	61825.3	[20000]	ug/L	10:30:03
3	Sc 361.383	821640.9	821640.9	100.96	%	10:30:42
3	Y 371.029	678212.4	678212.4	98.870	%	10:30:42

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	802154.7	17264.79	2.15%	98.561	%
Sc Radial	4719.0	7.72	0.16%	98.5	%
Y 371.029	661756.2	14464.60	2.19%	96.471	%
Y RADIAL	5007.3	16.01	0.32%	97.62	%
Al 396.153Radial†	62368.9	575.46	0.92%	[50000]	ug/L
Ca 317.933Radial†	29686.5	218.08	0.73%	[50000]	ug/L
Fe 238.204 Radial†	2126.0	12.97	0.61%	[20000]	ug/L
Mg 279.077 IEC†	1421.3	7.54	0.53%	[50000]	ug/L
Na 589.592 Radial†	62545.7	667.22	1.07%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	203.5	0.00000	0.999996	
Al 396.153Radial	3	Lin Thru 0	0.0	1.246	0.00000	0.999995	
As 188.979	3	Lin Thru 0	0.0	2.222	0.00000	0.999992	
B 249.677	3	Lin Thru 0	0.0	41.09	0.00000	0.999989	
Ba 233.527	3	Lin Thru 0	0.0	120.6	0.00000	0.999989	
Be 313.107	3	Lin Thru 0	0.0	2518	0.00000	0.999990	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.5938	0.00000	0.999999	
Cd 226.502	3	Lin Thru 0	0.0	85.32	0.00000	0.999957	
Co 228.616	3	Lin Thru 0	0.0	46.05	0.00000	0.999966	
Cr 267.716	3	Lin Thru 0	0.0	84.76	0.00000	0.999987	
Cu 324.752	3	Lin Thru 0	0.0	313.3	0.00000	0.999998	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1064	0.00000	0.999999	
K 766.490 Radial	3	Lin Thru 0	0.0	4.991	0.00000	0.999966	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0285	0.00000	0.999959
Mn 257.610	3	Lin Thru 0	0.0	852.8	0.00000	0.999996
Mo 202.031	3	Lin Thru 0	0.0	13.47	0.00000	0.999991
Na 589.592 Radia	2	Lin Thru 0	0.0	3.086	0.00000	0.999649
Ni 231.604	3	Lin Thru 0	0.0	37.99	0.00000	0.999959
P 214.914	3	Lin Thru 0	0.0	1.567	0.00000	0.999995
Pb 220.353	3	Lin Thru 0	0.0	7.807	0.00000	0.999996
S 181.975 Axial	3	Lin Thru 0	0.0	0.6701	0.00000	0.999964
Sb 206.836	3	Lin Thru 0	0.0	2.736	0.00000	0.999999
Se 196.026	3	Lin Thru 0	0.0	1.495	0.00000	0.999950
Si 251.611	3	Lin Thru 0	0.0	29.66	0.00000	0.999938
Sn 189.927	3	Lin Thru 0	0.0	5.407	0.00000	0.999964
Sr 421.552	3	Lin Thru 0	0.0	140.3	0.00000	0.999920
Ti 334.940	3	Lin Thru 0	0.0	582.9	0.00000	0.999999
Tl 190.801	3	Lin Thru 0	0.0	3.126	0.00000	0.999972
U 409.014	3	Lin Thru 0	0.0	31.31	0.00000	0.999929
V 292.402	3	Lin Thru 0	0.0	138.6	0.00000	0.999992
Zn 213.857	3	Lin Thru 0	0.0	100.3	0.00000	0.999938
SiO2	3	Lin Thru 0	0.0	13.95	0.00000	0.999961

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 1/14/2010 10:32:53
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4815.0	4815.0	100	%			10:34:46
1	Y RADIAL	5123.2	5123.2	99.88	%			10:34:46
1	Al 396.153Radial†	6201.2	6173.9	4927.0	ug/L	4927.0	ppb	10:34:46
1	Ca 317.933Radial†	2992.4	2962.6	4988.8	ug/L	4988.8	ppb	10:35:06
1	Fe 238.204 Radial†	563.9	551.3	5197.5	ug/L	5197.5	ppb	10:35:06
1	K 766.490 Radial†	15365.7	12502.7	2501.4	ug/L	2501.4	ppb	10:34:46
1	Mg 279.077 IEC†	155.1	152.8	5364.9	ug/L	5364.9	ppb	10:35:06
1	Na 589.592 Radial†	5981.5	7519.0	2436.2	ug/L	2436.2	ppb	10:34:46
1	Sr 421.552†	74307.3	73924.6	526.89	ug/L	526.89	ppb	10:34:46
1	Sc 361.383	821629.7	821629.7	100.95	%			10:36:03
1	Y 371.029	684525.5	684525.5	99.791	%			10:36:03
1	Ag 328.068†	53958.2	53166.7	264.45	ug/L	264.45	ppb	10:36:03
1	As 188.979†	1037.2	1046.3	475.17	ug/L	475.17	ppb	10:36:23
1	B 249.677†	21021.2	21341.1	517.13	ug/L	517.13	ppb	10:36:03
1	Ba 233.527†	62441.8	61850.3	514.13	ug/L	514.13	ppb	10:36:03
1	Be 313.107†	663319.7	661363.9	263.81	ug/L	263.81	ppb	10:36:03
1	Cd 226.502†	42106.2	41905.9	491.03	ug/L	491.03	ppb	10:36:23
1	Co 228.616†	23380.0	23231.8	504.68	ug/L	504.68	ppb	10:36:23
1	Cr 267.716†	42161.7	41667.6	492.20	ug/L	492.20	ppb	10:36:03
1	Cu 324.752†	167293.5	159414.6	508.89	ug/L	508.89	ppb	10:36:03
1	Mn 257.610†	443801.3	439203.3	515.32	ug/L	515.32	ppb	10:36:03
1	Mo 202.031†	7324.0	7235.4	537.56	ug/L	537.56	ppb	10:36:23
1	Ni 231.604†	19277.3	19020.0	500.38	ug/L	500.38	ppb	10:36:23
1	P 214.914†	4198.8	3931.2	2410.0	ug/L	2410.0	ppb	10:36:23
1	Pb 220.353†	3896.5	3924.3	504.35	ug/L	504.35	ppb	10:36:23
1	S 181.975 Axial†	1723.6	1660.9	2477.7	ug/L	2477.7	ppb	10:36:23
1	Sb 206.836†	1409.8	1363.7	517.88	ug/L	517.88	ppb	10:36:23
1	Se 196.026†	3835.0	3829.2	2579.8	ug/L	2579.8	ppb	10:36:23
1	Si 251.611†	146847.9	145014.4	4882.8	ug/L	4882.8	ppb	10:36:03
1	Sn 189.927†	2934.2	2900.4	537.23	ug/L	537.23	ppb	10:36:23
1	Ti 334.940†	293673.7	292285.6	501.26	ug/L	501.26	ppb	10:36:03
1	Tl 190.801†	1605.4	1634.2	526.20	ug/L	526.20	ppb	10:36:23
1	U 409.014†	13827.4	15737.6	500.93	ug/L	500.93	ppb	10:36:03
1	V 292.402†	69615.6	70364.9	514.80	ug/L	514.80	ppb	10:36:03
1	Zn 213.857†	53394.7	52029.8	514.53	ug/L	514.53	ppb	10:36:03
1	SiO2†	144889.8	143064.5	10242	ug/L	10242	ppb	10:37:21
2	Sc Radial	4796.4	4796.4	100	%			10:35:11
2	Y RADIAL	5108.2	5108.2	99.59	%			10:35:11
2	Al 396.153Radial†	6173.7	6170.4	4923.8	ug/L	4923.8	ppb	10:35:11
2	Ca 317.933Radial†	2983.3	2964.9	4992.8	ug/L	4992.8	ppb	10:35:31
2	Fe 238.204 Radial†	559.1	548.6	5172.3	ug/L	5172.3	ppb	10:35:31
2	K 766.490 Radial†	15422.2	12618.4	2524.6	ug/L	2524.6	ppb	10:35:11
2	Mg 279.077 IEC†	154.5	152.9	5366.6	ug/L	5366.6	ppb	10:35:31
2	Na 589.592 Radial†	5918.6	7479.2	2423.3	ug/L	2423.3	ppb	10:35:11
2	Sr 421.552†	74132.7	74036.6	527.69	ug/L	527.69	ppb	10:35:11
2	Sc 361.383	812833.2	812833.2	99.873	%			10:36:29
2	Y 371.029	678506.5	678506.5	98.913	%			10:36:29
2	Ag 328.068†	53088.5	52874.4	263.01	ug/L	263.01	ppb	10:36:29
2	As 188.979†	1049.4	1069.6	485.61	ug/L	485.61	ppb	10:36:49
2	B 249.677†	20678.3	21223.1	514.25	ug/L	514.25	ppb	10:36:29
2	Ba 233.527†	61481.3	61557.9	511.71	ug/L	511.71	ppb	10:36:29
2	Be 313.107†	654550.4	659694.1	263.15	ug/L	263.15	ppb	10:36:29
2	Cd 226.502†	42140.4	42391.5	496.73	ug/L	496.73	ppb	10:36:49
2	Co 228.616†	23395.2	23497.6	510.48	ug/L	510.48	ppb	10:36:49
2	Cr 267.716†	41649.1	41606.3	491.48	ug/L	491.48	ppb	10:36:29
2	Cu 324.752†	164944.5	158856.0	507.11	ug/L	507.11	ppb	10:36:29
2	Mn 257.610†	436789.7	436940.2	512.66	ug/L	512.66	ppb	10:36:29
2	Mo 202.031†	7363.5	7353.5	546.32	ug/L	546.32	ppb	10:36:49
2	Ni 231.604†	19297.8	19247.2	506.36	ug/L	506.36	ppb	10:36:49

2	P 214.914†	4179.6	3957.0	2426.8 ug/L	2426.8 ppb	10:36:49
2	Pb 220.353†	3868.1	3937.6	506.08 ug/L	506.08 ppb	10:36:49
2	S 181.975 Axial†	1731.6	1687.3	2517.2 ug/L	2517.2 ppb	10:36:49
2	Sb 206.836†	1407.8	1376.8	522.93 ug/L	522.93 ppb	10:36:49
2	Se 196.026†	3840.6	3875.8	2610.9 ug/L	2610.9 ppb	10:36:49
2	Si 251.611†	144552.0	144289.7	4858.2 ug/L	4858.2 ppb	10:36:29
2	Sn 189.927†	2928.3	2925.9	541.95 ug/L	541.95 ppb	10:36:49
2	Ti 334.940†	289483.7	291238.5	499.47 ug/L	499.47 ppb	10:36:29
2	Tl 190.801†	1615.7	1661.7	534.95 ug/L	534.95 ppb	10:36:49
2	U 409.014†	13556.5	15614.7	497.01 ug/L	497.01 ppb	10:36:29
2	V 292.402†	68818.7	70313.2	514.55 ug/L	514.55 ppb	10:36:29
2	Zn 213.857†	52539.5	51745.9	511.66 ug/L	511.66 ppb	10:36:29
2	SiO2†	148430.1	148162.4	10607 ug/L	10607 ppb	10:37:26
3	Sc Radial	4795.3	4795.3	100 %		10:35:36
3	Y RADIAL	5103.0	5103.0	99.48 %		10:35:36
3	Al 396.153Radial†	6222.3	6220.3	4964.3 ug/L	4964.3 ppb	10:35:36
3	Ca 317.933Radial†	2977.1	2959.5	4983.6 ug/L	4983.6 ppb	10:35:56
3	Fe 238.204 Radial†	560.6	550.3	5187.9 ug/L	5187.9 ppb	10:35:56
3	K 766.490 Radial†	15391.5	12591.3	2519.1 ug/L	2519.1 ppb	10:35:36
3	Mg 279.077 IEC†	153.3	151.7	5324.7 ug/L	5324.7 ppb	10:35:56
3	Na 589.592 Radial†	6003.2	7565.1	2451.1 ug/L	2451.1 ppb	10:35:36
3	Sr 421.552†	74362.8	74283.5	529.45 ug/L	529.45 ppb	10:35:36
3	Sc 361.383	822630.3	822630.3	101.08 %		10:36:55
3	Y 371.029	686689.9	686689.9	100.11 %		10:36:55
3	Ag 328.068†	53835.1	52979.9	263.53 ug/L	263.53 ppb	10:36:55
3	As 188.979†	1034.0	1041.9	473.16 ug/L	473.16 ppb	10:37:15
3	B 249.677†	21054.6	21348.8	517.33 ug/L	517.33 ppb	10:36:55
3	Ba 233.527†	62372.3	61706.3	512.94 ug/L	512.94 ppb	10:36:55
3	Be 313.107†	664062.4	661299.4	263.78 ug/L	263.78 ppb	10:36:55
3	Cd 226.502†	41973.5	41723.8	488.90 ug/L	488.90 ppb	10:37:15
3	Co 228.616†	23287.6	23112.2	502.09 ug/L	502.09 ppb	10:37:15
3	Cr 267.716†	42087.5	41543.4	490.74 ug/L	490.74 ppb	10:36:55
3	Cu 324.752†	167329.5	159248.6	508.36 ug/L	508.36 ppb	10:36:55
3	Mn 257.610†	442831.7	437709.3	513.57 ug/L	513.57 ppb	10:36:55
3	Mo 202.031†	7322.5	7225.2	536.80 ug/L	536.80 ppb	10:37:15
3	Ni 231.604†	19216.7	18936.9	498.20 ug/L	498.20 ppb	10:37:15
3	P 214.914†	4176.0	3903.7	2392.5 ug/L	2392.5 ppb	10:37:15
3	Pb 220.353†	3872.9	3896.2	500.76 ug/L	500.76 ppb	10:37:15
3	S 181.975 Axial†	1716.8	1652.0	2464.5 ug/L	2464.5 ppb	10:37:15
3	Sb 206.836†	1404.0	1356.3	515.12 ug/L	515.12 ppb	10:37:15
3	Se 196.026†	3813.7	3803.4	2562.5 ug/L	2562.5 ppb	10:37:15
3	Si 251.611†	146562.0	144554.6	4867.3 ug/L	4867.3 ppb	10:36:55
3	Sn 189.927†	2934.5	2897.1	536.62 ug/L	536.62 ppb	10:37:15
3	Ti 334.940†	293171.3	291434.7	499.81 ug/L	499.81 ppb	10:36:55
3	Tl 190.801†	1613.1	1639.8	528.00 ug/L	528.00 ppb	10:37:15
3	U 409.014†	13894.9	15787.8	502.53 ug/L	502.53 ppb	10:36:55
3	V 292.402†	69647.6	70312.7	514.42 ug/L	514.42 ppb	10:36:55
3	Zn 213.857†	53211.7	51784.4	512.10 ug/L	512.10 ppb	10:36:55
3	SiO2†	146388.9	144373.0	10336 ug/L	10336 ppb	10:37:31

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	819031.1	100.63	%	0.662				0.66%
Sc Radial	4802.2	100	%	0.2				0.23%
Y 371.029	683240.6	99.603	%	0.6182				0.62%
Y RADIAL	5111.5	99.65	%	0.204				0.21%
Ag 328.068†	53007.0	263.67	ug/L	0.731	263.67	ppb	0.731	0.28%
QC value within limits for Ag 328.068 Recovery = 105.47%								
Al 396.153Radial†	6188.2	4938.4	ug/L	22.54	4938.4	ppb	22.54	0.46%
QC value within limits for Al 396.153Radial Recovery = 98.77%								
As 188.979†	1052.6	477.98	ug/L	6.682	477.98	ppb	6.682	1.40%
QC value within limits for As 188.979 Recovery = 95.60%								
B 249.677†	21304.3	516.23	ug/L	1.725	516.23	ppb	1.725	0.33%
QC value within limits for B 249.677 Recovery = 103.25%								
Ba 233.527†	61704.8	512.93	ug/L	1.213	512.93	ppb	1.213	0.24%
QC value within limits for Ba 233.527 Recovery = 102.59%								
Be 313.107†	660785.8	263.58	ug/L	0.377	263.58	ppb	0.377	0.14%
QC value within limits for Be 313.107 Recovery = 105.43%								
Ca 317.933Radial†	2962.3	4988.4	ug/L	4.60	4988.4	ppb	4.60	0.09%

QC value within limits for Ca 317.933Radial Recovery = 99.77%

Cd 226.502†	42007.1	492.22 ug/L	4.048	492.22 ppb	4.048	0.82%
QC value within limits for Cd 226.502 Recovery = 98.44%						
Co 228.616†	23280.5	505.75 ug/L	4.297	505.75 ppb	4.297	0.85%
QC value within limits for Co 228.616 Recovery = 101.15%						
Cr 267.716†	41605.7	491.47 ug/L	0.733	491.47 ppb	0.733	0.15%
QC value within limits for Cr 267.716 Recovery = 98.29%						
Cu 324.752†	159173.1	508.12 ug/L	0.915	508.12 ppb	0.915	0.18%
QC value within limits for Cu 324.752 Recovery = 101.62%						
Fe 238.204 Radial†	550.0	5185.9 ug/L	12.69	5185.9 ppb	12.69	0.24%
QC value within limits for Fe 238.204 Radial Recovery = 103.72%						
K 766.490 Radial†	12570.8	2515.0 ug/L	12.12	2515.0 ppb	12.12	0.48%
QC value within limits for K 766.490 Radial Recovery = 100.60%						
Mg 279.077 IEC†	152.4	5352.1 ug/L	23.70	5352.1 ppb	23.70	0.44%
QC value within limits for Mg 279.077 IEC Recovery = 107.04%						
Mn 257.610†	437950.9	513.85 ug/L	1.350	513.85 ppb	1.350	0.26%
QC value within limits for Mn 257.610 Recovery = 102.77%						
Mo 202.031†	7271.4	540.22 ug/L	5.292	540.22 ppb	5.292	0.98%
QC value within limits for Mo 202.031 Recovery = 108.04%						
Na 589.592 Radial†	7521.1	2436.9 ug/L	13.92	2436.9 ppb	13.92	0.57%
QC value within limits for Na 589.592 Radial Recovery = 97.48%						
Ni 231.604†	19068.0	501.65 ug/L	4.226	501.65 ppb	4.226	0.84%
QC value within limits for Ni 231.604 Recovery = 100.33%						
P 214.914†	3930.6	2409.8 ug/L	17.17	2409.8 ppb	17.17	0.71%
QC value within limits for P 214.914 Recovery = 96.39%						
Pb 220.353†	3919.4	503.73 ug/L	2.711	503.73 ppb	2.711	0.54%
QC value within limits for Pb 220.353 Recovery = 100.75%						
S 181.975 Axial†	1666.7	2486.5 ug/L	27.42	2486.5 ppb	27.42	1.10%
QC value within limits for S 181.975 Axial Recovery = 99.46%						
Sb 206.836†	1365.6	518.65 ug/L	3.961	518.65 ppb	3.961	0.76%
QC value within limits for Sb 206.836 Recovery = 103.73%						
Se 196.026†	3836.1	2584.4 ug/L	24.52	2584.4 ppb	24.52	0.95%
QC value within limits for Se 196.026 Recovery = 103.38%						
Si 251.611†	144619.6	4869.4 ug/L	12.41	4869.4 ppb	12.41	0.25%
QC value within limits for Si 251.611 Recovery = 97.39%						
Sn 189.927†	2907.8	538.60 ug/L	2.920	538.60 ppb	2.920	0.54%
QC value within limits for Sn 189.927 Recovery = 107.72%						
Sr 421.552†	74081.6	528.01 ug/L	1.309	528.01 ppb	1.309	0.25%
QC value within limits for Sr 421.552 Recovery = 105.60%						
Ti 334.940†	291652.9	500.18 ug/L	0.954	500.18 ppb	0.954	0.19%
QC value within limits for Ti 334.940 Recovery = 100.04%						
Tl 190.801†	1645.2	529.72 ug/L	4.619	529.72 ppb	4.619	0.87%
QC value within limits for Tl 190.801 Recovery = 105.94%						
U 409.014†	15713.4	500.16 ug/L	2.843	500.16 ppb	2.843	0.57%
QC value within limits for U 409.014 Recovery = 100.03%						
V 292.402†	70330.3	514.59 ug/L	0.194	514.59 ppb	0.194	0.04%
QC value within limits for V 292.402 Recovery = 102.92%						
Zn 213.857†	51853.4	512.76 ug/L	1.544	512.76 ppb	1.544	0.30%
QC value within limits for Zn 213.857 Recovery = 102.55%						
SiO2†	145200.0	10395 ug/L	189.7	10395 ppb	189.7	1.82%
QC value within limits for SiO2 Recovery = 97.19%						

All analyte(s) passed QC.

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 1/14/2010 10:39:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4602.3	4602.3	96.1	%			10:41:35
1	Y RADIAL	4941.5	4941.5	96.33	%			10:41:35
1	Al 396.153Radial†	6.0	9.5	7.5623	ug/L	7.5623	ppb	10:41:35
1	Ca 317.933Radial†	13.6	-1.0	-1.6550	ug/L	-1.6550	ppb	10:41:55
1	Fe 238.204 Radial†	9.6	0.1	0.8017	ug/L	0.8017	ppb	10:41:55
1	K 766.490 Radial†	2972.8	307.4	61.606	ug/L	61.606	ppb	10:41:35
1	Mg 279.077 IEC†	2.0	0.6	19.859	ug/L	19.859	ppb	10:41:55
1	Na 589.592 Radial†	-1615.1	-114.5	-37.113	ug/L	-37.113	ppb	10:41:35
1	Sr 421.552†	46.5	31.2	0.2221	ug/L	0.2221	ppb	10:41:35
1	Sc 361.383	806946.5	806946.5	99.150	%			10:42:52
1	Y 371.029	679464.3	679464.3	99.053	%			10:42:52
1	Ag 328.068†	417.5	139.6	0.6813	ug/L	0.6813	ppb	10:42:52
1	As 188.979†	-26.5	-7.9	-3.5520	ug/L	-3.5520	ppb	10:43:12
1	B 249.677†	-221.0	295.6	7.1947	ug/L	7.1947	ppb	10:43:12
1	Ba 233.527†	6.0	4.6	0.0379	ug/L	0.0379	ppb	10:43:12
1	Be 313.107†	-4255.5	20.2	0.0087	ug/L	0.0087	ppb	10:42:52
1	Cd 226.502†	-181.9	14.1	0.1661	ug/L	0.1661	ppb	10:43:12
1	Co 228.616†	-64.5	7.6	0.1671	ug/L	0.1671	ppb	10:43:12
1	Cr 267.716†	108.1	13.3	0.1547	ug/L	0.1547	ppb	10:43:12
1	Cu 324.752†	6348.0	104.4	0.3303	ug/L	0.3303	ppb	10:42:52
1	Mn 257.610†	485.8	85.6	0.0997	ug/L	0.0997	ppb	10:43:12
1	Mo 202.031†	34.6	15.5	1.1537	ug/L	1.1537	ppb	10:43:12
1	Ni 231.604†	94.1	19.8	0.5213	ug/L	0.5213	ppb	10:43:12
1	P 214.914†	227.4	1.5	0.8962	ug/L	0.8962	ppb	10:43:12
1	Pb 220.353†	-78.7	-14.8	-1.8947	ug/L	-1.8947	ppb	10:43:12
1	S 181.975 Axial†	45.4	-0.7	-0.9831	ug/L	-0.9831	ppb	10:43:12
1	Sb 206.836†	45.7	13.3	4.9037	ug/L	4.9037	ppb	10:43:12
1	Se 196.026†	-29.7	0.4	0.3016	ug/L	0.3016	ppb	10:43:12
1	Si 251.611†	488.3	46.6	1.5571	ug/L	1.5571	ppb	10:43:12
1	Sn 189.927†	8.3	2.3	0.4242	ug/L	0.4242	ppb	10:43:12
1	Ti 334.940†	-1207.0	169.7	0.2869	ug/L	0.2869	ppb	10:42:52
1	Tl 190.801†	-40.7	2.8	0.9053	ug/L	0.9053	ppb	10:43:12
1	U 409.014†	-1859.0	166.0	5.3014	ug/L	5.3014	ppb	10:42:52
1	V 292.402†	-1405.5	-10.4	-0.0489	ug/L	-0.0489	ppb	10:42:52
1	Zn 213.857†	936.6	84.3	0.8364	ug/L	0.8364	ppb	10:43:12
1	SiO2†	479.1	27.0	1.9051	ug/L	1.9051	ppb	10:44:08
2	Sc Radial	4831.4	4831.4	101	%			10:42:00
2	Y RADIAL	5186.3	5186.3	101.1	%			10:42:00
2	Al 396.153Radial†	7.7	10.9	8.6975	ug/L	8.6975	ppb	10:42:00
2	Ca 317.933Radial†	12.7	-2.6	-4.3546	ug/L	-4.3546	ppb	10:42:20
2	Fe 238.204 Radial†	9.2	-0.8	-7.0680	ug/L	-7.0680	ppb	10:42:20
2	K 766.490 Radial†	2722.7	-87.3	-17.483	ug/L	-17.483	ppb	10:42:00
2	Mg 279.077 IEC†	1.3	-0.2	-6.4266	ug/L	-6.4266	ppb	10:42:20
2	Na 589.592 Radial†	-1600.0	-19.8	-6.4098	ug/L	-6.4098	ppb	10:42:00
2	Sr 421.552†	-2.7	-19.8	-0.1415	ug/L	-0.1415	ppb	10:42:00
2	Sc 361.383	824688.3	824688.3	101.33	%			10:43:17
2	Y 371.029	694557.0	694557.0	101.25	%			10:43:17
2	Ag 328.068†	291.1	5.7	0.0301	ug/L	0.0301	ppb	10:43:17
2	As 188.979†	-21.7	-2.6	-1.1639	ug/L	-1.1639	ppb	10:43:37
2	B 249.677†	-232.9	288.7	7.0280	ug/L	7.0280	ppb	10:43:37
2	Ba 233.527†	7.4	5.9	0.0492	ug/L	0.0492	ppb	10:43:37
2	Be 313.107†	-4308.5	60.3	0.0246	ug/L	0.0246	ppb	10:43:17
2	Cd 226.502†	-186.8	13.2	0.1556	ug/L	0.1556	ppb	10:43:37
2	Co 228.616†	-71.6	2.0	0.0439	ug/L	0.0439	ppb	10:43:37
2	Cr 267.716†	94.2	-2.8	-0.0314	ug/L	-0.0314	ppb	10:43:37
2	Cu 324.752†	6393.4	11.5	0.0382	ug/L	0.0382	ppb	10:43:17
2	Mn 257.610†	479.8	69.2	0.0807	ug/L	0.0807	ppb	10:43:37
2	Mo 202.031†	24.4	4.7	0.3499	ug/L	0.3499	ppb	10:43:37
2	Ni 231.604†	115.9	39.3	1.0343	ug/L	1.0343	ppb	10:43:37

2	P 214.914†	209.3	-21.3	-13.587 ug/L	-13.587 ppb	10:43:37
2	Pb 220.353†	-63.2	2.2	0.2803 ug/L	0.2803 ppb	10:43:37
2	S 181.975 Axial†	51.5	4.4	6.5482 ug/L	6.5482 ppb	10:43:37
2	Sb 206.836†	35.6	2.4	0.8931 ug/L	0.8931 ppb	10:43:37
2	Se 196.026†	-30.1	0.6	0.4062 ug/L	0.4062 ppb	10:43:37
2	Si 251.611†	490.3	38.0	1.2772 ug/L	1.2772 ppb	10:43:37
2	Sn 189.927†	12.0	5.7	1.0617 ug/L	1.0617 ppb	10:43:37
2	Ti 334.940†	-1229.2	174.0	0.2999 ug/L	0.2999 ppb	10:43:17
2	Tl 190.801†	-35.2	9.1	2.9247 ug/L	2.9247 ppb	10:43:37
2	U 409.014†	-2176.7	-107.1	-3.4212 ug/L	-3.4212 ppb	10:43:17
2	V 292.402†	-1372.2	53.0	0.3811 ug/L	0.3811 ppb	10:43:17
2	Zn 213.857†	935.6	63.0	0.6222 ug/L	0.6222 ppb	10:43:37
2	SiO2†	483.7	21.1	1.5052 ug/L	1.5052 ppb	10:44:13
3	Sc Radial	4845.4	4845.4	101 %		10:42:25
3	Y RADIAL	5156.5	5156.5	100.5 %		10:42:25
3	Al 396.153Radial†	-4.6	-1.3	-1.0698 ug/L	-1.0698 ppb	10:42:25
3	Ca 317.933Radial†	18.5	3.1	5.2827 ug/L	5.2827 ppb	10:42:45
3	Fe 238.204 Radial†	7.5	-2.5	-23.449 ug/L	-23.449 ppb	10:42:45
3	K 766.490 Radial†	2823.8	4.9	0.9772 ug/L	0.9772 ppb	10:42:25
3	Mg 279.077 IEC†	1.8	0.3	10.499 ug/L	10.499 ppb	10:42:45
3	Na 589.592 Radial†	-1635.8	-50.6	-16.386 ug/L	-16.386 ppb	10:42:25
3	Sr 421.552†	19.4	1.9	0.0137 ug/L	0.0137 ppb	10:42:25
3	Sc 361.383	806645.9	806645.9	99.113 %		10:43:42
3	Y 371.029	680613.7	680613.7	99.220 %		10:43:42
3	Ag 328.068†	360.6	82.2	0.3989 ug/L	0.3989 ppb	10:43:42
3	As 188.979†	-17.6	1.1	0.4757 ug/L	0.4757 ppb	10:44:02
3	B 249.677†	-274.2	241.9	5.8920 ug/L	5.8920 ppb	10:44:02
3	Ba 233.527†	6.0	4.6	0.0376 ug/L	0.0376 ppb	10:44:02
3	Be 313.107†	-4173.3	101.6	0.0408 ug/L	0.0408 ppb	10:43:42
3	Cd 226.502†	-189.9	6.0	0.0722 ug/L	0.0722 ppb	10:44:02
3	Co 228.616†	-79.5	-7.5	-0.1616 ug/L	-0.1616 ppb	10:44:02
3	Cr 267.716†	95.2	0.3	0.0047 ug/L	0.0047 ppb	10:44:02
3	Cu 324.752†	6354.4	113.2	0.3615 ug/L	0.3615 ppb	10:43:42
3	Mn 257.610†	484.0	84.0	0.0958 ug/L	0.0958 ppb	10:44:02
3	Mo 202.031†	26.1	7.0	0.5168 ug/L	0.5168 ppb	10:44:02
3	Ni 231.604†	96.0	21.7	0.5713 ug/L	0.5713 ppb	10:44:02
3	P 214.914†	223.2	-2.7	-1.7710 ug/L	-1.7710 ppb	10:44:02
3	Pb 220.353†	-71.1	-7.1	-0.9086 ug/L	-0.9086 ppb	10:44:02
3	S 181.975 Axial†	44.3	-1.8	-2.6532 ug/L	-2.6532 ppb	10:44:02
3	Sb 206.836†	38.0	5.6	2.0666 ug/L	2.0666 ppb	10:44:02
3	Se 196.026†	-31.5	-1.4	-1.0284 ug/L	-1.0284 ppb	10:44:02
3	Si 251.611†	478.0	36.4	1.2221 ug/L	1.2221 ppb	10:44:02
3	Sn 189.927†	13.0	7.0	1.3021 ug/L	1.3021 ppb	10:44:02
3	Ti 334.940†	-1271.4	104.2	0.1797 ug/L	0.1797 ppb	10:43:42
3	Tl 190.801†	-34.9	8.7	2.7887 ug/L	2.7887 ppb	10:44:02
3	U 409.014†	-2100.1	-77.9	-2.4860 ug/L	-2.4860 ppb	10:43:42
3	V 292.402†	-1377.1	17.7	0.1337 ug/L	0.1337 ppb	10:43:42
3	Zn 213.857†	942.3	90.4	0.8999 ug/L	0.8999 ppb	10:44:02
3	SiO2†	468.3	16.2	1.1503 ug/L	1.1503 ppb	10:44:18

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	812760.2	99.864	%	1.2694				1.27%
Sc Radial	4759.7	99.3	%	2.85				2.87%
Y 371.029	684878.3	99.842	%	1.2248				1.23%
Y RADIAL	5094.8	99.32	%	2.604				2.62%
Ag 328.068†	75.8	0.3701	ug/L	0.32653	0.3701	ppb	0.32653	88.23%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.4	5.0633	ug/L	5.34168	5.0633	ppb	5.34168	105.50%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.1	-1.4134	ug/L	2.02542	-1.4134	ppb	2.02542	143.30%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	275.4	6.7049	ug/L	0.70891	6.7049	ppb	0.70891	10.57%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	5.0	0.0415	ug/L	0.00663	0.0415	ppb	0.00663	15.96%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	60.7	0.0247	ug/L	0.01604	0.0247	ppb	0.01604	64.93%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-0.1	-0.2423	ug/L	4.97151	-0.2423	ppb	4.97151	>999.9%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	11.1	0.1313 ug/L	0.05146	0.1313 ppb	0.05146	39.20%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	0.7	0.0165 ug/L	0.16611	0.0165 ppb	0.16611	>999.9%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	3.6	0.0426 ug/L	0.09868	0.0426 ppb	0.09868	231.44%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	76.4	0.2433 ug/L	0.17836	0.2433 ppb	0.17836	73.30%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-1.1	-9.9050 ug/L	12.37172	-9.9050 ppb	12.37172	124.90%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	75.0	15.033 ug/L	41.3757	15.033 ppb	41.3757	275.22%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.2	7.9770 ug/L	13.32295	7.9770 ppb	13.32295	167.02%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	79.6	0.0921 ug/L	0.01001	0.0921 ppb	0.01001	10.87%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	9.1	0.6735 ug/L	0.42418	0.6735 ppb	0.42418	62.98%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	-61.6	-19.970 ug/L	15.6622	-19.970 ppb	15.6622	78.43%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	26.9	0.7090 ug/L	0.28285	0.7090 ppb	0.28285	39.90%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-7.5	-4.8205 ug/L	7.70810	-4.8205 ppb	7.70810	159.90%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-6.6	-0.8410 ug/L	1.08907	-0.8410 ppb	1.08907	129.50%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	0.7	0.9706 ug/L	4.90199	0.9706 ppb	4.90199	505.03%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	7.1	2.6212 ug/L	2.06200	2.6212 ppb	2.06200	78.67%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-0.1	-0.1069 ug/L	0.79981	-0.1069 ppb	0.79981	748.33%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	40.3	1.3522 ug/L	0.17965	1.3522 ppb	0.17965	13.29%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	5.0	0.9293 ug/L	0.45364	0.9293 ppb	0.45364	48.81%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	4.4	0.0315 ug/L	0.18244	0.0315 ppb	0.18244	579.65%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	149.3	0.2555 ug/L	0.06594	0.2555 ppb	0.06594	25.81%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	6.9	2.2062 ug/L	1.12868	2.2062 ppb	1.12868	51.16%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	-6.4	-0.2019 ug/L	4.78889	-0.2019 ppb	4.78889	>999.9%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	20.1	0.1553 ug/L	0.21582	0.1553 ppb	0.21582	139.00%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	79.2	0.7861 ug/L	0.14551	0.7861 ppb	0.14551	18.51%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	21.5	1.5202 ug/L	0.37763	1.5202 ppb	0.37763	24.84%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/14/2010 10:46:28
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4881.8	4881.8	102	%			10:48:21
1	Y RADIAL	5210.0	5210.0	101.6	%			10:48:21
1	Al 396.153Radial†	256.4	254.9	203.98	ug/L	203.98	ppb	10:48:21
1	Ca 317.933Radial†	146.0	128.1	215.78	ug/L	215.78	ppb	10:48:41
1	Fe 238.204 Radial†	24.0	13.7	128.51	ug/L	128.51	ppb	10:48:41
1	K 766.490 Radial†	3515.7	663.1	132.64	ug/L	132.64	ppb	10:48:21
1	Mg 279.077 IEC†	8.5	6.8	239.93	ug/L	239.93	ppb	10:48:41
1	Na 589.592 Radial†	-641.7	937.2	303.64	ug/L	303.64	ppb	10:48:21
1	Sr 421.552†	763.9	732.5	5.2197	ug/L	5.2197	ppb	10:48:21
1	Sc 361.383	818126.7	818126.7	100.52	%			10:49:38
1	Y 371.029	689868.0	689868.0	100.57	%			10:49:38
1	Ag 328.068†	1399.9	1111.0	5.4695	ug/L	5.4695	ppb	10:49:38
1	As 188.979†	46.6	65.2	29.413	ug/L	29.413	ppb	10:49:58
1	B 249.677†	1643.7	2153.7	52.382	ug/L	52.382	ppb	10:49:38
1	Ba 233.527†	623.8	619.0	5.1469	ug/L	5.1469	ppb	10:49:58
1	Be 313.107†	8600.7	12868.2	5.1227	ug/L	5.1227	ppb	10:49:38
1	Cd 226.502†	244.8	441.1	5.1712	ug/L	5.1712	ppb	10:49:58
1	Co 228.616†	169.4	241.3	5.2500	ug/L	5.2500	ppb	10:49:58
1	Cr 267.716†	486.6	388.3	4.5682	ug/L	4.5682	ppb	10:49:58
1	Cu 324.752†	9634.5	3286.3	10.466	ug/L	10.466	ppb	10:49:38
1	Mn 257.610†	9544.9	9090.9	10.663	ug/L	10.663	ppb	10:49:38
1	Mo 202.031†	152.9	132.8	9.8720	ug/L	9.8720	ppb	10:49:58
1	Ni 231.604†	281.4	204.8	5.3891	ug/L	5.3891	ppb	10:49:58
1	P 214.914†	451.4	221.1	139.10	ug/L	139.10	ppb	10:49:58
1	Pb 220.353†	18.7	83.2	10.710	ug/L	10.710	ppb	10:49:58
1	S 181.975 Axial†	116.6	69.5	103.70	ug/L	103.70	ppb	10:49:58
1	Sb 206.836†	58.1	25.1	9.5169	ug/L	9.5169	ppb	10:49:58
1	Se 196.026†	27.1	57.3	38.804	ug/L	38.804	ppb	10:49:58
1	Si 251.611†	3398.0	2934.4	98.817	ug/L	98.817	ppb	10:49:58
1	Sn 189.927†	61.5	55.1	10.226	ug/L	10.226	ppb	10:49:58
1	Ti 334.940†	1649.6	3028.0	5.1778	ug/L	5.1778	ppb	10:49:38
1	Tl 190.801†	27.9	71.6	22.971	ug/L	22.971	ppb	10:49:58
1	U 409.014†	-282.7	1759.8	56.177	ug/L	56.177	ppb	10:49:38
1	V 292.402†	-782.2	629.0	4.7630	ug/L	4.7630	ppb	10:49:38
1	Zn 213.857†	1720.4	851.1	8.4274	ug/L	8.4274	ppb	10:49:58
1	SiO2†	3565.2	3090.4	221.29	ug/L	221.29	ppb	10:50:54
2	Sc Radial	4889.2	4889.2	102	%			10:48:46
2	Y RADIAL	5225.5	5225.5	101.9	%			10:48:46
2	Al 396.153Radial†	245.6	244.0	195.24	ug/L	195.24	ppb	10:48:46
2	Ca 317.933Radial†	142.8	124.7	210.06	ug/L	210.06	ppb	10:49:06
2	Fe 238.204 Radial†	21.4	11.1	104.51	ug/L	104.51	ppb	10:49:06
2	K 766.490 Radial†	3646.8	786.3	157.33	ug/L	157.33	ppb	10:48:46
2	Mg 279.077 IEC†	13.8	12.0	420.84	ug/L	420.84	ppb	10:49:06
2	Na 589.592 Radial†	-636.9	942.8	305.46	ug/L	305.46	ppb	10:48:46
2	Sr 421.552†	756.0	723.6	5.1564	ug/L	5.1564	ppb	10:48:46
2	Sc 361.383	817289.1	817289.1	100.42	%			10:50:04
2	Y 371.029	689757.6	689757.6	100.55	%			10:50:04
2	Ag 328.068†	1340.4	1053.3	5.1810	ug/L	5.1810	ppb	10:50:04
2	As 188.979†	39.6	58.3	26.276	ug/L	26.276	ppb	10:50:24
2	B 249.677†	1635.6	2147.2	52.229	ug/L	52.229	ppb	10:50:04
2	Ba 233.527†	625.8	621.7	5.1695	ug/L	5.1695	ppb	10:50:24
2	Be 313.107†	8674.3	12950.2	5.1553	ug/L	5.1553	ppb	10:50:04
2	Cd 226.502†	246.2	442.7	5.1923	ug/L	5.1923	ppb	10:50:24
2	Co 228.616†	166.5	238.5	5.1901	ug/L	5.1901	ppb	10:50:24
2	Cr 267.716†	507.0	409.2	4.8145	ug/L	4.8145	ppb	10:50:24
2	Cu 324.752†	9595.7	3257.5	10.374	ug/L	10.374	ppb	10:50:04
2	Mn 257.610†	9494.4	9050.3	10.606	ug/L	10.606	ppb	10:50:04
2	Mo 202.031†	153.0	133.0	9.8844	ug/L	9.8844	ppb	10:50:24
2	Ni 231.604†	281.6	205.3	5.4002	ug/L	5.4002	ppb	10:50:24

2	P 214.914†	437.5	207.8	130.58 ug/L	130.58 ppb	10:50:24
2	Pb 220.353†	19.2	83.7	10.778 ug/L	10.778 ppb	10:50:24
2	S 181.975 Axial†	109.7	62.7	93.602 ug/L	93.602 ppb	10:50:24
2	Sb 206.836†	58.5	25.5	9.6630 ug/L	9.6630 ppb	10:50:24
2	Se 196.026†	15.0	45.3	30.654 ug/L	30.654 ppb	10:50:24
2	Si 251.611†	3371.3	2911.3	98.038 ug/L	98.038 ppb	10:50:24
2	Sn 189.927†	54.1	47.8	8.8647 ug/L	8.8647 ppb	10:50:24
2	Ti 334.940†	1670.8	3050.8	5.2018 ug/L	5.2018 ppb	10:50:04
2	Tl 190.801†	30.1	73.9	23.699 ug/L	23.699 ppb	10:50:24
2	U 409.014†	-323.3	1719.0	54.878 ug/L	54.878 ppb	10:50:04
2	V 292.402†	-711.6	698.5	5.2694 ug/L	5.2694 ppb	10:50:04
2	Zn 213.857†	1689.6	822.2	8.1415 ug/L	8.1415 ppb	10:50:24
2	SiO2†	3521.6	3050.6	218.44 ug/L	218.44 ppb	10:50:59
3	Sc Radial	4955.8	4955.8	103 %		10:49:12
3	Y RADIAL	5308.9	5308.9	103.5 %		10:49:12
3	Al 396.153Radial†	240.4	235.6	188.54 ug/L	188.54 ppb	10:49:12
3	Ca 317.933Radial†	135.6	116.0	195.30 ug/L	195.30 ppb	10:49:32
3	Fe 238.204 Radial†	22.3	11.7	109.68 ug/L	109.68 ppb	10:49:32
3	K 766.490 Radial†	3467.9	565.4	113.06 ug/L	113.06 ppb	10:49:12
3	Mg 279.077 IEC†	11.2	9.4	328.53 ug/L	328.53 ppb	10:49:32
3	Na 589.592 Radial†	-600.8	986.0	319.48 ug/L	319.48 ppb	10:49:12
3	Sr 421.552†	765.0	722.4	5.1476 ug/L	5.1476 ppb	10:49:12
3	Sc 361.383	821831.7	821831.7	100.98 %		10:50:29
3	Y 371.029	694000.9	694000.9	101.17 %		10:50:29
3	Ag 328.068†	1461.9	1166.1	5.7418 ug/L	5.7418 ppb	10:50:29
3	As 188.979†	53.8	72.1	32.488 ug/L	32.488 ppb	10:50:49
3	B 249.677†	1682.9	2185.1	53.150 ug/L	53.150 ppb	10:50:29
3	Ba 233.527†	624.7	617.2	5.1324 ug/L	5.1324 ppb	10:50:49
3	Be 313.107†	8653.4	12881.7	5.1281 ug/L	5.1281 ppb	10:50:29
3	Cd 226.502†	250.1	445.2	5.2199 ug/L	5.2199 ppb	10:50:49
3	Co 228.616†	151.0	222.2	4.8365 ug/L	4.8365 ppb	10:50:49
3	Cr 267.716†	527.4	426.6	5.0222 ug/L	5.0222 ppb	10:50:49
3	Cu 324.752†	9733.0	3340.6	10.642 ug/L	10.642 ppb	10:50:29
3	Mn 257.610†	9529.7	9033.1	10.590 ug/L	10.590 ppb	10:50:29
3	Mo 202.031†	157.8	136.9	10.175 ug/L	10.175 ppb	10:50:49
3	Ni 231.604†	279.3	201.5	5.3013 ug/L	5.3013 ppb	10:50:49
3	P 214.914†	434.4	202.4	127.07 ug/L	127.07 ppb	10:50:49
3	Pb 220.353†	6.9	71.4	9.1949 ug/L	9.1949 ppb	10:50:49
3	S 181.975 Axial†	112.5	64.9	96.894 ug/L	96.894 ppb	10:50:49
3	Sb 206.836†	57.7	24.4	9.2859 ug/L	9.2859 ppb	10:50:49
3	Se 196.026†	21.4	51.6	34.891 ug/L	34.891 ppb	10:50:49
3	Si 251.611†	3381.6	2902.9	97.752 ug/L	97.752 ppb	10:50:49
3	Sn 189.927†	60.0	53.3	9.8883 ug/L	9.8883 ppb	10:50:49
3	Ti 334.940†	1665.6	3036.5	5.1845 ug/L	5.1845 ppb	10:50:29
3	Tl 190.801†	27.4	71.1	22.791 ug/L	22.791 ppb	10:50:49
3	U 409.014†	-454.0	1591.3	50.800 ug/L	50.800 ppb	10:50:29
3	V 292.402†	-677.6	736.1	5.5343 ug/L	5.5343 ppb	10:50:29
3	Zn 213.857†	1706.0	829.2	8.2108 ug/L	8.2108 ppb	10:50:49
3	SiO2†	3498.3	3008.2	215.39 ug/L	215.39 ppb	10:51:05

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	819082.5	100.64	%	0.297				0.30%
Sc Radial	4908.9	102	%	0.9				0.83%
Y 371.029	691208.9	100.77	%	0.353				0.35%
Y RADIAL	5248.1	102.3	%	1.04				1.01%
Ag 328.068†	1110.1	5.4641	ug/L	0.28046	5.4641	ppb	0.28046	5.13%
QC value within limits for Ag 328.068 Recovery = 109.28%								
Al 396.153Radial†	244.8	195.92	ug/L	7.742	195.92	ppb	7.742	3.95%
QC value within limits for Al 396.153Radial Recovery = 97.96%								
As 188.979†	65.2	29.392	ug/L	3.1061	29.392	ppb	3.1061	10.57%
QC value within limits for As 188.979 Recovery = 97.97%								
B 249.677†	2162.0	52.587	ug/L	0.4938	52.587	ppb	0.4938	0.94%
QC value within limits for B 249.677 Recovery = 105.17%								
Ba 233.527†	619.3	5.1496	ug/L	0.01869	5.1496	ppb	0.01869	0.36%
QC value within limits for Ba 233.527 Recovery = 102.99%								
Be 313.107†	12900.0	5.1354	ug/L	0.01750	5.1354	ppb	0.01750	0.34%
QC value within limits for Be 313.107 Recovery = 102.71%								
Ca 317.933Radial†	123.0	207.05	ug/L	10.567	207.05	ppb	10.567	5.10%

QC value within limits for Ca 317.933Radial Recovery = 103.52%

Cd 226.502†	443.0	5.1945 ug/L	0.02445	5.1945 ppb	0.02445	0.47%
QC value within limits for Cd 226.502 Recovery = 103.89%						
Co 228.616†	234.0	5.0922 ug/L	0.22346	5.0922 ppb	0.22346	4.39%
QC value within limits for Co 228.616 Recovery = 101.84%						
Cr 267.716†	408.0	4.8017 ug/L	0.22727	4.8017 ppb	0.22727	4.73%
QC value within limits for Cr 267.716 Recovery = 96.03%						
Cu 324.752†	3294.8	10.494 ug/L	0.1360	10.494 ppb	0.1360	1.30%
QC value within limits for Cu 324.752 Recovery = 104.94%						
Fe 238.204 Radial†	12.1	114.23 ug/L	12.635	114.23 ppb	12.635	11.06%
QC value within limits for Fe 238.204 Radial Recovery = 114.23%						
K 766.490 Radial†	671.6	134.35 ug/L	22.181	134.35 ppb	22.181	16.51%
QC value within limits for K 766.490 Radial Recovery = 89.56%						
Mg 279.077 IEC†	9.4	329.77 ug/L	90.465	329.77 ppb	90.465	27.43%
QC value within limits for Mg 279.077 IEC Recovery = 109.92%						
Mn 257.610†	9058.1	10.620 ug/L	0.0385	10.620 ppb	0.0385	0.36%
QC value within limits for Mn 257.610 Recovery = 106.20%						
Mo 202.031†	134.3	9.9772 ug/L	0.17155	9.9772 ppb	0.17155	1.72%
QC value within limits for Mo 202.031 Recovery = 99.77%						
Na 589.592 Radial†	955.3	309.53 ug/L	8.667	309.53 ppb	8.667	2.80%
QC value within limits for Na 589.592 Radial Recovery = 103.18%						
Ni 231.604†	203.9	5.3635 ug/L	0.05419	5.3635 ppb	0.05419	1.01%
QC value within limits for Ni 231.604 Recovery = 107.27%						
P 214.914†	210.4	132.25 ug/L	6.182	132.25 ppb	6.182	4.67%
QC value within limits for P 214.914 Recovery = 88.17%						
Pb 220.353†	79.4	10.228 ug/L	0.8952	10.228 ppb	0.8952	8.75%
QC value within limits for Pb 220.353 Recovery = 102.28%						
S 181.975 Axial†	65.7	98.065 ug/L	5.1497	98.065 ppb	5.1497	5.25%
QC value within limits for S 181.975 Axial Recovery = 98.07%						
Sb 206.836†	25.0	9.4886 ug/L	0.19010	9.4886 ppb	0.19010	2.00%
QC value within limits for Sb 206.836 Recovery = 94.89%						
Se 196.026†	51.4	34.783 ug/L	4.0762	34.783 ppb	4.0762	11.72%
QC value within limits for Se 196.026 Recovery = 115.94%						
Si 251.611†	2916.2	98.202 ug/L	0.5515	98.202 ppb	0.5515	0.56%
QC value within limits for Si 251.611 Recovery = 98.20%						
Sn 189.927†	52.1	9.6596 ug/L	0.70884	9.6596 ppb	0.70884	7.34%
QC value within limits for Sn 189.927 Recovery = 96.60%						
Sr 421.552†	726.2	5.1746 ug/L	0.03928	5.1746 ppb	0.03928	0.76%
QC value within limits for Sr 421.552 Recovery = 103.49%						
Ti 334.940†	3038.5	5.1880 ug/L	0.01240	5.1880 ppb	0.01240	0.24%
QC value within limits for Ti 334.940 Recovery = 103.76%						
Tl 190.801†	72.2	23.154 ug/L	0.4809	23.154 ppb	0.4809	2.08%
QC value within limits for Tl 190.801 Recovery = 115.77%						
U 409.014†	1690.0	53.952 ug/L	2.8057	53.952 ppb	2.8057	5.20%
QC value within limits for U 409.014 Recovery = 107.90%						
V 292.402†	687.9	5.1889 ug/L	0.39186	5.1889 ppb	0.39186	7.55%
QC value within limits for V 292.402 Recovery = 103.78%						
Zn 213.857†	834.2	8.2599 ug/L	0.14914	8.2599 ppb	0.14914	1.81%
QC value within limits for Zn 213.857 Recovery = 82.60%						
SiO2†	3049.7	218.37 ug/L	2.952	218.37 ppb	2.952	1.35%
QC value within limits for SiO2 Recovery = 102.52%						

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 1/14/2010 10:53:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4366.7	4366.7	91.1	%			10:55:14
1	Y RADIAL	4625.6	4625.6	90.18	%			10:55:14
1	Al 396.153Radial†	574461.5	630327.7	505690	ug/L	505690	ppb	10:55:09
1	Ca 317.933Radial†	256832.4	281792.6	474520	ug/L	474520	ppb	10:55:09
1	Fe 238.204 Radial†	18550.9	20345.0	191260	ug/L	191260	ppb	10:55:14
1	K 766.490 Radial†	2355.5	-202.9	-199.36	ug/L	-199.36	ppb	10:55:09
1	Mg 279.077 IEC†	12742.9	13980.5	490610	ug/L	490610	ppb	10:55:14
1	Na 589.592 Radial†	-1387.6	44.4	14.384	ug/L	14.384	ppb	10:55:14
1	Sr 421.552†	506.2	538.2	0.2927	ug/L	0.2927	ppb	10:55:14
1	Sc 361.383	698776.5	698776.5	85.859	%			10:55:42
1	Y 371.029	575182.3	575182.3	83.851	%			10:55:42
1	Ag 328.068†	-9042.5	-10813.4	2.4098	ug/L	2.4098	ppb	10:55:42
1	As 188.979†	-82.7	-77.5	9.7499	ug/L	9.7499	ppb	10:56:02
1	B 249.677†	313.5	883.6	-9.5557	ug/L	-9.5557	ppb	10:55:42
1	Ba 233.527†	-474.0	-553.5	1.2676	ug/L	1.2676	ppb	10:56:02
1	Be 313.107†	-3983.9	-327.9	-0.1843	ug/L	-0.1843	ppb	10:55:42
1	Cd 226.502†	1230.3	1630.5	-0.6369	ug/L	-0.6369	ppb	10:56:02
1	Co 228.616†	-20.1	49.2	-1.6919	ug/L	-1.6919	ppb	10:56:02
1	Cr 267.716†	-58.6	-164.0	1.7952	ug/L	1.7952	ppb	10:56:02
1	Cu 324.752†	3675.8	-2016.8	3.6692	ug/L	3.6692	ppb	10:55:42
1	Mn 257.610†	848.2	583.6	-0.4937	ug/L	-0.4937	ppb	10:55:42
1	Mo 202.031†	-217.1	-272.2	0.2876	ug/L	0.2876	ppb	10:56:02
1	Ni 231.604†	207.8	166.9	4.3920	ug/L	4.3920	ppb	10:56:02
1	P 214.914†	160.8	-40.6	-53.371	ug/L	-53.371	ppb	10:56:02
1	Pb 220.353†	-756.7	-816.7	-5.9433	ug/L	-5.9433	ppb	10:56:02
1	S 181.975 Axial†	68.0	32.8	-45.830	ug/L	-45.830	ppb	10:56:02
1	Sb 206.836†	77.6	57.6	10.694	ug/L	10.694	ppb	10:56:02
1	Se 196.026†	-849.2	-958.7	11.376	ug/L	11.376	ppb	10:56:02
1	Si 251.611†	477.6	110.4	3.9716	ug/L	3.9716	ppb	10:56:02
1	Sn 189.927†	-367.5	-434.2	-4.9656	ug/L	-4.9656	ppb	10:56:02
1	Ti 334.940†	-13124.2	-13898.7	-0.2982	ug/L	-0.2982	ppb	10:55:42
1	Tl 190.801†	-79.4	-48.6	-15.780	ug/L	-15.780	ppb	10:56:02
1	U 409.014†	-983.1	895.9	6.8149	ug/L	6.8149	ppb	10:55:42
1	V 292.402†	874.5	2425.7	-1.0820	ug/L	-1.0820	ppb	10:56:02
1	Zn 213.857†	2891.5	2507.5	6.4355	ug/L	6.4355	ppb	10:56:02
1	SiO2†	475.5	97.5	7.5434	ug/L	7.5434	ppb	10:56:58
2	Sc Radial	4319.9	4319.9	90.2	%			10:55:25
2	Y RADIAL	4632.0	4632.0	90.30	%			10:55:25
2	Al 396.153Radial†	572941.8	635472.8	509820	ug/L	509820	ppb	10:55:20
2	Ca 317.933Radial†	256332.4	284291.9	478730	ug/L	478730	ppb	10:55:20
2	Fe 238.204 Radial†	18371.7	20366.8	191460	ug/L	191460	ppb	10:55:25
2	K 766.490 Radial†	2331.6	-201.3	-200.46	ug/L	-200.46	ppb	10:55:20
2	Mg 279.077 IEC†	12673.0	14054.5	493210	ug/L	493210	ppb	10:55:25
2	Na 589.592 Radial†	-1411.7	1.2	0.3903	ug/L	0.3903	ppb	10:55:25
2	Sr 421.552†	480.3	515.5	0.0999	ug/L	0.0999	ppb	10:55:25
2	Sc 361.383	703297.6	703297.6	86.414	%			10:56:07
2	Y 371.029	577230.9	577230.9	84.149	%			10:56:07
2	Ag 328.068†	-9262.6	-11000.4	1.5012	ug/L	1.5012	ppb	10:56:07
2	As 188.979†	-74.9	-67.8	14.163	ug/L	14.163	ppb	10:56:27
2	B 249.677†	215.8	768.2	-12.398	ug/L	-12.398	ppb	10:56:07
2	Ba 233.527†	-449.7	-521.9	1.5370	ug/L	1.5370	ppb	10:56:27
2	Be 313.107†	-4076.4	-405.0	-0.2146	ug/L	-0.2146	ppb	10:56:07
2	Cd 226.502†	1236.4	1628.4	-0.6835	ug/L	-0.6835	ppb	10:56:27
2	Co 228.616†	-12.5	58.3	-1.4914	ug/L	-1.4914	ppb	10:56:27
2	Cr 267.716†	-55.5	-159.9	1.8483	ug/L	1.8483	ppb	10:56:27
2	Cu 324.752†	3698.5	-2018.1	3.6759	ug/L	3.6759	ppb	10:56:07
2	Mn 257.610†	1064.3	827.3	-0.2938	ug/L	-0.2938	ppb	10:56:07
2	Mo 202.031†	-180.8	-228.6	3.5929	ug/L	3.5929	ppb	10:56:27
2	Ni 231.604†	185.5	139.5	3.6715	ug/L	3.6715	ppb	10:56:27

2	P 214.914†	185.9	-12.8	-34.707 ug/L	-34.707 ppb	10:56:27
2	Pb 220.353†	-766.8	-822.8	-5.7744 ug/L	-5.7744 ppb	10:56:27
2	S 181.975 Axial†	72.4	37.4	-39.791 ug/L	-39.791 ppb	10:56:27
2	Sb 206.836†	45.2	19.6	-3.2091 ug/L	-3.2091 ppb	10:56:27
2	Se 196.026†	-860.9	-965.9	7.4821 ug/L	7.4821 ppb	10:56:27
2	Si 251.611†	479.3	108.8	3.8760 ug/L	3.8760 ppb	10:56:27
2	Sn 189.927†	-362.3	-425.4	-2.6994 ug/L	-2.6994 ppb	10:56:27
2	Ti 334.940†	-13134.5	-13812.4	0.2021 ug/L	0.2021 ppb	10:56:07
2	Tl 190.801†	-85.9	-55.5	-17.994 ug/L	-17.994 ppb	10:56:27
2	U 409.014†	-985.7	900.3	6.9290 ug/L	6.9290 ppb	10:56:07
2	V 292.402†	916.7	2468.0	-0.7111 ug/L	-0.7111 ppb	10:56:27
2	Zn 213.857†	2867.9	2458.5	5.9318 ug/L	5.9318 ppb	10:56:27
2	SiO2†	444.3	58.0	4.6197 ug/L	4.6197 ppb	10:57:03
3	Sc Radial	4408.3	4408.3	92.0 %		10:55:35
3	Y RADIAL	4696.8	4696.8	91.57 %		10:55:35
3	Al 396.153Radial†	579777.9	630148.8	505540 ug/L	505540 ppb	10:55:30
3	Ca 317.933Radial†	258804.1	281272.3	473650 ug/L	473650 ppb	10:55:30
3	Fe 238.204 Radial†	18540.1	20140.9	189340 ug/L	189340 ppb	10:55:35
3	K 766.490 Radial†	2323.8	-261.8	-210.87 ug/L	-210.87 ppb	10:55:30
3	Mg 279.077 IEC†	12823.0	13935.5	489030 ug/L	489030 ppb	10:55:35
3	Na 589.592 Radial†	-1415.0	29.0	9.3941 ug/L	9.3941 ppb	10:55:35
3	Sr 421.552†	517.5	545.2	0.3495 ug/L	0.3495 ppb	10:55:35
3	Sc 361.383	705583.6	705583.6	86.695 %		10:56:33
3	Y 371.029	579570.7	579570.7	84.490 %		10:56:33
3	Ag 328.068†	-9249.1	-10950.1	1.1250 ug/L	1.1250 ppb	10:56:33
3	As 188.979†	-66.7	-58.1	18.048 ug/L	18.048 ppb	10:56:53
3	B 249.677†	403.6	984.1	-6.7994 ug/L	-6.7994 ppb	10:56:33
3	Ba 233.527†	-463.9	-536.6	1.3493 ug/L	1.3493 ppb	10:56:53
3	Be 313.107†	-4109.2	-427.6	-0.2238 ug/L	-0.2238 ppb	10:56:33
3	Cd 226.502†	1235.8	1623.1	-0.5265 ug/L	-0.5265 ppb	10:56:53
3	Co 228.616†	-7.6	63.9	-1.3446 ug/L	-1.3446 ppb	10:56:53
3	Cr 267.716†	-88.9	-198.3	1.3516 ug/L	1.3516 ppb	10:56:53
3	Cu 324.752†	3729.8	-1995.8	3.6328 ug/L	3.6328 ppb	10:56:33
3	Mn 257.610†	861.2	589.0	-0.6122 ug/L	-0.6122 ppb	10:56:33
3	Mo 202.031†	-214.2	-266.3	0.5636 ug/L	0.5636 ppb	10:56:53
3	Ni 231.604†	150.1	98.0	2.5785 ug/L	2.5785 ppb	10:56:53
3	P 214.914†	182.3	-17.5	-37.132 ug/L	-37.132 ppb	10:56:53
3	Pb 220.353†	-749.9	-800.4	-3.7086 ug/L	-3.7086 ppb	10:56:53
3	S 181.975 Axial†	62.5	25.6	-56.542 ug/L	-56.542 ppb	10:56:53
3	Sb 206.836†	66.9	44.4	5.8282 ug/L	5.8282 ppb	10:56:53
3	Se 196.026†	-883.0	-988.1	-14.597 ug/L	-14.597 ppb	10:56:53
3	Si 251.611†	504.3	135.8	4.8235 ug/L	4.8235 ppb	10:56:53
3	Sn 189.927†	-369.5	-432.3	-4.7871 ug/L	-4.7871 ppb	10:56:53
3	Ti 334.940†	-13209.7	-13849.9	-0.2044 ug/L	-0.2044 ppb	10:56:33
3	Tl 190.801†	-62.8	-28.6	-9.3744 ug/L	-9.3744 ppb	10:56:53
3	U 409.014†	-899.6	1003.3	10.462 ug/L	10.462 ppb	10:56:33
3	V 292.402†	852.2	2390.1	-1.0771 ug/L	-1.0771 ppb	10:56:53
3	Zn 213.857†	2896.0	2480.1	6.3604 ug/L	6.3604 ppb	10:56:53
3	SiO2†	480.4	97.9	7.5578 ug/L	7.5578 ppb	10:57:08

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	702552.5	86.323	%	0.4256				0.49%
Sc Radial	4365.0	91.1	%	0.92				1.01%
Y 371.029	577328.0	84.163	%	0.3201				0.38%
Y RADIAL	4651.5	90.68	%	0.768				0.85%
Ag 328.068†	-10921.3	1.6787	ug/L	0.66053	1.6787	ppb	0.66053	39.35%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	631983.1	507020	ug/L	2425.5	507020	ppb	2425.5	0.48%
QC value within limits for Al 396.153Radial Recovery = 101.40%								
As 188.979†	-67.8	13.987	ug/L	4.1518	13.987	ppb	4.1518	29.68%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	878.7	-9.5844	ug/L	2.79937	-9.5844	ppb	2.79937	29.21%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-537.3	1.3847	ug/L	0.13812	1.3847	ppb	0.13812	9.98%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-386.8	-0.2076	ug/L	0.02063	-0.2076	ppb	0.02063	9.94%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	282452.3	475640	ug/L	2718.4	475640	ppb	2718.4	0.57%

QC value within limits for Ca 317.933Radial Recovery = 95.13%

Cd 226.502†	1627.3	-0.6156 ug/L	0.08065	-0.6156 ppb	0.08065	13.10%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	57.1	-1.5093 ug/L	0.17432	-1.5093 ppb	0.17432	11.55%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-174.1	1.6651 ug/L	0.27273	1.6651 ppb	0.27273	16.38%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-2010.2	3.6593 ug/L	0.02318	3.6593 ppb	0.02318	0.63%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	20284.2	190690 ug/L	1171.5	190690 ppb	1171.5	0.61%
QC value within limits for Fe 238.204 Radial Recovery = 95.34%						
K 766.490 Radial†	-222.0	-203.56 ug/L	6.355	-203.56 ppb	6.355	3.12%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	13990.2	490950 ug/L	2108.6	490950 ppb	2108.6	0.43%
QC value within limits for Mg 279.077 IEC Recovery = 98.19%						
Mn 257.610†	666.6	-0.4666 ug/L	0.16090	-0.4666 ppb	0.16090	34.48%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	-255.7	1.4814 ug/L	1.83384	1.4814 ppb	1.83384	123.79%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	24.9	8.0560 ug/L	7.09195	8.0560 ppb	7.09195	88.03%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	134.8	3.5473 ug/L	0.91310	3.5473 ppb	0.91310	25.74%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-23.7	-41.737 ug/L	10.1485	-41.737 ppb	10.1485	24.32%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-813.3	-5.1421 ug/L	1.24434	-5.1421 ppb	1.24434	24.20%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	31.9	-47.388 ug/L	8.4834	-47.388 ppb	8.4834	17.90%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	40.5	4.4378 ug/L	7.05519	4.4378 ppb	7.05519	158.98%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	-970.9	1.4203 ug/L	14.00713	1.4203 ppb	14.00713	986.19%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	118.3	4.2237 ug/L	0.52167	4.2237 ppb	0.52167	12.35%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-430.6	-4.1507 ug/L	1.26003	-4.1507 ppb	1.26003	30.36%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	533.0	0.2474 ug/L	0.13080	0.2474 ppb	0.13080	52.88%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	-13853.7	-0.1002 ug/L	0.26592	-0.1002 ppb	0.26592	265.45%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	-44.2	-14.383 ug/L	4.4765	-14.383 ppb	4.4765	31.12%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	933.2	8.0686 ug/L	2.07336	8.0686 ppb	2.07336	25.70%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	2427.9	-0.9567 ug/L	0.21274	-0.9567 ppb	0.21274	22.24%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	2482.0	6.2425 ug/L	0.27174	6.2425 ppb	0.27174	4.35%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	84.5	6.5736 ug/L	1.69219	6.5736 ppb	1.69219	25.74%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 1/14/2010 10:59:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4460.9	4460.9	93.1	%			11:01:17
1	Y RADIAL	4775.6	4775.6	93.10	%			11:01:17
1	Al 396.153Radial†	585220.9	628572.4	504250	ug/L	504250	ppb	11:01:12
1	Ca 317.933Radial†	262712.9	282157.3	475140	ug/L	475140	ppb	11:01:12
1	Fe 238.204 Radial†	19382.3	20808.1	195620	ug/L	195620	ppb	11:01:17
1	K 766.490 Radial†	28032.5	27321.5	5311.7	ug/L	5311.7	ppb	11:01:12
1	Mg 279.077 IEC†	13268.2	14249.5	500050	ug/L	500050	ppb	11:01:17
1	Na 589.592 Radial†	15710.1	18440.7	5974.9	ug/L	5974.9	ppb	11:01:17
1	Sr 421.552†	69506.1	74637.3	528.46	ug/L	528.46	ppb	11:01:12
1	Sc 361.383	707414.6	707414.6	86.920	%			11:01:45
1	Y 371.029	579258.3	579258.3	84.445	%			11:01:45
1	Ag 328.068†	39878.4	45597.7	282.60	ug/L	282.60	ppb	11:01:45
1	As 188.979†	927.4	1085.8	537.65	ug/L	537.65	ppb	11:02:05
1	B 249.677†	19301.2	22724.1	520.00	ug/L	520.00	ppb	11:01:45
1	Ba 233.527†	52370.3	60249.5	506.70	ug/L	506.70	ppb	11:01:45
1	Be 313.107†	543489.6	629585.6	251.19	ug/L	251.19	ppb	11:01:45
1	Cd 226.502†	36003.4	41618.7	467.98	ug/L	467.98	ppb	11:02:05
1	Co 228.616†	18289.4	21114.3	455.83	ug/L	455.83	ppb	11:02:05
1	Cr 267.716†	36065.7	41397.1	492.73	ug/L	492.73	ppb	11:01:45
1	Cu 324.752†	156888.0	174198.3	566.15	ug/L	566.15	ppb	11:01:45
1	Mn 257.610†	364441.9	418878.5	490.06	ug/L	490.06	ppb	11:01:45
1	Mo 202.031†	5707.5	6547.1	506.83	ug/L	506.83	ppb	11:02:05
1	Ni 231.604†	15193.2	17404.4	457.88	ug/L	457.88	ppb	11:02:05
1	P 214.914†	3694.0	4022.0	2428.6	ug/L	2428.6	ppb	11:02:05
1	Pb 220.353†	2418.8	2847.4	463.61	ug/L	463.61	ppb	11:02:05
1	S 181.975 Axial†	1670.9	1875.8	2705.0	ug/L	2705.0	ppb	11:02:05
1	Sb 206.836†	1326.4	1493.3	553.76	ug/L	553.76	ppb	11:02:05
1	Se 196.026†	2481.9	2885.7	2598.2	ug/L	2598.2	ppb	11:02:05
1	Si 251.611†	138667.6	159088.3	5357.9	ug/L	5357.9	ppb	11:01:45
1	Sn 189.927†	1989.0	2282.1	497.54	ug/L	497.54	ppb	11:02:05
1	Ti 334.940†	251423.8	290644.8	521.07	ug/L	521.07	ppb	11:01:45
1	Tl 190.801†	1200.8	1425.4	459.43	ug/L	459.43	ppb	11:02:05
1	U 409.014†	12896.9	16878.5	515.66	ug/L	515.66	ppb	11:01:45
1	V 292.402†	62529.6	73346.2	517.48	ug/L	517.48	ppb	11:01:45
1	Zn 213.857†	46968.8	53176.3	507.70	ug/L	507.70	ppb	11:01:45
1	SiO2†	140558.6	161253.5	11547	ug/L	11547	ppb	11:03:02
2	Sc Radial	4360.5	4360.5	91.0	%			11:01:27
2	Y RADIAL	4660.4	4660.4	90.86	%			11:01:27
2	Al 396.153Radial†	589026.8	647223.0	519220	ug/L	519220	ppb	11:01:22
2	Ca 317.933Radial†	264513.5	290631.0	489410	ug/L	489410	ppb	11:01:22
2	Fe 238.204 Radial†	18934.4	20795.2	195500	ug/L	195500	ppb	11:01:27
2	K 766.490 Radial†	28175.2	28171.4	5477.2	ug/L	5477.2	ppb	11:01:22
2	Mg 279.077 IEC†	12927.9	14203.6	498440	ug/L	498440	ppb	11:01:27
2	Na 589.592 Radial†	15140.5	18203.2	5897.9	ug/L	5897.9	ppb	11:01:27
2	Sr 421.552†	69837.7	76720.1	543.20	ug/L	543.20	ppb	11:01:22
2	Sc 361.383	717232.5	717232.5	88.127	%			11:02:11
2	Y 371.029	587543.3	587543.3	85.653	%			11:02:11
2	Ag 328.068†	40543.4	45724.3	282.99	ug/L	282.99	ppb	11:02:11
2	As 188.979†	921.2	1064.2	527.92	ug/L	527.92	ppb	11:02:31
2	B 249.677†	19451.9	22591.3	516.80	ug/L	516.80	ppb	11:02:11
2	Ba 233.527†	53020.9	60163.0	505.98	ug/L	505.98	ppb	11:02:11
2	Be 313.107†	552046.9	630736.8	251.64	ug/L	251.64	ppb	11:02:11
2	Cd 226.502†	35940.8	40980.7	460.51	ug/L	460.51	ppb	11:02:31
2	Co 228.616†	18294.9	20832.4	449.69	ug/L	449.69	ppb	11:02:31
2	Cr 267.716†	36631.5	41471.1	493.60	ug/L	493.60	ppb	11:02:11
2	Cu 324.752†	159307.1	174472.6	567.01	ug/L	567.01	ppb	11:02:11
2	Mn 257.610†	369695.0	419099.9	490.37	ug/L	490.37	ppb	11:02:11
2	Mo 202.031†	5685.2	6431.8	498.44	ug/L	498.44	ppb	11:02:31
2	Ni 231.604†	15200.8	17173.7	451.81	ug/L	451.81	ppb	11:02:31

2	P 214.914†	3686.0	3954.8	2389.3 ug/L	2389.3 ppb	11:02:31
2	Pb 220.353†	2411.9	2801.5	461.18 ug/L	461.18 ppb	11:02:31
2	S 181.975 Axial†	1678.3	1857.9	2675.5 ug/L	2675.5 ppb	11:02:31
2	Sb 206.836†	1344.2	1492.6	552.84 ug/L	552.84 ppb	11:02:31
2	Se 196.026†	2474.0	2837.6	2566.4 ug/L	2566.4 ppb	11:02:31
2	Si 251.611†	140703.5	159214.6	5362.3 ug/L	5362.3 ppb	11:02:11
2	Sn 189.927†	1990.7	2252.8	494.29 ug/L	494.29 ppb	11:02:31
2	Ti 334.940†	255073.5	290826.7	523.43 ug/L	523.43 ppb	11:02:11
2	Tl 190.801†	1208.7	1415.4	456.28 ug/L	456.28 ppb	11:02:31
2	U 409.014†	13231.4	17055.0	521.31 ug/L	521.31 ppb	11:02:11
2	V 292.402†	63547.3	73516.2	518.58 ug/L	518.58 ppb	11:02:11
2	Zn 213.857†	47600.3	53153.2	507.52 ug/L	507.52 ppb	11:02:11
2	SiO2†	139548.6	157893.8	11307 ug/L	11307 ppb	11:03:07
3	Sc Radial	4483.3	4483.3	93.6 %		11:01:37
3	Y RADIAL	4768.3	4768.3	92.96 %		11:01:37
3	Al 396.153Radial†	578241.7	617976.6	495750 ug/L	495750 ppb	11:01:32
3	Ca 317.933Radial†	259443.2	277254.7	466880 ug/L	466880 ppb	11:01:32
3	Fe 238.204 Radial†	19333.8	20652.3	194160 ug/L	194160 ppb	11:01:37
3	K 766.490 Radial†	27684.1	26798.9	5209.8 ug/L	5209.8 ppb	11:01:32
3	Mg 279.077 IEC†	13193.1	14098.1	494740 ug/L	494740 ppb	11:01:37
3	Na 589.592 Radial†	15495.3	18126.9	5873.2 ug/L	5873.2 ppb	11:01:37
3	Sr 421.552†	68428.1	73112.7	517.65 ug/L	517.65 ppb	11:01:32
3	Sc 361.383	714085.4	714085.4	87.740 %		11:02:37
3	Y 371.029	586060.1	586060.1	85.436 %		11:02:37
3	Ag 328.068†	40371.8	45731.4	282.92 ug/L	282.92 ppb	11:02:37
3	As 188.979†	925.5	1073.6	531.85 ug/L	531.85 ppb	11:02:57
3	B 249.677†	19408.9	22639.4	518.18 ug/L	518.18 ppb	11:02:37
3	Ba 233.527†	52966.5	60366.1	507.63 ug/L	507.63 ppb	11:02:37
3	Be 313.107†	552868.3	634433.7	253.11 ug/L	253.11 ppb	11:02:37
3	Cd 226.502†	36232.3	41492.7	466.65 ug/L	466.65 ppb	11:02:57
3	Co 228.616†	18383.5	21025.0	453.90 ug/L	453.90 ppb	11:02:57
3	Cr 267.716†	36579.0	41594.5	495.03 ug/L	495.03 ppb	11:02:37
3	Cu 324.752†	158681.3	174556.0	567.21 ug/L	567.21 ppb	11:02:37
3	Mn 257.610†	369046.1	420209.2	491.69 ug/L	491.69 ppb	11:02:37
3	Mo 202.031†	5711.2	6489.9	502.38 ug/L	502.38 ppb	11:02:57
3	Ni 231.604†	15311.6	17376.0	457.13 ug/L	457.13 ppb	11:02:57
3	P 214.914†	3733.5	4027.3	2430.8 ug/L	2430.8 ppb	11:02:57
3	Pb 220.353†	2456.4	2864.2	463.92 ug/L	463.92 ppb	11:02:57
3	S 181.975 Axial†	1674.7	1862.2	2686.2 ug/L	2686.2 ppb	11:02:57
3	Sb 206.836†	1316.4	1467.6	544.54 ug/L	544.54 ppb	11:02:57
3	Se 196.026†	2505.0	2885.4	2592.7 ug/L	2592.7 ppb	11:02:57
3	Si 251.611†	140307.7	159467.2	5370.8 ug/L	5370.8 ppb	11:02:37
3	Sn 189.927†	2022.0	2298.4	499.27 ug/L	499.27 ppb	11:02:57
3	Ti 334.940†	254318.1	291241.3	521.42 ug/L	521.42 ppb	11:02:37
3	Tl 190.801†	1209.4	1422.3	458.46 ug/L	458.46 ppb	11:02:57
3	U 409.014†	12930.2	16777.9	512.61 ug/L	512.61 ppb	11:02:37
3	V 292.402†	63542.6	73828.6	521.00 ug/L	521.00 ppb	11:02:37
3	Zn 213.857†	47567.1	53353.4	509.61 ug/L	509.61 ppb	11:02:37
3	SiO2†	140776.2	159990.8	11457 ug/L	11457 ppb	11:03:13

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	712910.8	87.596	%	0.6160				0.70%
Sc Radial	4434.9	92.6	%	1.36				1.47%
Y 371.029	584287.3	85.178	%	0.6440				0.76%
Y RADIAL	4734.8	92.31	%	1.257				1.36%
Ag 328.068†	45684.5	282.84	ug/L	0.206	282.84	ppb	0.206	0.07%
QC value within limits for Ag 328.068 Recovery = 113.14%								
Al 396.153Radial†	631257.3	506410	ug/L	11879.1	506410	ppb	11879.1	2.35%
QC value within limits for Al 396.153Radial Recovery = 101.28%								
As 188.979†	1074.5	532.48	ug/L	4.895	532.48	ppb	4.895	0.92%
QC value within limits for As 188.979 Recovery = 106.50%								
B 249.677†	22651.6	518.33	ug/L	1.603	518.33	ppb	1.603	0.31%
QC value within limits for B 249.677 Recovery = 103.67%								
Ba 233.527†	60259.5	506.77	ug/L	0.826	506.77	ppb	0.826	0.16%
QC value within limits for Ba 233.527 Recovery = 101.35%								
Be 313.107†	631585.4	251.98	ug/L	1.007	251.98	ppb	1.007	0.40%
QC value within limits for Be 313.107 Recovery = 100.79%								
Ca 317.933Radial†	283347.7	477140	ug/L	11395.5	477140	ppb	11395.5	2.39%

QC value within limits for Ca 317.933Radial Recovery = 95.43%

Cd 226.502†	41364.0	465.05 ug/L	3.984	465.05 ppb	3.984	0.86%
QC value within limits for Cd 226.502 Recovery = 93.01%						
Co 228.616†	20990.6	453.14 ug/L	3.140	453.14 ppb	3.140	0.69%
QC value within limits for Co 228.616 Recovery = 90.63%						
Cr 267.716†	41487.6	493.79 ug/L	1.165	493.79 ppb	1.165	0.24%
QC value within limits for Cr 267.716 Recovery = 98.76%						
Cu 324.752†	174409.0	566.79 ug/L	0.567	566.79 ppb	0.567	0.10%
QC value within limits for Cu 324.752 Recovery = 113.36%						
Fe 238.204 Radial†	20751.9	195100 ug/L	812.5	195100 ppb	812.5	0.42%
QC value within limits for Fe 238.204 Radial Recovery = 97.55%						
K 766.490 Radial†	27430.6	5332.9 ug/L	134.97	5332.9 ppb	134.97	2.53%
QC value within limits for K 766.490 Radial Recovery = 106.66%						
Mg 279.077 IEC†	14183.7	497740 ug/L	2724.5	497740 ppb	2724.5	0.55%
QC value within limits for Mg 279.077 IEC Recovery = 99.55%						
Mn 257.610†	419395.8	490.71 ug/L	0.867	490.71 ppb	0.867	0.18%
QC value within limits for Mn 257.610 Recovery = 98.14%						
Mo 202.031†	6489.6	502.55 ug/L	4.199	502.55 ppb	4.199	0.84%
QC value within limits for Mo 202.031 Recovery = 100.51%						
Na 589.592 Radial†	18257.0	5915.4 ug/L	53.02	5915.4 ppb	53.02	0.90%
QC value within limits for Na 589.592 Radial Recovery = 118.31%						
Ni 231.604†	17318.0	455.61 ug/L	3.309	455.61 ppb	3.309	0.73%
QC value within limits for Ni 231.604 Recovery = 91.12%						
P 214.914†	4001.4	2416.2 ug/L	23.36	2416.2 ppb	23.36	0.97%
QC value within limits for P 214.914 Recovery = 96.65%						
Pb 220.353†	2837.7	462.91 ug/L	1.499	462.91 ppb	1.499	0.32%
QC value within limits for Pb 220.353 Recovery = 92.58%						
S 181.975 Axial†	1865.3	2688.9 ug/L	14.94	2688.9 ppb	14.94	0.56%
QC value within limits for S 181.975 Axial Recovery = 107.56%						
Sb 206.836†	1484.5	550.38 ug/L	5.077	550.38 ppb	5.077	0.92%
QC value within limits for Sb 206.836 Recovery = 110.08%						
Se 196.026†	2869.6	2585.8 ug/L	17.00	2585.8 ppb	17.00	0.66%
QC value within limits for Se 196.026 Recovery = 103.43%						
Si 251.611†	159256.7	5363.7 ug/L	6.52	5363.7 ppb	6.52	0.12%
QC value within limits for Si 251.611 Recovery = 107.27%						
Sn 189.927†	2277.8	497.03 ug/L	2.533	497.03 ppb	2.533	0.51%
QC value within limits for Sn 189.927 Recovery = 99.41%						
Sr 421.552†	74823.4	529.77 ug/L	12.823	529.77 ppb	12.823	2.42%
QC value within limits for Sr 421.552 Recovery = 105.95%						
Ti 334.940†	290904.3	521.97 ug/L	1.270	521.97 ppb	1.270	0.24%
QC value within limits for Ti 334.940 Recovery = 104.39%						
Tl 190.801†	1421.0	458.06 ug/L	1.612	458.06 ppb	1.612	0.35%
QC value within limits for Tl 190.801 Recovery = 91.61%						
U 409.014†	16903.8	516.53 ug/L	4.414	516.53 ppb	4.414	0.85%
QC value within limits for U 409.014 Recovery = 103.31%						
V 292.402†	73563.7	519.02 ug/L	1.802	519.02 ppb	1.802	0.35%
QC value within limits for V 292.402 Recovery = 103.80%						
Zn 213.857†	53227.6	508.27 ug/L	1.159	508.27 ppb	1.159	0.23%
QC value within limits for Zn 213.857 Recovery = 101.65%						
SiO2†	159712.7	11437 ug/L	121.5	11437 ppb	121.5	1.06%
QC value within limits for SiO2 Recovery = 106.94%						

All analyte(s) passed QC.

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 1/14/2010 11:05:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Rep1#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4325.4	4325.4	90.3	%			11:07:20
1	Y RADIAL	4609.2	4609.2	89.86	%			11:07:20
1	Al 396.153Radial†	559046.9	619270.0	496820	ug/L	496820	ppb	11:07:15
1	Ca 317.933Radial†	249788.9	276680.8	465920	ug/L	465920	ppb	11:07:15
1	Fe 238.204 Radial†	41978.5	46490.5	437040	ug/L	437040	ppb	11:07:20
1	K 766.490 Radial†	2824.3	341.1	-287.48	ug/L	-287.48	ppb	11:07:15
1	Mg 279.077 IEC†	12241.7	13558.9	475550	ug/L	475550	ppb	11:07:20
1	Na 589.592 Radial†	1427323.1	1582639.6	512780	ug/L	512780	ppb	11:07:15
1	Sr 421.552†	724.6	785.4	2.1193	ug/L	2.1193	ppb	11:07:20
1	Sc 361.383	690936.1	690936.1	84.896	%			11:07:48
1	Y 371.029	567787.9	567787.9	82.773	%			11:07:48
1	Ag 328.068†	-21540.8	-25654.9	-2.9059	ug/L	-2.9059	ppb	11:07:48
1	As 188.979†	-193.5	-209.1	8.1587	ug/L	8.1587	ppb	11:08:08
1	B 249.677†	1388.5	2154.1	-18.563	ug/L	-18.563	ppb	11:07:48
1	Ba 233.527†	-1359.0	-1602.3	0.0791	ug/L	0.0791	ppb	11:08:08
1	Be 313.107†	-10412.7	-7953.1	-3.2138	ug/L	-3.2138	ppb	11:07:48
1	Cd 226.502†	3121.5	3874.4	3.1787	ug/L	3.1787	ppb	11:08:08
1	Co 228.616†	175.4	279.3	-0.3000	ug/L	-0.3000	ppb	11:08:08
1	Cr 267.716†	24.7	-66.6	1.8297	ug/L	1.8297	ppb	11:08:08
1	Cu 324.752†	1105.4	-4996.0	-1.0854	ug/L	-1.0854	ppb	11:07:48
1	Mn 257.610†	-19920.2	-23868.6	-4.2867	ug/L	-4.2867	ppb	11:07:48
1	Mo 202.031†	-469.3	-572.1	-3.0002	ug/L	-3.0002	ppb	11:08:08
1	Ni 231.604†	277.5	251.7	6.6221	ug/L	6.6221	ppb	11:08:08
1	P 214.914†	517.5	381.6	17.781	ug/L	17.781	ppb	11:08:08
1	Pb 220.353†	-517.5	-545.0	3.2731	ug/L	3.2731	ppb	11:08:08
1	S 181.975 Axial†	94.8	65.3	4.2973	ug/L	4.2973	ppb	11:08:08
1	Sb 206.836†	41.5	16.1	1.4223	ug/L	1.4223	ppb	11:08:08
1	Se 196.026†	-1984.5	-2307.2	-86.069	ug/L	-86.069	ppb	11:08:08
1	Si 251.611†	-420.3	-941.0	-31.205	ug/L	-31.205	ppb	11:08:08
1	Sn 189.927†	-397.0	-473.7	-9.4483	ug/L	-9.4483	ppb	11:08:08
1	Ti 334.940†	-13182.8	-14141.2	-7.2072	ug/L	-7.2072	ppb	11:07:48
1	Tl 190.801†	-109.5	-85.1	-27.634	ug/L	-27.634	ppb	11:08:08
1	U 409.014†	395335.8	467713.8	14888	ug/L	14888	ppb	11:07:48
1	V 292.402†	2458.6	4303.2	4.5976	ug/L	4.5976	ppb	11:08:08
1	Zn 213.857†	5470.3	5583.2	13.267	ug/L	13.267	ppb	11:08:08
1	SiO2†	-339.0	-855.5	-60.175	ug/L	-60.175	ppb	11:09:05
2	Sc Radial	4318.7	4318.7	90.1	%			11:07:31
2	Y RADIAL	4643.3	4643.3	90.52	%			11:07:31
2	Al 396.153Radial†	553258.3	613799.2	492430	ug/L	492430	ppb	11:07:26
2	Ca 317.933Radial†	246625.0	273595.6	460720	ug/L	460720	ppb	11:07:26
2	Fe 238.204 Radial†	42397.6	47026.8	442090	ug/L	442090	ppb	11:07:31
2	K 766.490 Radial†	2838.6	361.8	-278.50	ug/L	-278.50	ppb	11:07:26
2	Mg 279.077 IEC†	12382.8	13736.2	481770	ug/L	481770	ppb	11:07:31
2	Na 589.592 Radial†	1402980.3	1558061.8	504820	ug/L	504820	ppb	11:07:26
2	Sr 421.552†	722.4	784.2	2.1494	ug/L	2.1494	ppb	11:07:31
2	Sc 361.383	699514.9	699514.9	85.950	%			11:08:14
2	Y 371.029	574789.6	574789.6	83.793	%			11:08:14
2	Ag 328.068†	-21766.2	-25605.9	-0.9759	ug/L	-0.9759	ppb	11:08:14
2	As 188.979†	-183.5	-194.6	15.858	ug/L	15.858	ppb	11:08:34
2	B 249.677†	1369.5	2111.9	-20.406	ug/L	-20.406	ppb	11:08:14
2	Ba 233.527†	-1327.8	-1546.3	0.6956	ug/L	0.6956	ppb	11:08:34
2	Be 313.107†	-10552.1	-7964.8	-3.2176	ug/L	-3.2176	ppb	11:08:14
2	Cd 226.502†	3113.3	3819.8	2.0207	ug/L	2.0207	ppb	11:08:34
2	Co 228.616†	155.1	253.2	-0.9391	ug/L	-0.9391	ppb	11:08:34
2	Cr 267.716†	20.2	-72.2	1.8556	ug/L	1.8556	ppb	11:08:34
2	Cu 324.752†	1029.4	-5100.4	-1.1593	ug/L	-1.1593	ppb	11:08:14
2	Mn 257.610†	-19969.7	-23638.4	-3.7733	ug/L	-3.7733	ppb	11:08:14
2	Mo 202.031†	-460.8	-555.5	-1.4325	ug/L	-1.4325	ppb	11:08:34
2	Ni 231.604†	265.1	233.3	6.1394	ug/L	6.1394	ppb	11:08:34

2	P 214.914†	521.1	378.4	10.605 ug/L	10.605 ppb	11:08:34
2	Pb 220.353†	-522.5	-543.4	1.9640 ug/L	1.9640 ppb	11:08:34
2	S 181.975 Axial†	80.2	46.9	-22.321 ug/L	-22.321 ppb	11:08:34
2	Sb 206.836†	62.0	39.4	10.219 ug/L	10.219 ppb	11:08:34
2	Se 196.026†	-1968.2	-2259.6	-37.933 ug/L	-37.933 ppb	11:08:34
2	Si 251.611†	-414.3	-927.9	-30.778 ug/L	-30.778 ppb	11:08:34
2	Sn 189.927†	-395.5	-466.3	-8.7798 ug/L	-8.7798 ppb	11:08:34
2	Ti 334.940†	-13153.0	-13916.1	-8.0325 ug/L	-8.0325 ppb	11:08:14
2	Tl 190.801†	-95.7	-67.5	-22.001 ug/L	-22.001 ppb	11:08:34
2	U 409.014†	400616.1	468146.5	14901 ug/L	14901 ppb	11:08:14
2	V 292.402†	2407.1	4207.8	3.3387 ug/L	3.3387 ppb	11:08:34
2	Zn 213.857†	5411.1	5435.3	11.306 ug/L	11.306 ppb	11:08:34
2	SiO2†	-427.2	-953.3	-67.222 ug/L	-67.222 ppb	11:09:10
3	Sc Radial	4365.1	4365.1	91.1 %		11:07:41
3	Y RADIAL	4692.6	4692.6	91.48 %		11:07:41
3	Al 396.153Radial†	557491.9	611933.7	490930 ug/L	490930 ppb	11:07:36
3	Ca 317.933Radial†	248919.6	273211.2	460070 ug/L	460070 ppb	11:07:36
3	Fe 238.204 Radial†	42954.3	47138.9	443140 ug/L	443140 ppb	11:07:41
3	K 766.490 Radial†	2995.6	500.7	-250.02 ug/L	-250.02 ppb	11:07:36
3	Mg 279.077 IEC†	12537.6	13760.4	482620 ug/L	482620 ppb	11:07:41
3	Na 589.592 Radial†	1414898.3	1554628.6	503710 ug/L	503710 ppb	11:07:36
3	Sr 421.552†	728.9	782.8	2.1444 ug/L	2.1444 ppb	11:07:41
3	Sc 361.383	693608.2	693608.2	85.224 %		11:08:40
3	Y 371.029	569680.0	569680.0	83.048 %		11:08:40
3	Ag 328.068†	-21486.9	-25493.9	-0.0219 ug/L	-0.0219 ppb	11:08:40
3	As 188.979†	-180.9	-193.5	16.620 ug/L	16.620 ppb	11:09:00
3	B 249.677†	1331.4	2080.7	-21.338 ug/L	-21.338 ppb	11:08:40
3	Ba 233.527†	-1333.0	-1565.6	0.5674 ug/L	0.5674 ppb	11:09:00
3	Be 313.107†	-10495.9	-8003.4	-3.2329 ug/L	-3.2329 ppb	11:08:40
3	Cd 226.502†	3110.9	3847.9	2.2279 ug/L	2.2279 ppb	11:09:00
3	Co 228.616†	161.1	261.7	-0.7697 ug/L	-0.7697 ppb	11:09:00
3	Cr 267.716†	64.9	-19.5	2.5236 ug/L	2.5236 ppb	11:09:00
3	Cu 324.752†	1112.1	-4993.2	-0.7250 ug/L	-0.7250 ppb	11:08:40
3	Mn 257.610†	-19946.5	-23809.1	-3.9041 ug/L	-3.9041 ppb	11:08:40
3	Mo 202.031†	-462.5	-562.0	-1.8397 ug/L	-1.8397 ppb	11:09:00
3	Ni 231.604†	258.9	228.7	6.0174 ug/L	6.0174 ppb	11:09:00
3	P 214.914†	507.1	367.1	2.1257 ug/L	2.1257 ppb	11:09:00
3	Pb 220.353†	-535.2	-563.4	-1.0297 ug/L	-1.0297 ppb	11:09:00
3	S 181.975 Axial†	79.4	46.7	-22.358 ug/L	-22.358 ppb	11:09:00
3	Sb 206.836†	69.5	48.8	13.661 ug/L	13.661 ppb	11:09:00
3	Se 196.026†	-1976.4	-2288.7	-53.994 ug/L	-53.994 ppb	11:09:00
3	Si 251.611†	-414.9	-932.7	-30.934 ug/L	-30.934 ppb	11:09:00
3	Sn 189.927†	-404.3	-480.5	-11.490 ug/L	-11.490 ppb	11:09:00
3	Ti 334.940†	-13027.3	-13898.9	-8.1307 ug/L	-8.1307 ppb	11:08:40
3	Tl 190.801†	-106.5	-81.1	-26.365 ug/L	-26.365 ppb	11:09:00
3	U 409.014†	395488.0	466098.4	14835 ug/L	14835 ppb	11:08:40
3	V 292.402†	2400.5	4223.9	3.1857 ug/L	3.1857 ppb	11:09:00
3	Zn 213.857†	5425.3	5505.6	11.906 ug/L	11.906 ppb	11:09:00
3	SiO2†	-431.3	-962.3	-67.854 ug/L	-67.854 ppb	11:09:15

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	694686.4	85.356	%	0.5394				0.63%
Sc Radial	4336.4	90.5	%	0.52				0.58%
Y 371.029	570752.5	83.205	%	0.5280				0.63%
Y RADIAL	4648.4	90.62	%	0.818				0.90%
Ag 328.068†	-25584.9	-1.3012	ug/L	1.46931	-1.3012	ppb	1.46931	112.92%
Al 396.153Radial†	615001.0	493390	ug/L	3059.0	493390	ppb	3059.0	0.62%
QC value within limits for Al 396.153Radial Recovery = 98.68%								
As 188.979†	-199.1	13.545	ug/L	4.6806	13.545	ppb	4.6806	34.55%
B 249.677†	2115.6	-20.102	ug/L	1.4121	-20.102	ppb	1.4121	7.02%
Ba 233.527†	-1571.4	0.4474	ug/L	0.32531	0.4474	ppb	0.32531	72.71%
Be 313.107†	-7973.8	-3.2214	ug/L	0.01008	-3.2214	ppb	0.01008	0.31%
Ca 317.933Radial†	274495.9	462240	ug/L	3202.8	462240	ppb	3202.8	0.69%
QC value within limits for Ca 317.933Radial Recovery = 92.45%								
Cd 226.502†	3847.3	2.4758	ug/L	0.61749	2.4758	ppb	0.61749	24.94%
Co 228.616†	264.7	-0.6696	ug/L	0.33111	-0.6696	ppb	0.33111	49.45%
Cr 267.716†	-52.8	2.0696	ug/L	0.39339	2.0696	ppb	0.39339	19.01%
Cu 324.752†	-5029.9	-0.9899	ug/L	0.23234	-0.9899	ppb	0.23234	23.47%

Fe 238.204 Radial†	46885.4	440760 ug/L	3257.9	440760 ppb	3257.9	0.74%
QC value less than the lower limit for Fe 238.204 Radial Recovery = 88.15%						
K 766.490 Radial†	401.2	-272.00 ug/L	19.557	-272.00 ppb	19.557	7.19%
Mg 279.077 IEC†	13685.2	479980 ug/L	3859.9	479980 ppb	3859.9	0.80%
QC value within limits for Mg 279.077 IEC Recovery = 96.00%						
Mn 257.610†	-23772.0	-3.9880 ug/L	0.26676	-3.9880 ppb	0.26676	6.69%
Mo 202.031†	-563.2	-2.0908 ug/L	0.81349	-2.0908 ppb	0.81349	38.91%
Na 589.592 Radial†	1565110.0	507100 ug/L	4950.1	507100 ppb	4950.1	0.98%
QC value within limits for Na 589.592 Radial Recovery = 101.42%						
Ni 231.604†	237.9	6.2596 ug/L	0.31974	6.2596 ppb	0.31974	5.11%
P 214.914†	375.7	10.171 ug/L	7.8368	10.171 ppb	7.8368	77.05%
Pb 220.353†	-550.6	1.4024 ug/L	2.20569	1.4024 ppb	2.20569	157.27%
S 181.975 Axial†	52.9	-13.460 ug/L	15.3787	-13.460 ppb	15.3787	114.25%
Sb 206.836†	34.8	8.4341 ug/L	6.31147	8.4341 ppb	6.31147	74.83%
Se 196.026†	-2285.2	-59.332 ug/L	24.5082	-59.332 ppb	24.5082	41.31%
Si 251.611†	-933.9	-30.972 ug/L	0.2160	-30.972 ppb	0.2160	0.70%
Sn 189.927†	-473.5	-9.9059 ug/L	1.41175	-9.9059 ppb	1.41175	14.25%
Sr 421.552†	784.1	2.1377 ug/L	0.01615	2.1377 ppb	0.01615	0.76%
Ti 334.940†	-13985.4	-7.7901 ug/L	0.50720	-7.7901 ppb	0.50720	6.51%
Tl 190.801†	-77.9	-25.334 ug/L	2.9548	-25.334 ppb	2.9548	11.66%
U 409.014†	467319.6	14875 ug/L	34.6	14875 ppb	34.6	0.23%
QC value within limits for U 409.014 Recovery = 99.16%						
V 292.402†	4244.9	3.7073 ug/L	0.77478	3.7073 ppb	0.77478	20.90%
Zn 213.857†	5508.0	12.160 ug/L	1.0048	12.160 ppb	1.0048	8.26%
SiO2†	-923.7	-65.083 ug/L	4.2626	-65.083 ppb	4.2626	6.55%

QC Failed. Continue with analysis.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 1/14/2010 11:11:26
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4833.5	4833.5	101	%			11:13:24
1	Y RADIAL	5126.8	5126.8	99.95	%			11:13:24
1	Al 396.153Radial†	548.9	547.4	-42.692	ug/L	-42.692	ppb	11:13:24
1	Ca 317.933Radial†	26.7	11.4	19.131	ug/L	19.131	ppb	11:13:44
1	Fe 238.204 Radial†	-15.6	-25.4	50.089	ug/L	50.089	ppb	11:13:44
1	K 766.490 Radial†	1467235.0	1451652.4	290810	ug/L	290810	ppb	11:13:19
1	Mg 279.077 IEC†	-6.3	-7.8	-168.60	ug/L	-168.60	ppb	11:13:44
1	Na 589.592 Radial†	-679.2	893.6	289.54	ug/L	289.54	ppb	11:13:24
1	Sr 421.552†	1386069.3	1373964.8	9793.5	ug/L	9793.5	ppb	11:13:19
1	Sc 361.383	796153.9	796153.9	97.824	%			11:15:01
1	Y 371.029	651907.6	651907.6	95.036	%			11:15:01
1	Ag 328.068†	-7670.8	-8123.0	0.5984	ug/L	0.5984	ppb	11:15:06
1	As 188.979†	22203.8	22716.6	10286	ug/L	10286	ppb	11:15:06
1	B 249.677†	203325.9	208367.8	5043.9	ug/L	5043.9	ppb	11:15:01
1	Ba 233.527†	1697903.5	1735674.8	14414	ug/L	14414	ppb	11:15:01
1	Be 313.107†	7215609.0	7380444.5	2953.9	ug/L	2953.9	ppb	11:14:55
1	Cd 226.502†	810860.2	829096.7	9723.6	ug/L	9723.6	ppb	11:15:01
1	Co 228.616†	434202.7	443935.0	9639.4	ug/L	9639.4	ppb	11:15:06
1	Cr 267.716†	1998704.4	2043073.2	24118	ug/L	24118	ppb	11:15:01
1	Cu 324.752†	6226475.9	6358696.2	20299	ug/L	20299	ppb	11:14:55
1	Mn 257.610†	7962178.6	8138906.2	9544.0	ug/L	9544.0	ppb	11:14:55
1	Mo 202.031†	130960.8	133854.9	9936.2	ug/L	9936.2	ppb	11:15:06
1	Ni 231.604†	363867.2	371886.9	9783.8	ug/L	9783.8	ppb	11:15:06
1	P 214.914†	29181.4	29602.7	14960	ug/L	14960	ppb	11:15:06
1	Pb 220.353†	187396.7	191630.2	24558	ug/L	24558	ppb	11:15:06
1	S 181.975 Axial†	34708.0	35433.7	52881	ug/L	52881	ppb	11:15:06
1	Sb 206.836†	28463.5	29064.0	10993	ug/L	10993	ppb	11:15:06
1	Se 196.026†	15102.4	15468.7	10375	ug/L	10375	ppb	11:15:06
1	Si 251.611†	1410028.2	1440950.7	48462	ug/L	48462	ppb	11:15:01
1	Sn 189.927†	56050.8	57291.7	10595	ug/L	10595	ppb	11:15:06
1	Ti 334.940†	5687630.8	5815548.7	9968.2	ug/L	9968.2	ppb	11:14:55
1	Tl 190.801†	29649.5	30353.0	9776.8	ug/L	9776.8	ppb	11:15:06
1	U 409.014†	-1035.8	982.1	-22.548	ug/L	-22.548	ppb	11:15:06
1	V 292.402†	1360318.8	1391988.6	10163	ug/L	10163	ppb	11:15:01
1	Zn 213.857†	1401405.8	1431722.1	14189	ug/L	14189	ppb	11:15:01
1	SiO2†	1448559.9	1480329.4	105860	ug/L	105860	ppb	11:15:52
2	Sc Radial	4588.2	4588.2	95.8	%			11:13:54
2	Y RADIAL	4864.5	4864.5	94.83	%			11:13:54
2	Al 396.153Radial†	540.8	568.0	-17.243	ug/L	-17.243	ppb	11:13:54
2	Ca 317.933Radial†	24.7	10.7	17.993	ug/L	17.993	ppb	11:14:14
2	Fe 238.204 Radial†	-18.9	-29.6	5.1614	ug/L	5.1614	ppb	11:14:14
2	K 766.490 Radial†	1468925.8	1531153.5	306740	ug/L	306740	ppb	11:13:49
2	Mg 279.077 IEC†	-3.0	-4.7	-62.016	ug/L	-62.016	ppb	11:14:14
2	Na 589.592 Radial†	-709.9	825.6	267.51	ug/L	267.51	ppb	11:13:54
2	Sr 421.552†	1382801.8	1443987.9	10293	ug/L	10293	ppb	11:13:49
2	Sc 361.383	813805.6	813805.6	99.993	%			11:15:21
2	Y 371.029	665730.3	665730.3	97.051	%			11:15:21
2	Ag 328.068†	-7720.5	-8002.6	1.1554	ug/L	1.1554	ppb	11:15:26
2	As 188.979†	22291.8	22312.3	10103	ug/L	10103	ppb	11:15:26
2	B 249.677†	208484.5	209018.4	5060.2	ug/L	5060.2	ppb	11:15:21
2	Ba 233.527†	1732440.2	1732566.6	14388	ug/L	14388	ppb	11:15:21
2	Be 313.107†	7222926.3	7227771.7	2892.9	ug/L	2892.9	ppb	11:15:14
2	Cd 226.502†	828294.4	828553.1	9717.1	ug/L	9717.1	ppb	11:15:21
2	Co 228.616†	436065.1	436170.0	9470.8	ug/L	9470.8	ppb	11:15:26
2	Cr 267.716†	2039566.6	2039621.4	24077	ug/L	24077	ppb	11:15:21
2	Cu 324.752†	6241955.9	6236118.6	19907	ug/L	19907	ppb	11:15:14
2	Mn 257.610†	7969154.5	7969338.4	9345.1	ug/L	9345.1	ppb	11:15:14
2	Mo 202.031†	131385.1	131375.5	9752.1	ug/L	9752.1	ppb	11:15:26
2	Ni 231.604†	365837.9	365789.8	9623.4	ug/L	9623.4	ppb	11:15:26

2	P 214.914†	29367.9	29142.2	14743 ug/L	14743 ppb	11:15:26
2	Pb 220.353†	188598.2	188676.7	24180 ug/L	24180 ppb	11:15:26
2	S 181.975 Axial†	34984.4	34940.5	52145 ug/L	52145 ppb	11:15:26
2	Sb 206.836†	28586.7	28556.0	10801 ug/L	10801 ppb	11:15:26
2	Se 196.026†	15149.6	15181.0	10182 ug/L	10182 ppb	11:15:26
2	Si 251.611†	1443549.2	1443209.9	48540 ug/L	48540 ppb	11:15:21
2	Sn 189.927†	56442.9	56441.0	10438 ug/L	10438 ppb	11:15:26
2	Ti 334.940†	5699387.1	5701194.8	9772.0 ug/L	9772.0 ppb	11:15:14
2	Tl 190.801†	29827.4	29873.5	9621.6 ug/L	9621.6 ppb	11:15:26
2	U 409.014†	-967.2	1073.7	-19.525 ug/L	-19.525 ppb	11:15:26
2	V 292.402†	1389817.1	1391326.8	10156 ug/L	10156 ppb	11:15:21
2	Zn 213.857†	1427537.8	1426782.8	14142 ug/L	14142 ppb	11:15:21
2	SiO2†	1466183.4	1465835.4	104820 ug/L	104820 ppb	11:15:58
3	Sc Radial	4781.1	4781.1	99.8 %		11:14:25
3	Y RADIAL	5052.2	5052.2	98.49 %		11:14:25
3	Al 396.153Radial†	555.2	559.6	-30.859 ug/L	-30.859 ppb	11:14:25
3	Ca 317.933Radial†	25.3	10.2	17.197 ug/L	17.197 ppb	11:14:45
3	Fe 238.204 Radial†	-21.5	-31.4	-8.6483 ug/L	-8.6483 ppb	11:14:45
3	K 766.490 Radial†	1464717.0	1465046.9	293500 ug/L	293500 ppb	11:14:20
3	Mg 279.077 IEC†	-4.1	-5.6	-92.186 ug/L	-92.186 ppb	11:14:45
3	Na 589.592 Radial†	-715.7	849.7	275.30 ug/L	275.30 ppb	11:14:25
3	Sr 421.552†	1376656.2	1379568.9	9833.4 ug/L	9833.4 ppb	11:14:20
3	Sc 361.383	808471.7	808471.7	99.337 %		11:15:41
3	Y 371.029	662634.1	662634.1	96.599 %		11:15:41
3	Ag 328.068†	-7577.4	-7909.5	1.6246 ug/L	1.6246 ppb	11:15:46
3	As 188.979†	22420.3	22588.7	10228 ug/L	10228 ppb	11:15:46
3	B 249.677†	206693.8	208591.4	5049.5 ug/L	5049.5 ppb	11:15:41
3	Ba 233.527†	1719540.9	1731011.9	14375 ug/L	14375 ppb	11:15:41
3	Be 313.107†	7278978.3	7331855.0	2934.5 ug/L	2934.5 ppb	11:15:34
3	Cd 226.502†	821978.0	827659.7	9706.7 ug/L	9706.7 ppb	11:15:41
3	Co 228.616†	438152.9	441148.9	9579.0 ug/L	9579.0 ppb	11:15:46
3	Cr 267.716†	2026596.9	2040022.4	24082 ug/L	24082 ppb	11:15:41
3	Cu 324.752†	6277520.3	6313105.0	20153 ug/L	20153 ppb	11:15:34
3	Mn 257.610†	8010463.9	8063504.4	9455.6 ug/L	9455.6 ppb	11:15:34
3	Mo 202.031†	132428.4	133292.7	9894.4 ug/L	9894.4 ppb	11:15:46
3	Ni 231.604†	367354.5	369730.3	9727.1 ug/L	9727.1 ppb	11:15:46
3	P 214.914†	29388.7	29356.9	14832 ug/L	14832 ppb	11:15:46
3	Pb 220.353†	189199.8	190526.7	24417 ug/L	24417 ppb	11:15:46
3	S 181.975 Axial†	35264.6	35453.5	52910 ug/L	52910 ppb	11:15:46
3	Sb 206.836†	28749.5	28908.6	10934 ug/L	10934 ppb	11:15:46
3	Se 196.026†	15188.3	15320.0	10275 ug/L	10275 ppb	11:15:46
3	Si 251.611†	1429840.0	1438933.8	48394 ug/L	48394 ppb	11:15:41
3	Sn 189.927†	56596.7	56968.2	10535 ug/L	10535 ppb	11:15:46
3	Ti 334.940†	5728567.8	5768175.0	9886.9 ug/L	9886.9 ppb	11:15:34
3	Tl 190.801†	30059.5	30303.9	9760.3 ug/L	9760.3 ppb	11:15:46
3	U 409.014†	-841.9	1193.4	-15.712 ug/L	-15.712 ppb	11:15:46
3	V 292.402†	1381399.1	1392022.8	10163 ug/L	10163 ppb	11:15:41
3	Zn 213.857†	1417945.8	1426545.8	14138 ug/L	14138 ppb	11:15:41
3	SiO2†	1451848.1	1461078.4	104480 ug/L	104480 ppb	11:16:04

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	806143.7	99.051	%	1.1124				1.12%
Sc Radial	4734.3	98.8	%	2.70				2.73%
Y 371.029	660090.6	96.229	%	1.0575				1.10%
Y RADIAL	5014.5	97.76	%	2.634				2.69%
Ag 328.068†	-8011.7	1.1261	ug/L	0.51372	1.1261	ppb	0.51372	45.62%
Al 396.153Radial†	558.3	-30.265	ug/L	12.7351	-30.265	ppb	12.7351	42.08%
As 188.979†	22539.2	10206	ug/L	93.6	10206	ppb	93.6	0.92%
QC value within limits for As 188.979 Recovery = 102.06%								
B 249.677†	208659.2	5051.2	ug/L	8.29	5051.2	ppb	8.29	0.16%
QC value within limits for B 249.677 Recovery = 101.02%								
Ba 233.527†	1733084.4	14393	ug/L	19.7	14393	ppb	19.7	0.14%
QC value within limits for Ba 233.527 Recovery = 95.95%								
Be 313.107†	7313357.1	2927.1	ug/L	31.20	2927.1	ppb	31.20	1.07%
QC value within limits for Be 313.107 Recovery = 97.57%								
Ca 317.933Radial†	10.8	18.107	ug/L	0.9722	18.107	ppb	0.9722	5.37%
Cd 226.502†	828436.5	9715.8	ug/L	8.51	9715.8	ppb	8.51	0.09%
QC value within limits for Cd 226.502 Recovery = 97.16%								

Co 228.616†	440417.9	9563.1 ug/L	85.44	9563.1 ppb	85.44	0.89%
QC value within limits for Co 228.616 Recovery = 95.63%						
Cr 267.716†	2040905.7	24092 ug/L	22.3	24092 ppb	22.3	0.09%
QC value within limits for Cr 267.716 Recovery = 96.37%						
Cu 324.752†	6302639.9	20120 ug/L	197.8	20120 ppb	197.8	0.98%
QC value within limits for Cu 324.752 Recovery = 100.60%						
Fe 238.204 Radial†	-28.8	15.534 ug/L	30.7117	15.534 ppb	30.7117	197.71%
K 766.490 Radial†	1482617.6	297020 ug/L	8527.5	297020 ppb	8527.5	2.87%
QC value within limits for K 766.490 Radial Recovery = 99.01%						
Mg 279.077 IEC†	-6.0	-107.60 ug/L	54.938	-107.60 ppb	54.938	51.06%
Mn 257.610†	8057249.7	9448.2 ug/L	99.63	9448.2 ppb	99.63	1.05%
QC value within limits for Mn 257.610 Recovery = 94.48%						
Mo 202.031†	132841.0	9860.9 ug/L	96.50	9860.9 ppb	96.50	0.98%
QC value within limits for Mo 202.031 Recovery = 98.61%						
Na 589.592 Radial†	856.3	277.45 ug/L	11.175	277.45 ppb	11.175	4.03%
Ni 231.604†	369135.7	9711.5 ug/L	81.34	9711.5 ppb	81.34	0.84%
QC value within limits for Ni 231.604 Recovery = 97.11%						
P 214.914†	29367.2	14845 ug/L	109.4	14845 ppb	109.4	0.74%
QC value within limits for P 214.914 Recovery = 98.97%						
Pb 220.353†	190277.9	24385 ug/L	191.3	24385 ppb	191.3	0.78%
QC value within limits for Pb 220.353 Recovery = 97.54%						
S 181.975 Axial†	35275.9	52645 ug/L	433.7	52645 ppb	433.7	0.82%
QC value within limits for S 181.975 Axial Recovery = 105.29%						
Sb 206.836†	28842.9	10909 ug/L	98.1	10909 ppb	98.1	0.90%
QC value within limits for Sb 206.836 Recovery = 109.09%						
Se 196.026†	15323.3	10277 ug/L	96.6	10277 ppb	96.6	0.94%
QC value within limits for Se 196.026 Recovery = 102.77%						
Si 251.611†	1441031.5	48465 ug/L	73.0	48465 ppb	73.0	0.15%
QC value within limits for Si 251.611 Recovery = 96.93%						
Sn 189.927†	56900.3	10523 ug/L	79.4	10523 ppb	79.4	0.75%
QC value within limits for Sn 189.927 Recovery = 105.23%						
Sr 421.552†	1399173.8	9973.2 ug/L	277.35	9973.2 ppb	277.35	2.78%
QC value within limits for Sr 421.552 Recovery = 99.73%						
Ti 334.940†	5761639.5	9875.7 ug/L	98.57	9875.7 ppb	98.57	1.00%
QC value within limits for Ti 334.940 Recovery = 98.76%						
Tl 190.801†	30176.8	9719.6 ug/L	85.25	9719.6 ppb	85.25	0.88%
QC value within limits for Tl 190.801 Recovery = 97.20%						
U 409.014†	1083.1	-19.262 ug/L	3.4255	-19.262 ppb	3.4255	17.78%
V 292.402†	1391779.4	10160 ug/L	4.1	10160 ppb	4.1	0.04%
QC value within limits for V 292.402 Recovery = 101.60%						
Zn 213.857†	1428350.2	14156 ug/L	28.6	14156 ppb	28.6	0.20%
QC value within limits for Zn 213.857 Recovery = 94.38%						
SiO2†	1469081.1	105050 ug/L	717.6	105050 ppb	717.6	0.68%
QC value within limits for SiO2 Recovery = 98.18%						

All analyte(s) passed QC.

Analysis Begun

Start Time: 1/14/2010 11:33:29 Plasma On Time: 1/11/2010 06:15:31
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\011410.sif
Batch ID:
Results Data Set: 011410
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 1/14/2010 10:05:12
IEC File: 011110.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 7
Sample ID: CCV Date Collected: 1/14/2010 11:33:30
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4918.2	4918.2	103	%			11:35:22
1	Y RADIAL	5241.8	5241.8	102.2	%			11:35:22
1	Al 396.153Radial†	6325.5	6165.5	4921.9	ug/L	4921.9	ppb	11:35:22

1	Ca 317.933Radial†	3138.9	3042.7	5123.8 ug/L	5123.8 ppb	11:35:42
1	Fe 238.204 Radial†	593.8	568.6	5360.5 ug/L	5360.5 ppb	11:35:42
1	K 766.490 Radial†	29392.8	25846.9	5171.7 ug/L	5171.7 ppb	11:35:22
1	Mg 279.077 IEC†	160.5	154.9	5436.4 ug/L	5436.4 ppb	11:35:42
1	Na 589.592 Radial†	31648.7	32398.9	10497 ug/L	10497 ppb	11:35:22
1	Sr 421.552†	74493.4	72553.9	517.12 ug/L	517.12 ppb	11:35:22
1	Sc 361.383	844802.9	844802.9	103.80 %		11:36:40
1	Y 371.029	699607.3	699607.3	101.99 %		11:36:40
1	Ag 328.068†	103672.1	99594.0	492.56 ug/L	492.56 ppb	11:36:45
1	As 188.979†	1157.0	1133.5	514.48 ug/L	514.48 ppb	11:37:05
1	B 249.677†	21404.9	21139.6	512.19 ug/L	512.19 ppb	11:36:45
1	Ba 233.527†	63034.7	60724.9	504.79 ug/L	504.79 ppb	11:36:45
1	Be 313.107†	1322500.6	1278382.0	508.86 ug/L	508.86 ppb	11:36:40
1	Cd 226.502†	44770.3	43328.4	507.69 ug/L	507.69 ppb	11:36:45
1	Co 228.616†	24163.1	23350.9	507.19 ug/L	507.19 ppb	11:36:45
1	Cr 267.716†	44245.7	42529.6	502.36 ug/L	502.36 ppb	11:36:45
1	Cu 324.752†	167986.8	155537.0	496.52 ug/L	496.52 ppb	11:36:45
1	Mn 257.610†	447547.4	430753.6	505.42 ug/L	505.42 ppb	11:36:40
1	Mo 202.031†	7075.6	6797.2	505.04 ug/L	505.04 ppb	11:37:05
1	Ni 231.604†	20015.1	19207.0	505.30 ug/L	505.30 ppb	11:36:45
1	P 214.914†	4340.4	3953.5	2426.3 ug/L	2426.3 ppb	11:37:05
1	Pb 220.353†	4008.2	3926.0	504.49 ug/L	504.49 ppb	11:37:05
1	S 181.975 Axial†	768.1	693.5	1034.0 ug/L	1034.0 ppb	11:37:05
1	Sb 206.836†	1468.8	1382.3	523.61 ug/L	523.61 ppb	11:37:05
1	Se 196.026†	769.5	771.7	535.43 ug/L	535.43 ppb	11:37:05
1	Si 251.611†	78797.2	75465.8	2538.2 ug/L	2538.2 ppb	11:36:45
1	Sn 189.927†	2875.2	2763.8	512.00 ug/L	512.00 ppb	11:37:05
1	Ti 334.940†	299002.1	289439.4	496.39 ug/L	496.39 ppb	11:36:45
1	Tl 190.801†	1595.7	1581.2	509.17 ug/L	509.17 ppb	11:37:05
1	U 409.014†	14455.8	15967.4	508.22 ug/L	508.22 ppb	11:36:45
1	V 292.402†	70575.4	69398.0	507.36 ug/L	507.36 ppb	11:36:45
1	Zn 213.857†	54075.5	51234.9	506.57 ug/L	506.57 ppb	11:36:45
1	SiO2†	79133.3	75779.2	5419.0 ug/L	5419.0 ppb	11:38:12
2	Sc Radial	5043.4	5043.4	105 %		11:35:47
2	Y RADIAL	5344.9	5344.9	104.2 %		11:35:47
2	Al 396.153Radial†	6382.8	6067.0	4842.5 ug/L	4842.5 ppb	11:35:47
2	Ca 317.933Radial†	3123.9	2952.6	4972.0 ug/L	4972.0 ppb	11:36:07
2	Fe 238.204 Radial†	587.6	548.4	5170.3 ug/L	5170.3 ppb	11:36:07
2	K 766.490 Radial†	29923.4	25640.1	5130.3 ug/L	5130.3 ppb	11:35:47
2	Mg 279.077 IEC†	159.1	149.7	5253.7 ug/L	5253.7 ppb	11:36:07
2	Na 589.592 Radial†	32154.8	32114.3	10405 ug/L	10405 ppb	11:35:47
2	Sr 421.552†	75781.2	71975.6	513.00 ug/L	513.00 ppb	11:35:47
2	Sc 361.383	829636.7	829636.7	101.94 %		11:37:11
2	Y 371.029	686474.6	686474.6	100.07 %		11:37:11
2	Ag 328.068†	103869.7	101613.6	502.43 ug/L	502.43 ppb	11:37:16
2	As 188.979†	1147.3	1144.3	519.35 ug/L	519.35 ppb	11:37:36
2	B 249.677†	21136.5	21253.2	514.98 ug/L	514.98 ppb	11:37:16
2	Ba 233.527†	62365.4	61178.4	508.55 ug/L	508.55 ppb	11:37:16
2	Be 313.107†	1294277.8	1273986.5	507.13 ug/L	507.13 ppb	11:37:11
2	Cd 226.502†	44300.5	43656.0	511.56 ug/L	511.56 ppb	11:37:16
2	Co 228.616†	23880.7	23499.5	510.43 ug/L	510.43 ppb	11:37:16
2	Cr 267.716†	43856.9	42927.5	507.05 ug/L	507.05 ppb	11:37:16
2	Cu 324.752†	166247.1	156788.8	500.50 ug/L	500.50 ppb	11:37:16
2	Mn 257.610†	439774.8	431010.6	505.71 ug/L	505.71 ppb	11:37:11
2	Mo 202.031†	7041.3	6888.1	511.77 ug/L	511.77 ppb	11:37:36
2	Ni 231.604†	19846.2	19393.8	510.22 ug/L	510.22 ppb	11:37:16
2	P 214.914†	4307.8	3998.1	2454.1 ug/L	2454.1 ppb	11:37:36
2	Pb 220.353†	4002.0	3990.5	512.75 ug/L	512.75 ppb	11:37:36
2	S 181.975 Axial†	755.2	694.4	1035.4 ug/L	1035.4 ppb	11:37:36
2	Sb 206.836†	1473.8	1413.1	535.01 ug/L	535.01 ppb	11:37:36
2	Se 196.026†	762.7	778.6	539.40 ug/L	539.40 ppb	11:37:36
2	Si 251.611†	78029.0	76099.8	2559.5 ug/L	2559.5 ppb	11:37:16
2	Sn 189.927†	2830.3	2770.4	513.19 ug/L	513.19 ppb	11:37:36
2	Ti 334.940†	296376.5	292129.5	500.99 ug/L	500.99 ppb	11:37:16
2	Tl 190.801†	1599.9	1613.4	519.50 ug/L	519.50 ppb	11:37:36
2	U 409.014†	14501.1	16266.4	517.78 ug/L	517.78 ppb	11:37:16
2	V 292.402†	69862.3	69941.4	511.41 ug/L	511.41 ppb	11:37:16
2	Zn 213.857†	53368.7	51493.9	509.14 ug/L	509.14 ppb	11:37:16
2	SiO2†	78809.6	76855.3	5496.0 ug/L	5496.0 ppb	11:38:17
3	Sc Radial	4885.7	4885.7	102 %		11:36:12
3	Y RADIAL	5228.6	5228.6	101.9 %		11:36:12

3	Al 396.153Radial†	6273.0	6155.1	4913.6 ug/L	4913.6 ppb	11:36:12
3	Ca 317.933Radial†	3131.5	3055.8	5145.9 ug/L	5145.9 ppb	11:36:32
3	Fe 238.204 Radial†	596.8	575.4	5424.1 ug/L	5424.1 ppb	11:36:32
3	K 766.490 Radial†	29306.7	25953.2	5193.0 ug/L	5193.0 ppb	11:36:12
3	Mg 279.077 IEC†	160.0	155.4	5455.6 ug/L	5455.6 ppb	11:36:32
3	Na 589.592 Radial†	31242.6	32206.0	10435 ug/L	10435 ppb	11:36:12
3	Sr 421.552†	73882.8	72438.4	516.30 ug/L	516.30 ppb	11:36:12
3	Sc 361.383	851135.9	851135.9	104.58 %		11:37:42
3	Y 371.029	704218.2	704218.2	102.66 %		11:37:42
3	Ag 328.068†	103264.1	98460.7	486.99 ug/L	486.99 ppb	11:37:47
3	As 188.979†	1148.8	1117.3	507.18 ug/L	507.18 ppb	11:38:07
3	B 249.677†	21215.1	20804.6	504.06 ug/L	504.06 ppb	11:37:47
3	Ba 233.527†	62428.3	59693.2	496.22 ug/L	496.22 ppb	11:37:47
3	Be 313.107†	1332401.1	1278369.0	508.84 ug/L	508.84 ppb	11:37:42
3	Cd 226.502†	44406.1	42659.2	499.84 ug/L	499.84 ppb	11:37:47
3	Co 228.616†	23893.4	22919.8	497.84 ug/L	497.84 ppb	11:37:47
3	Cr 267.716†	43954.7	41934.3	495.33 ug/L	495.33 ppb	11:37:47
3	Cu 324.752†	167040.1	153427.5	489.79 ug/L	489.79 ppb	11:37:47
3	Mn 257.610†	450850.9	430704.4	505.37 ug/L	505.37 ppb	11:37:42
3	Mo 202.031†	7105.1	6774.7	503.37 ug/L	503.37 ppb	11:38:07
3	Ni 231.604†	19870.1	18924.9	497.88 ug/L	497.88 ppb	11:37:47
3	P 214.914†	4323.5	3906.3	2397.4 ug/L	2397.4 ppb	11:38:07
3	Pb 220.353†	4024.1	3912.5	502.74 ug/L	502.74 ppb	11:38:07
3	S 181.975 Axial†	761.5	681.7	1016.4 ug/L	1016.4 ppb	11:38:07
3	Sb 206.836†	1483.5	1385.8	524.81 ug/L	524.81 ppb	11:38:07
3	Se 196.026†	771.4	768.0	533.16 ug/L	533.16 ppb	11:38:07
3	Si 251.611†	78231.6	74360.1	2501.0 ug/L	2501.0 ppb	11:37:47
3	Sn 189.927†	2880.3	2748.1	509.09 ug/L	509.09 ppb	11:38:07
3	Ti 334.940†	297363.4	285729.2	490.03 ug/L	490.03 ppb	11:37:47
3	Tl 190.801†	1595.3	1569.4	505.39 ug/L	505.39 ppb	11:38:07
3	U 409.014†	14445.7	15854.1	504.61 ug/L	504.61 ppb	11:37:47
3	V 292.402†	70178.9	68513.0	500.94 ug/L	500.94 ppb	11:37:47
3	Zn 213.857†	53539.4	50334.6	497.64 ug/L	497.64 ppb	11:37:47
3	SiO2†	78908.0	74996.5	5363.0 ug/L	5363.0 ppb	11:38:22

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	841858.5	103.44	%	1.357				1.31%
Sc Radial	4949.1	103	%	1.7				1.68%
Y 371.029	696766.7	101.58	%	1.342				1.32%
Y RADIAL	5271.8	102.8	%	1.24				1.21%
Ag 328.068†	99889.5	494.00	ug/L	7.820	494.00	ppb	7.820	1.58%
QC value within limits for Ag 328.068 Recovery = 98.80%								
Al 396.153Radial†	6129.2	4892.6	ug/L	43.63	4892.6	ppb	43.63	0.89%
QC value within limits for Al 396.153Radial Recovery = 97.85%								
As 188.979†	1131.7	513.67	ug/L	6.127	513.67	ppb	6.127	1.19%
QC value within limits for As 188.979 Recovery = 102.73%								
B 249.677†	21065.8	510.41	ug/L	5.675	510.41	ppb	5.675	1.11%
QC value within limits for B 249.677 Recovery = 102.08%								
Ba 233.527†	60532.1	503.19	ug/L	6.319	503.19	ppb	6.319	1.26%
QC value within limits for Ba 233.527 Recovery = 100.64%								
Be 313.107†	1276912.5	508.28	ug/L	0.996	508.28	ppb	0.996	0.20%
QC value within limits for Be 313.107 Recovery = 101.66%								
Ca 317.933Radial†	3017.0	5080.5	ug/L	94.65	5080.5	ppb	94.65	1.86%
QC value within limits for Ca 317.933Radial Recovery = 101.61%								
Cd 226.502†	43214.5	506.36	ug/L	5.972	506.36	ppb	5.972	1.18%
QC value within limits for Cd 226.502 Recovery = 101.27%								
Co 228.616†	23256.7	505.15	ug/L	6.537	505.15	ppb	6.537	1.29%
QC value within limits for Co 228.616 Recovery = 101.03%								
Cr 267.716†	42463.8	501.58	ug/L	5.900	501.58	ppb	5.900	1.18%
QC value within limits for Cr 267.716 Recovery = 100.32%								
Cu 324.752†	155251.1	495.60	ug/L	5.413	495.60	ppb	5.413	1.09%
QC value within limits for Cu 324.752 Recovery = 99.12%								
Fe 238.204 Radial†	564.1	5318.3	ug/L	132.08	5318.3	ppb	132.08	2.48%
QC value within limits for Fe 238.204 Radial Recovery = 106.37%								
K 766.490 Radial†	25813.4	5165.0	ug/L	31.86	5165.0	ppb	31.86	0.62%
QC value within limits for K 766.490 Radial Recovery = 103.30%								
Mg 279.077 IEC†	153.3	5381.9	ug/L	111.44	5381.9	ppb	111.44	2.07%
QC value within limits for Mg 279.077 IEC Recovery = 107.64%								

Mn 257.610†	430822.9	505.50 ug/L	0.184	505.50 ppb	0.184	0.04%
QC value within limits for Mn 257.610 Recovery = 101.10%						
Mo 202.031†	6820.0	506.73 ug/L	4.447	506.73 ppb	4.447	0.88%
QC value within limits for Mo 202.031 Recovery = 101.35%						
Na 589.592 Radial†	32239.7	10446 ug/L	47.1	10446 ppb	47.1	0.45%
QC value within limits for Na 589.592 Radial Recovery = 104.46%						
Ni 231.604†	19175.2	504.47 ug/L	6.211	504.47 ppb	6.211	1.23%
QC value within limits for Ni 231.604 Recovery = 100.89%						
P 214.914†	3952.6	2425.9 ug/L	28.34	2425.9 ppb	28.34	1.17%
QC value within limits for P 214.914 Recovery = 97.04%						
Pb 220.353†	3943.0	506.66 ug/L	5.348	506.66 ppb	5.348	1.06%
QC value within limits for Pb 220.353 Recovery = 101.33%						
S 181.975 Axial†	689.8	1028.6 ug/L	10.57	1028.6 ppb	10.57	1.03%
QC value within limits for S 181.975 Axial Recovery = 102.86%						
Sb 206.836†	1393.7	527.81 ug/L	6.263	527.81 ppb	6.263	1.19%
QC value within limits for Sb 206.836 Recovery = 105.56%						
Se 196.026†	772.8	536.00 ug/L	3.159	536.00 ppb	3.159	0.59%
QC value within limits for Se 196.026 Recovery = 107.20%						
Si 251.611†	75308.5	2532.9 ug/L	29.64	2532.9 ppb	29.64	1.17%
QC value within limits for Si 251.611 Recovery = 101.32%						
Sn 189.927†	2760.8	511.43 ug/L	2.109	511.43 ppb	2.109	0.41%
QC value within limits for Sn 189.927 Recovery = 102.29%						
Sr 421.552†	72322.6	515.47 ug/L	2.181	515.47 ppb	2.181	0.42%
QC value within limits for Sr 421.552 Recovery = 103.09%						
Ti 334.940†	289099.4	495.80 ug/L	5.505	495.80 ppb	5.505	1.11%
QC value within limits for Ti 334.940 Recovery = 99.16%						
Tl 190.801†	1588.0	511.35 ug/L	7.304	511.35 ppb	7.304	1.43%
QC value within limits for Tl 190.801 Recovery = 102.27%						
U 409.014†	16029.3	510.21 ug/L	6.806	510.21 ppb	6.806	1.33%
QC value within limits for U 409.014 Recovery = 102.04%						
V 292.402†	69284.1	506.57 ug/L	5.277	506.57 ppb	5.277	1.04%
QC value within limits for V 292.402 Recovery = 101.31%						
Zn 213.857†	51021.1	504.45 ug/L	6.033	504.45 ppb	6.033	1.20%
QC value within limits for Zn 213.857 Recovery = 100.89%						
SiO2†	75877.0	5426.0 ug/L	66.79	5426.0 ppb	66.79	1.23%
QC value within limits for SiO2 Recovery = 101.47%						

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 11:40:33
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5114.8	5114.8	107	%			11:42:25
1	Y RADIAL	5501.5	5501.5	107.3	%			11:42:25
1	Al 396.153Radial†	-4.3	-0.8	-0.6493	ug/L	-0.6493	ppb	11:42:25
1	Ca 317.933Radial†	12.0	-3.9	-6.5561	ug/L	-6.5561	ppb	11:42:45
1	Fe 238.204 Radial†	8.9	-1.5	-14.331	ug/L	-14.331	ppb	11:42:45
1	K 766.490 Radial†	3206.1	215.9	43.230	ug/L	43.230	ppb	11:42:25
1	Mg 279.077 IEC†	1.9	0.3	10.676	ug/L	10.676	ppb	11:42:45
1	Na 589.592 Radial†	-1467.1	192.6	62.393	ug/L	62.393	ppb	11:42:25
1	Sr 421.552†	-34.8	-49.8	-0.3550	ug/L	-0.3550	ppb	11:42:25
1	Sc 361.383	837733.1	837733.1	102.93	%			11:43:42
1	Y 371.029	704879.0	704879.0	102.76	%			11:43:42
1	Ag 328.068†	444.1	149.9	0.7307	ug/L	0.7307	ppb	11:43:42
1	As 188.979†	-11.5	7.7	3.4441	ug/L	3.4441	ppb	11:44:02
1	B 249.677†	25.9	543.7	13.234	ug/L	13.234	ppb	11:44:02
1	Ba 233.527†	-7.1	-8.4	-0.0685	ug/L	-0.0685	ppb	11:44:02
1	Be 313.107†	-4320.6	114.7	0.0460	ug/L	0.0460	ppb	11:43:42
1	Cd 226.502†	-163.4	38.8	0.4576	ug/L	0.4576	ppb	11:44:02
1	Co 228.616†	-68.0	6.6	0.1455	ug/L	0.1455	ppb	11:44:02
1	Cr 267.716†	72.0	-25.8	-0.3056	ug/L	-0.3056	ppb	11:44:02
1	Cu 324.752†	6404.5	-76.1	-0.2460	ug/L	-0.2460	ppb	11:43:42
1	Mn 257.610†	401.4	-14.3	-0.0187	ug/L	-0.0187	ppb	11:44:02
1	Mo 202.031†	32.0	11.7	0.8700	ug/L	0.8700	ppb	11:44:02
1	Ni 231.604†	87.5	9.9	0.2609	ug/L	0.2609	ppb	11:44:02
1	P 214.914†	217.4	-16.7	-10.579	ug/L	-10.579	ppb	11:44:02
1	Pb 220.353†	-61.0	5.3	0.6785	ug/L	0.6785	ppb	11:44:02
1	S 181.975 Axial†	45.0	-2.7	-4.0114	ug/L	-4.0114	ppb	11:44:02
1	Sb 206.836†	36.5	2.7	1.0110	ug/L	1.0110	ppb	11:44:02
1	Se 196.026†	-23.6	7.5	4.9609	ug/L	4.9609	ppb	11:44:02
1	Si 251.611†	485.5	25.8	0.8602	ug/L	0.8602	ppb	11:44:02
1	Sn 189.927†	8.7	2.3	0.4291	ug/L	0.4291	ppb	11:44:02
1	Ti 334.940†	-1310.7	113.6	0.1913	ug/L	0.1913	ppb	11:43:42
1	Tl 190.801†	-30.8	14.0	4.4715	ug/L	4.4715	ppb	11:44:02
1	U 409.014†	-1958.0	138.8	4.4347	ug/L	4.4347	ppb	11:43:42
1	V 292.402†	-1357.2	88.6	0.6624	ug/L	0.6624	ppb	11:43:42
1	Zn 213.857†	916.5	30.0	0.2995	ug/L	0.2995	ppb	11:44:02
1	SiO2†	477.0	7.2	0.4943	ug/L	0.4943	ppb	11:44:58
2	Sc Radial	5112.9	5112.9	107	%			11:42:51
2	Y RADIAL	5482.4	5482.4	106.9	%			11:42:51
2	Al 396.153Radial†	-16.1	-11.8	-9.5320	ug/L	-9.5320	ppb	11:42:51
2	Ca 317.933Radial†	14.3	-1.7	-2.8738	ug/L	-2.8738	ppb	11:43:11
2	Fe 238.204 Radial†	10.0	-0.5	-4.7665	ug/L	-4.7665	ppb	11:43:11
2	K 766.490 Radial†	3300.3	305.3	61.140	ug/L	61.140	ppb	11:42:51
2	Mg 279.077 IEC†	3.2	1.5	52.817	ug/L	52.817	ppb	11:43:11
2	Na 589.592 Radial†	-1484.4	175.9	56.996	ug/L	56.996	ppb	11:42:51
2	Sr 421.552†	-12.0	-28.5	-0.2029	ug/L	-0.2029	ppb	11:42:51
2	Sc 361.383	828673.0	828673.0	101.82	%			11:44:08
2	Y 371.029	698218.2	698218.2	101.79	%			11:44:08
2	Ag 328.068†	492.3	202.0	0.9890	ug/L	0.9890	ppb	11:44:08
2	As 188.979†	-18.9	0.3	0.1233	ug/L	0.1233	ppb	11:44:28
2	B 249.677†	46.9	564.6	13.743	ug/L	13.743	ppb	11:44:28
2	Ba 233.527†	-0.6	-2.1	-0.0170	ug/L	-0.0170	ppb	11:44:28
2	Be 313.107†	-4261.3	127.1	0.0504	ug/L	0.0504	ppb	11:44:08
2	Cd 226.502†	-158.8	41.6	0.4887	ug/L	0.4887	ppb	11:44:28
2	Co 228.616†	-78.6	-4.5	-0.0959	ug/L	-0.0959	ppb	11:44:28
2	Cr 267.716†	95.1	-2.4	-0.0289	ug/L	-0.0289	ppb	11:44:28
2	Cu 324.752†	6418.7	6.0	0.0175	ug/L	0.0175	ppb	11:44:08
2	Mn 257.610†	438.1	26.0	0.0278	ug/L	0.0278	ppb	11:44:28
2	Mo 202.031†	28.5	8.7	0.6432	ug/L	0.6432	ppb	11:44:28
2	Ni 231.604†	89.8	13.1	0.3452	ug/L	0.3452	ppb	11:44:28

2	P 214.914†	205.7	-25.9	-16.504 ug/L	-16.504 ppb	11:44:28
2	Pb 220.353†	-71.6	-5.7	-0.7326 ug/L	-0.7326 ppb	11:44:28
2	S 181.975 Axial†	47.2	-0.1	-0.0801 ug/L	-0.0801 ppb	11:44:28
2	Sb 206.836†	44.0	10.5	3.8510 ug/L	3.8510 ppb	11:44:28
2	Se 196.026†	-21.4	9.3	6.2301 ug/L	6.2301 ppb	11:44:28
2	Si 251.611†	467.4	13.1	0.4352 ug/L	0.4352 ppb	11:44:28
2	Sn 189.927†	8.3	2.1	0.3793 ug/L	0.3793 ppb	11:44:28
2	Ti 334.940†	-1444.6	-31.8	-0.0602 ug/L	-0.0602 ppb	11:44:08
2	Tl 190.801†	-21.9	22.3	7.1458 ug/L	7.1458 ppb	11:44:28
2	U 409.014†	-2001.4	75.3	2.4059 ug/L	2.4059 ppb	11:44:08
2	V 292.402†	-1423.0	9.5	0.0843 ug/L	0.0843 ppb	11:44:08
2	Zn 213.857†	908.8	32.3	0.3200 ug/L	0.3200 ppb	11:44:28
2	SiO2†	485.8	20.9	1.4797 ug/L	1.4797 ppb	11:45:03
3	Sc Radial	5028.6	5028.6	105 %		11:43:16
3	Y RADIAL	5399.2	5399.2	105.3 %		11:43:16
3	Al 396.153Radial†	-13.1	-9.2	-7.4088 ug/L	-7.4088 ppb	11:43:16
3	Ca 317.933Radial†	13.5	-2.3	-3.8875 ug/L	-3.8875 ppb	11:43:36
3	Fe 238.204 Radial†	10.4	0.1	0.5238 ug/L	0.5238 ppb	11:43:36
3	K 766.490 Radial†	3289.9	347.2	69.544 ug/L	69.544 ppb	11:43:16
3	Mg 279.077 IEC†	2.0	0.4	14.575 ug/L	14.575 ppb	11:43:36
3	Na 589.592 Radial†	-1440.1	194.8	63.122 ug/L	63.122 ppb	11:43:16
3	Sr 421.552†	-19.8	-36.0	-0.2569 ug/L	-0.2569 ppb	11:43:16
3	Sc 361.383	839676.6	839676.6	103.17 %		11:44:33
3	Y 371.029	706695.5	706695.5	103.02 %		11:44:33
3	Ag 328.068†	317.2	25.8	0.1293 ug/L	0.1293 ppb	11:44:33
3	As 188.979†	-7.2	11.8	5.3241 ug/L	5.3241 ppb	11:44:53
3	B 249.677†	1.5	520.0	12.655 ug/L	12.655 ppb	11:44:53
3	Ba 233.527†	-10.6	-11.8	-0.0957 ug/L	-0.0957 ppb	11:44:53
3	Be 313.107†	-4308.3	136.3	0.0543 ug/L	0.0543 ppb	11:44:33
3	Cd 226.502†	-173.3	29.6	0.3471 ug/L	0.3471 ppb	11:44:53
3	Co 228.616†	-82.5	-7.3	-0.1565 ug/L	-0.1565 ppb	11:44:53
3	Cr 267.716†	88.0	-10.4	-0.1225 ug/L	-0.1225 ppb	11:44:53
3	Cu 324.752†	6518.2	19.8	0.0623 ug/L	0.0623 ppb	11:44:33
3	Mn 257.610†	387.1	-29.1	-0.0347 ug/L	-0.0347 ppb	11:44:53
3	Mo 202.031†	29.3	9.1	0.6768 ug/L	0.6768 ppb	11:44:53
3	Ni 231.604†	79.0	1.4	0.0381 ug/L	0.0381 ppb	11:44:53
3	P 214.914†	220.4	-14.3	-9.1245 ug/L	-9.1245 ppb	11:44:53
3	Pb 220.353†	-49.8	16.3	2.0932 ug/L	2.0932 ppb	11:44:53
3	S 181.975 Axial†	46.7	-1.2	-1.8190 ug/L	-1.8190 ppb	11:44:53
3	Sb 206.836†	44.8	10.7	3.8832 ug/L	3.8832 ppb	11:44:53
3	Se 196.026†	-27.5	3.7	2.4623 ug/L	2.4623 ppb	11:44:53
3	Si 251.611†	504.5	43.1	1.4459 ug/L	1.4459 ppb	11:44:53
3	Sn 189.927†	-2.7	-8.8	-1.6205 ug/L	-1.6205 ppb	11:44:53
3	Ti 334.940†	-1383.3	46.2	0.0770 ug/L	0.0770 ppb	11:44:33
3	Tl 190.801†	-37.0	8.1	2.5833 ug/L	2.5833 ppb	11:44:53
3	U 409.014†	-2061.1	43.2	1.3801 ug/L	1.3801 ppb	11:44:33
3	V 292.402†	-1335.2	113.0	0.8276 ug/L	0.8276 ppb	11:44:33
3	Zn 213.857†	905.8	17.6	0.1754 ug/L	0.1754 ppb	11:44:53
3	SiO2†	514.6	42.5	3.0319 ug/L	3.0319 ppb	11:45:08

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	835360.9	102.64	%	0.722				0.70%
Sc Radial	5085.4	106	%	1.0				0.97%
Y 371.029	703264.2	102.52	%	0.651				0.63%
Y RADIAL	5461.0	106.5	%	1.06				1.00%
Ag 328.068†	125.9	0.6163	ug/L	0.44110	0.6163	ppb	0.44110	71.57%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-7.3	-5.8633	ug/L	4.63863	-5.8633	ppb	4.63863	79.11%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	6.6	2.9638	ug/L	2.63342	2.9638	ppb	2.63342	88.85%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	542.7	13.211	ug/L	0.5440	13.211	ppb	0.5440	4.12%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-7.4	-0.0604	ug/L	0.03995	-0.0604	ppb	0.03995	66.11%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	126.1	0.0502	ug/L	0.00416	0.0502	ppb	0.00416	8.28%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.6	-4.4391	ug/L	1.90215	-4.4391	ppb	1.90215	42.85%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	36.7	0.4311 ug/L	0.07444	0.4311 ppb	0.07444	17.27%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.7	-0.0356 ug/L	0.15973	-0.0356 ppb	0.15973	448.20%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-12.9	-0.1523 ug/L	0.14073	-0.1523 ppb	0.14073	92.39%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-16.8	-0.0554 ug/L	0.16661	-0.0554 ppb	0.16661	300.75%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-0.7	-6.1911 ug/L	7.52903	-6.1911 ppb	7.52903	121.61%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	289.5	57.971 ug/L	13.4403	57.971 ppb	13.4403	23.18%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.7	26.023 ug/L	23.2864	26.023 ppb	23.2864	89.49%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-5.8	-0.0085 ug/L	0.03248	-0.0085 ppb	0.03248	381.65%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	9.8	0.7300 ug/L	0.12243	0.7300 ppb	0.12243	16.77%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	187.8	60.837 ug/L	3.3460	60.837 ppb	3.3460	5.50%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	8.2	0.2147 ug/L	0.15866	0.2147 ppb	0.15866	73.89%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-18.9	-12.069 ug/L	3.9088	-12.069 ppb	3.9088	32.39%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	5.3	0.6797 ug/L	1.41289	0.6797 ppb	1.41289	207.87%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-1.3	-1.9702 ug/L	1.96999	-1.9702 ppb	1.96999	99.99%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	7.9	2.9151 ug/L	1.64901	2.9151 ppb	1.64901	56.57%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.8	4.5511 ug/L	1.91699	4.5511 ppb	1.91699	42.12%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	27.4	0.9138 ug/L	0.50744	0.9138 ppb	0.50744	55.53%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-1.5	-0.2707 ug/L	1.16922	-0.2707 ppb	1.16922	431.92%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-38.1	-0.2716 ug/L	0.07710	-0.2716 ppb	0.07710	28.39%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	42.7	0.0694 ug/L	0.12596	0.0694 ppb	0.12596	181.56%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	14.8	4.7335 ug/L	2.29247	4.7335 ppb	2.29247	48.43%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	85.8	2.7403 ug/L	1.55453	2.7403 ppb	1.55453	56.73%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	70.4	0.5248 ug/L	0.39030	0.5248 ppb	0.39030	74.37%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	26.6	0.2650 ug/L	0.07826	0.2650 ppb	0.07826	29.53%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	23.6	1.6686 ug/L	1.27928	1.6686 ppb	1.27928	76.67%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 3
Sample ID: LR1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 37
Date Collected: 1/14/2010 11:47:19
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4966.1	4966.1	104	%			11:49:12
1	Y RADIAL	5321.4	5321.4	103.7	%			11:49:12
1	Al 396.153Radial†	-42.3	-37.5	-28.874	ug/L	-28.874	ppb	11:49:12
1	Ca 317.933Radial†	11.4	-4.2	-7.0398	ug/L	-7.0398	ppb	11:49:32
1	Fe 238.204 Radial†	41146.6	39688.1	373100	ug/L	373100	ppb	11:49:12
1	K 766.490 Radial†	2902.3	12.7	2.5651	ug/L	2.5651	ppb	11:49:12
1	Mg 279.077 IEC†	13.2	11.2	3.9784	ug/L	3.9784	ppb	11:49:32
1	Na 589.592 Radial†	-1371.4	243.9	79.009	ug/L	79.009	ppb	11:49:12
1	Sr 421.552†	32.2	13.8	0.0985	ug/L	0.0985	ppb	11:49:12
1	Sc 361.383	841285.3	841285.3	103.37	%			11:50:30
1	Y 371.029	700674.3	700674.3	102.14	%			11:50:30
1	Ag 328.068†	-25045.8	-24511.1	0.5890	ug/L	0.5890	ppb	11:50:30
1	As 188.979†	-200.0	-174.6	8.8681	ug/L	8.8681	ppb	11:50:50
1	B 249.677†	2257.2	2702.2	5.1608	ug/L	5.1608	ppb	11:50:30
1	Ba 233.527†	-1720.2	-1665.6	-2.3305	ug/L	-2.3305	ppb	11:50:30
1	Be 313.107†	-4217.1	232.6	0.0926	ug/L	0.0926	ppb	11:50:30
1	Cd 226.502†	3186.6	3280.3	-0.0773	ug/L	-0.0773	ppb	11:50:30
1	Co 228.616†	209.1	275.0	0.5197	ug/L	0.5197	ppb	11:50:50
1	Cr 267.716†	-551.2	-629.0	-0.1131	ug/L	-0.1131	ppb	11:50:30
1	Cu 324.752†	367.2	-5942.8	0.7397	ug/L	0.7397	ppb	11:50:30
1	Mn 257.610†	-33094.8	-32420.5	-1.1843	ug/L	-1.1843	ppb	11:50:30
1	Mo 202.031†	-333.9	-342.4	3.5484	ug/L	3.5484	ppb	11:50:30
1	Ni 231.604†	182.7	101.6	2.6707	ug/L	2.6707	ppb	11:50:50
1	P 214.914†	678.4	428.5	-23.357	ug/L	-23.357	ppb	11:50:50
1	Pb 220.353†	224.5	281.8	0.3842	ug/L	0.3842	ppb	11:50:50
1	S 181.975 Axial†	59.9	11.5	17.177	ug/L	17.177	ppb	11:50:50
1	Sb 206.836†	30.4	-3.3	7.7399	ug/L	7.7399	ppb	11:50:50
1	Se 196.026†	-1774.0	-1685.8	94.375	ug/L	94.375	ppb	11:50:50
1	Si 251.611†	-654.3	-1078.9	-36.064	ug/L	-36.064	ppb	11:50:30
1	Sn 189.927†	-26.3	-31.5	0.4478	ug/L	0.4478	ppb	11:50:50
1	Ti 334.940†	-1366.7	64.8	0.0513	ug/L	0.0513	ppb	11:50:30
1	Tl 190.801†	-40.6	4.6	1.1696	ug/L	1.1696	ppb	11:50:50
1	U 409.014†	60.9	2099.8	24.546	ug/L	24.546	ppb	11:50:30
1	V 292.402†	6929.4	8110.7	3.9513	ug/L	3.9513	ppb	11:50:30
1	Zn 213.857†	4503.8	3496.7	-1.3099	ug/L	-1.3099	ppb	11:50:50
1	SiO2†	-618.3	-1054.4	-74.900	ug/L	-74.900	ppb	11:51:47
2	Sc Radial	4950.1	4950.1	103	%			11:49:37
2	Y RADIAL	5306.0	5306.0	103.4	%			11:49:37
2	Al 396.153Radial†	0.9	4.1	4.5442	ug/L	4.5442	ppb	11:49:37
2	Ca 317.933Radial†	11.1	-4.4	-7.4159	ug/L	-7.4159	ppb	11:49:57
2	Fe 238.204 Radial†	40949.7	39626.4	372520	ug/L	372520	ppb	11:49:37
2	K 766.490 Radial†	2879.0	-0.8	-0.1406	ug/L	-0.1406	ppb	11:49:37
2	Mg 279.077 IEC†	11.5	9.6	-52.343	ug/L	-52.343	ppb	11:49:57
2	Na 589.592 Radial†	-1389.2	222.3	72.017	ug/L	72.017	ppb	11:49:37
2	Sr 421.552†	89.3	69.2	0.4936	ug/L	0.4936	ppb	11:49:37
2	Sc 361.383	829050.3	829050.3	101.87	%			11:50:56
2	Y 371.029	691272.5	691272.5	100.77	%			11:50:56
2	Ag 328.068†	-24770.8	-24598.7	-0.0302	ug/L	-0.0302	ppb	11:50:56
2	As 188.979†	-207.0	-184.4	4.3291	ug/L	4.3291	ppb	11:51:16
2	B 249.677†	2090.6	2570.8	2.0612	ug/L	2.0612	ppb	11:50:56
2	Ba 233.527†	-1650.0	-1621.3	-1.9797	ug/L	-1.9797	ppb	11:50:56
2	Be 313.107†	-4244.7	145.2	0.0577	ug/L	0.0577	ppb	11:50:56
2	Cd 226.502†	3109.4	3250.0	-0.3710	ug/L	-0.3710	ppb	11:50:56
2	Co 228.616†	165.0	234.6	-0.3497	ug/L	-0.3497	ppb	11:51:16
2	Cr 267.716†	-505.0	-591.5	0.3164	ug/L	0.3164	ppb	11:50:56
2	Cu 324.752†	297.5	-6006.0	0.5051	ug/L	0.5051	ppb	11:50:56
2	Mn 257.610†	-32936.4	-32737.5	-1.6110	ug/L	-1.6110	ppb	11:50:56
2	Mo 202.031†	-342.2	-355.3	2.5456	ug/L	2.5456	ppb	11:50:56
2	Ni 231.604†	187.6	109.0	2.8668	ug/L	2.8668	ppb	11:51:16

2	P 214.914†	666.9	426.8	-23.898 ug/L	-23.898 ppb	11:51:16
2	Pb 220.353†	229.9	290.2	1.5301 ug/L	1.5301 ppb	11:51:16
2	S 181.975 Axial†	68.0	20.3	30.347 ug/L	30.347 ppb	11:51:16
2	Sb 206.836†	38.6	5.2	10.750 ug/L	10.750 ppb	11:51:16
2	Se 196.026†	-1764.2	-1701.5	81.968 ug/L	81.968 ppb	11:51:16
2	Si 251.611†	-621.1	-1055.6	-35.268 ug/L	-35.268 ppb	11:50:56
2	Sn 189.927†	-40.0	-45.4	-2.1314 ug/L	-2.1314 ppb	11:51:16
2	Ti 334.940†	-1420.2	-7.1	-0.0696 ug/L	-0.0696 ppb	11:50:56
2	Tl 190.801†	-49.8	-5.0	-1.9241 ug/L	-1.9241 ppb	11:51:16
2	U 409.014†	196.5	2233.9	28.893 ug/L	28.893 ppb	11:50:56
2	V 292.402†	6910.1	8190.7	4.6062 ug/L	4.6062 ppb	11:50:56
2	Zn 213.857†	4489.8	3547.3	-0.7502 ug/L	-0.7502 ppb	11:51:16
2	SiO2†	-697.7	-1141.1	-81.091 ug/L	-81.091 ppb	11:51:52
3	Sc Radial	5015.9	5015.9	105 %		11:50:02
3	Y RADIAL	5373.2	5373.2	104.8 %		11:50:02
3	Al 396.153Radial†	-22.9	-18.6	-13.710 ug/L	-13.710 ppb	11:50:02
3	Ca 317.933Radial†	5.7	-9.7	-16.363 ug/L	-16.363 ppb	11:50:22
3	Fe 238.204 Radial†	41422.1	39557.6	371870 ug/L	371870 ppb	11:50:02
3	K 766.490 Radial†	2915.2	-2.7	-0.5205 ug/L	-0.5205 ppb	11:50:02
3	Mg 279.077 IEC†	11.5	9.5	-56.564 ug/L	-56.564 ppb	11:50:22
3	Na 589.592 Radial†	-1424.8	206.0	66.729 ug/L	66.729 ppb	11:50:02
3	Sr 421.552†	124.0	101.3	0.7220 ug/L	0.7220 ppb	11:50:02
3	Sc 361.383	825054.9	825054.9	101.37 %		11:51:22
3	Y 371.029	690074.2	690074.2	100.60 %		11:51:22
3	Ag 328.068†	-24681.2	-24628.1	-0.3821 ug/L	-0.3821 ppb	11:51:22
3	As 188.979†	-197.5	-176.0	7.9699 ug/L	7.9699 ppb	11:51:42
3	B 249.677†	2166.4	2655.5	4.2284 ug/L	4.2284 ppb	11:51:22
3	Ba 233.527†	-1598.1	-1577.9	-1.6418 ug/L	-1.6418 ppb	11:51:22
3	Be 313.107†	-4258.6	111.4	0.0443 ug/L	0.0443 ppb	11:51:22
3	Cd 226.502†	3165.4	3320.0	0.5146 ug/L	0.5146 ppb	11:51:22
3	Co 228.616†	154.3	224.9	-0.5484 ug/L	-0.5484 ppb	11:51:42
3	Cr 267.716†	-623.7	-711.0	-1.1038 ug/L	-1.1038 ppb	11:51:22
3	Cu 324.752†	275.5	-6026.3	0.4104 ug/L	0.4104 ppb	11:51:22
3	Mn 257.610†	-32921.8	-32879.6	-1.8414 ug/L	-1.8414 ppb	11:51:22
3	Mo 202.031†	-322.6	-337.5	3.8129 ug/L	3.8129 ppb	11:51:22
3	Ni 231.604†	193.4	115.7	3.0425 ug/L	3.0425 ppb	11:51:42
3	P 214.914†	696.4	459.1	-2.7333 ug/L	-2.7333 ppb	11:51:42
3	Pb 220.353†	199.3	261.2	-2.1312 ug/L	-2.1312 ppb	11:51:42
3	S 181.975 Axial†	65.3	18.0	26.824 ug/L	26.824 ppb	11:51:42
3	Sb 206.836†	17.5	-15.5	3.2538 ug/L	3.2538 ppb	11:51:42
3	Se 196.026†	-1765.8	-1711.4	73.232 ug/L	73.232 ppb	11:51:42
3	Si 251.611†	-693.7	-1130.2	-37.797 ug/L	-37.797 ppb	11:51:22
3	Sn 189.927†	-24.2	-30.0	0.7046 ug/L	0.7046 ppb	11:51:42
3	Ti 334.940†	-1388.5	17.3	-0.0244 ug/L	-0.0244 ppb	11:51:22
3	Tl 190.801†	-56.8	-12.1	-4.1884 ug/L	-4.1884 ppb	11:51:42
3	U 409.014†	-56.6	1985.1	21.025 ug/L	21.025 ppb	11:51:22
3	V 292.402†	6720.4	8036.4	3.5913 ug/L	3.5913 ppb	11:51:22
3	Zn 213.857†	4485.1	3564.0	-0.5221 ug/L	-0.5221 ppb	11:51:42
3	SiO2†	-653.8	-1101.1	-78.261 ug/L	-78.261 ppb	11:51:57

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	831796.8	102.20	%	1.039				1.02%
Sc Radial	4977.4	104	%	0.7				0.69%
Y 371.029	694007.0	101.17	%	0.846				0.84%
Y RADIAL	5333.6	104.0	%	0.69				0.66%
Ag 328.068†	-24579.3	0.0589	ug/L	0.49165	0.0589	ppb	0.49165	834.52%
Al 396.153Radial†	-17.4	-12.680	ug/L	16.7329	-12.680	ppb	16.7329	131.96%
As 188.979†	-178.3	7.0557	ug/L	2.40359	7.0557	ppb	2.40359	34.07%
B 249.677†	2642.8	3.8168	ug/L	1.59028	3.8168	ppb	1.59028	41.67%
Ba 233.527†	-1621.6	-1.9840	ug/L	0.34438	-1.9840	ppb	0.34438	17.36%
Be 313.107†	163.1	0.0649	ug/L	0.02495	0.0649	ppb	0.02495	38.46%
Ca 317.933Radial†	-6.1	-10.273	ug/L	5.2774	-10.273	ppb	5.2774	51.37%
Cd 226.502†	3283.4	0.0221	ug/L	0.45108	0.0221	ppb	0.45108	>999.9%
Co 228.616†	244.8	-0.1262	ug/L	0.56807	-0.1262	ppb	0.56807	450.28%
Cr 267.716†	-643.8	-0.3002	ug/L	0.72835	-0.3002	ppb	0.72835	242.65%
Cu 324.752†	-5991.7	0.5518	ug/L	0.16951	0.5518	ppb	0.16951	30.72%
Fe 238.204 Radial†	39624.0	372490	ug/L	613.8	372490	ppb	613.8	0.16%
K 766.490 Radial†	3.1	0.6347	ug/L	1.68256	0.6347	ppb	1.68256	265.10%

Mg 279.077 IEC†	10.1	-34.976	ug/L	33.8016	-34.976	ppb	33.8016	96.64%
Mn 257.610†	-32679.2	-1.5456	ug/L	0.33339	-1.5456	ppb	0.33339	21.57%
Mo 202.031†	-345.1	3.3023	ug/L	0.66850	3.3023	ppb	0.66850	20.24%
Na 589.592 Radial†	224.0	72.585	ug/L	6.1595	72.585	ppb	6.1595	8.49%
Ni 231.604†	108.8	2.8600	ug/L	0.18602	2.8600	ppb	0.18602	6.50%
P 214.914†	438.1	-16.663	ug/L	12.0663	-16.663	ppb	12.0663	72.41%
Pb 220.353†	277.7	-0.0723	ug/L	1.87287	-0.0723	ppb	1.87287	>999.9%
S 181.975 Axial†	16.6	24.783	ug/L	6.8181	24.783	ppb	6.8181	27.51%
Sb 206.836†	-4.5	7.2479	ug/L	3.77233	7.2479	ppb	3.77233	52.05%
Se 196.026†	-1699.6	83.192	ug/L	10.6240	83.192	ppb	10.6240	12.77%
Si 251.611†	-1088.2	-36.376	ug/L	1.2930	-36.376	ppb	1.2930	3.55%
Sn 189.927†	-35.6	-0.3264	ug/L	1.56849	-0.3264	ppb	1.56849	480.60%
Sr 421.552†	61.4	0.4380	ug/L	0.31547	0.4380	ppb	0.31547	72.02%
Ti 334.940†	25.0	-0.0143	ug/L	0.06110	-0.0143	ppb	0.06110	428.68%
Tl 190.801†	-4.2	-1.6476	ug/L	2.68971	-1.6476	ppb	2.68971	163.25%
U 409.014†	2106.3	24.821	ug/L	3.9413	24.821	ppb	3.9413	15.88%
V 292.402†	8112.6	4.0496	ug/L	0.51453	4.0496	ppb	0.51453	12.71%
Zn 213.857†	3536.0	-0.8607	ug/L	0.40538	-0.8607	ppb	0.40538	47.10%
SiO2†	-1098.9	-78.084	ug/L	3.0992	-78.084	ppb	3.0992	3.97%

Sequence No.: 4
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/14/2010 11:54:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5063.6	5063.6	106	%			11:56:02
1	Y RADIAL	5366.5	5366.5	104.6	%			11:56:02
1	Al 396.153Radial†	6391.3	6050.9	4829.5	ug/L	4829.5	ppb	11:56:02
1	Ca 317.933Radial†	3109.2	2926.8	4928.6	ug/L	4928.6	ppb	11:56:22
1	Fe 238.204 Radial†	587.5	546.0	5148.7	ug/L	5148.7	ppb	11:56:22
1	K 766.490 Radial†	29400.0	25031.8	5008.6	ug/L	5008.6	ppb	11:56:02
1	Mg 279.077 IEC†	159.9	149.8	5258.6	ug/L	5258.6	ppb	11:56:22
1	Na 589.592 Radial†	31342.3	31224.0	10117	ug/L	10117	ppb	11:56:02
1	Sr 421.552†	75150.4	71092.5	506.70	ug/L	506.70	ppb	11:56:02
1	Sc 361.383	829412.1	829412.1	101.91	%			11:57:20
1	Y 371.029	686324.3	686324.3	100.05	%			11:57:20
1	Ag 328.068†	104712.6	102468.3	506.66	ug/L	506.66	ppb	11:57:25
1	As 188.979†	1143.1	1140.5	517.70	ug/L	517.70	ppb	11:57:45
1	B 249.677†	21543.9	21658.6	524.82	ug/L	524.82	ppb	11:57:25
1	Ba 233.527†	63387.8	62198.1	517.03	ug/L	517.03	ppb	11:57:25
1	Be 313.107†	1329417.5	1308811.2	520.98	ug/L	520.98	ppb	11:57:20
1	Cd 226.502†	45026.5	44380.1	520.05	ug/L	520.05	ppb	11:57:25
1	Co 228.616†	24316.1	23933.0	519.83	ug/L	519.83	ppb	11:57:25
1	Cr 267.716†	44647.4	43714.8	516.35	ug/L	516.35	ppb	11:57:25
1	Cu 324.752†	169781.3	160300.9	511.70	ug/L	511.70	ppb	11:57:25
1	Mn 257.610†	450884.7	442029.0	518.63	ug/L	518.63	ppb	11:57:20
1	Mo 202.031†	7064.0	6912.3	513.56	ug/L	513.56	ppb	11:57:45
1	Ni 231.604†	20174.0	19720.7	518.82	ug/L	518.82	ppb	11:57:25
1	P 214.914†	4328.6	4019.6	2465.7	ug/L	2465.7	ppb	11:57:45
1	Pb 220.353†	3989.0	3978.8	511.25	ug/L	511.25	ppb	11:57:45
1	S 181.975 Axial†	753.3	692.7	1032.9	ug/L	1032.9	ppb	11:57:45
1	Sb 206.836†	1461.3	1401.2	530.86	ug/L	530.86	ppb	11:57:45
1	Se 196.026†	770.0	785.9	544.26	ug/L	544.26	ppb	11:57:45
1	Si 251.611†	79580.9	77643.3	2611.6	ug/L	2611.6	ppb	11:57:25
1	Sn 189.927†	2880.2	2820.1	522.36	ug/L	522.36	ppb	11:57:45
1	Ti 334.940†	301886.2	297614.7	510.39	ug/L	510.39	ppb	11:57:25
1	Tl 190.801†	1591.3	1605.4	517.01	ug/L	517.01	ppb	11:57:45
1	U 409.014†	14801.7	16565.2	527.31	ug/L	527.31	ppb	11:57:25
1	V 292.402†	71289.6	71360.5	521.68	ug/L	521.68	ppb	11:57:25
1	Zn 213.857†	54385.9	52506.2	519.16	ug/L	519.16	ppb	11:57:25
1	SiO2†	79256.1	77314.3	5528.9	ug/L	5528.9	ppb	11:58:52
2	Sc Radial	5076.8	5076.8	106	%			11:56:28
2	Y RADIAL	5367.0	5367.0	104.6	%			11:56:28
2	Al 396.153Radial†	6432.4	6073.8	4847.4	ug/L	4847.4	ppb	11:56:28
2	Ca 317.933Radial†	3104.7	2915.0	4908.7	ug/L	4908.7	ppb	11:56:48
2	Fe 238.204 Radial†	585.1	542.3	5114.1	ug/L	5114.1	ppb	11:56:48
2	K 766.490 Radial†	29439.1	24995.9	5001.3	ug/L	5001.3	ppb	11:56:28
2	Mg 279.077 IEC†	157.2	146.8	5154.3	ug/L	5154.3	ppb	11:56:48
2	Na 589.592 Radial†	31544.3	31337.1	10153	ug/L	10153	ppb	11:56:28
2	Sr 421.552†	75470.2	71208.4	507.53	ug/L	507.53	ppb	11:56:28
2	Sc 361.383	816006.9	816006.9	100.26	%			11:57:51
2	Y 371.029	676270.6	676270.6	98.587	%			11:57:51
2	Ag 328.068†	105307.0	104749.1	517.89	ug/L	517.89	ppb	11:57:56
2	As 188.979†	1153.3	1169.2	530.67	ug/L	530.67	ppb	11:58:16
2	B 249.677†	21570.3	22032.3	533.88	ug/L	533.88	ppb	11:57:56
2	Ba 233.527†	63871.3	63702.3	529.53	ug/L	529.53	ppb	11:57:56
2	Be 313.107†	1317518.4	1318373.4	524.81	ug/L	524.81	ppb	11:57:51
2	Cd 226.502†	45359.6	45438.1	532.47	ug/L	532.47	ppb	11:57:56
2	Co 228.616†	24558.5	24566.7	533.59	ug/L	533.59	ppb	11:57:56
2	Cr 267.716†	44919.3	44705.7	528.05	ug/L	528.05	ppb	11:57:56
2	Cu 324.752†	171225.1	164477.7	525.03	ug/L	525.03	ppb	11:57:56
2	Mn 257.610†	446327.9	444752.5	521.83	ug/L	521.83	ppb	11:57:51
2	Mo 202.031†	7099.3	7061.4	524.63	ug/L	524.63	ppb	11:58:16
2	Ni 231.604†	20336.5	20208.0	531.64	ug/L	531.64	ppb	11:57:56

2	P 214.914†	4342.3	4103.0	2516.4 ug/L	2516.4 ppb	11:58:16
2	Pb 220.353†	4041.4	4095.3	526.21 ug/L	526.21 ppb	11:58:16
2	S 181.975 Axial†	766.8	718.4	1071.2 ug/L	1071.2 ppb	11:58:16
2	Sb 206.836†	1457.6	1421.0	538.43 ug/L	538.43 ppb	11:58:16
2	Se 196.026†	769.8	798.1	552.32 ug/L	552.32 ppb	11:58:16
2	Si 251.611†	80113.1	79457.0	2672.6 ug/L	2672.6 ppb	11:57:56
2	Sn 189.927†	2869.9	2856.2	529.05 ug/L	529.05 ppb	11:58:16
2	Ti 334.940†	304552.1	305140.0	523.29 ug/L	523.29 ppb	11:57:56
2	Tl 190.801†	1605.9	1645.6	529.92 ug/L	529.92 ppb	11:58:16
2	U 409.014†	14953.5	16955.3	539.75 ug/L	539.75 ppb	11:57:56
2	V 292.402†	71732.5	72951.4	533.32 ug/L	533.32 ppb	11:57:56
2	Zn 213.857†	54658.0	53654.3	530.52 ug/L	530.52 ppb	11:57:56
2	SiO2†	79169.7	78505.8	5614.0 ug/L	5614.0 ppb	11:58:58
3	Sc Radial	4980.1	4980.1	104 %		11:56:53
3	Y RADIAL	5323.0	5323.0	103.8 %		11:56:53
3	Al 396.153Radial†	6516.6	6272.8	5007.3 ug/L	5007.3 ppb	11:56:53
3	Ca 317.933Radial†	3120.0	2986.6	5029.2 ug/L	5029.2 ppb	11:57:13
3	Fe 238.204 Radial†	592.7	560.4	5283.7 ug/L	5283.7 ppb	11:57:13
3	K 766.490 Radial†	29329.6	25430.3	5088.3 ug/L	5088.3 ppb	11:56:53
3	Mg 279.077 IEC†	161.6	154.0	5405.7 ug/L	5405.7 ppb	11:57:13
3	Na 589.592 Radial†	31354.6	31732.9	10282 ug/L	10282 ppb	11:56:53
3	Sr 421.552†	75478.3	72599.8	517.45 ug/L	517.45 ppb	11:56:53
3	Sc 361.383	828986.7	828986.7	101.86 %		11:58:22
3	Y 371.029	686727.3	686727.3	100.11 %		11:58:22
3	Ag 328.068†	105256.9	103055.4	509.59 ug/L	509.59 ppb	11:58:27
3	As 188.979†	1153.3	1151.1	522.52 ug/L	522.52 ppb	11:58:47
3	B 249.677†	21536.4	21662.1	524.88 ug/L	524.88 ppb	11:58:27
3	Ba 233.527†	63394.3	62236.5	517.35 ug/L	517.35 ppb	11:58:27
3	Be 313.107†	1330915.8	1310951.7	521.83 ug/L	521.83 ppb	11:58:22
3	Cd 226.502†	45036.4	44412.5	520.42 ug/L	520.42 ppb	11:58:27
3	Co 228.616†	24372.8	24000.9	521.31 ug/L	521.31 ppb	11:58:27
3	Cr 267.716†	44643.7	43733.7	516.58 ug/L	516.58 ppb	11:58:27
3	Cu 324.752†	170254.1	160850.6	513.47 ug/L	513.47 ppb	11:58:27
3	Mn 257.610†	450413.7	441793.7	518.36 ug/L	518.36 ppb	11:58:22
3	Mo 202.031†	7125.0	6975.7	518.28 ug/L	518.28 ppb	11:58:47
3	Ni 231.604†	20224.9	19780.8	520.40 ug/L	520.40 ppb	11:58:27
3	P 214.914†	4365.6	4058.1	2489.8 ug/L	2489.8 ppb	11:58:47
3	Pb 220.353†	4024.3	4015.5	515.99 ug/L	515.99 ppb	11:58:47
3	S 181.975 Axial†	761.9	701.5	1046.0 ug/L	1046.0 ppb	11:58:47
3	Sb 206.836†	1472.5	1412.9	535.25 ug/L	535.25 ppb	11:58:47
3	Se 196.026†	782.8	798.9	553.39 ug/L	553.39 ppb	11:58:47
3	Si 251.611†	79617.4	77719.3	2614.1 ug/L	2614.1 ppb	11:58:27
3	Sn 189.927†	2886.8	2828.0	523.86 ug/L	523.86 ppb	11:58:47
3	Ti 334.940†	302504.8	298374.0	511.69 ug/L	511.69 ppb	11:58:27
3	Tl 190.801†	1589.5	1604.4	516.71 ug/L	516.71 ppb	11:58:47
3	U 409.014†	14741.2	16513.2	525.63 ug/L	525.63 ppb	11:58:27
3	V 292.402†	71354.7	71460.3	522.44 ug/L	522.44 ppb	11:58:27
3	Zn 213.857†	54398.7	52546.1	519.54 ug/L	519.54 ppb	11:58:27
3	SiO2†	80775.7	78846.1	5638.5 ug/L	5638.5 ppb	11:59:03

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	824801.9	101.34	%	0.936				0.92%
Sc Radial	5040.2	105	%	1.1				1.04%
Y 371.029	683107.4	99.584	%	0.8636				0.87%
Y RADIAL	5352.2	104.3	%	0.49				0.47%
Ag 328.068†	103424.3	511.38	ug/L	5.825	511.38	ppb	5.825	1.14%
QC value within limits for Ag 328.068 Recovery = 102.28%								
Al 396.153Radial†	6132.5	4894.7	ug/L	97.89	4894.7	ppb	97.89	2.00%
QC value within limits for Al 396.153Radial Recovery = 97.89%								
As 188.979†	1153.6	523.63	ug/L	6.553	523.63	ppb	6.553	1.25%
QC value within limits for As 188.979 Recovery = 104.73%								
B 249.677†	21784.3	527.86	ug/L	5.214	527.86	ppb	5.214	0.99%
QC value within limits for B 249.677 Recovery = 105.57%								
Ba 233.527†	62712.3	521.30	ug/L	7.123	521.30	ppb	7.123	1.37%
QC value within limits for Ba 233.527 Recovery = 104.26%								
Be 313.107†	1312712.1	522.54	ug/L	2.009	522.54	ppb	2.009	0.38%
QC value within limits for Be 313.107 Recovery = 104.51%								
Ca 317.933Radial†	2942.8	4955.5	ug/L	64.62	4955.5	ppb	64.62	1.30%

QC value within limits for Ca 317.933Radial Recovery = 99.11%

Cd 226.502†	44743.6	524.31 ug/L	7.064	524.31 ppb	7.064	1.35%
QC value within limits for Cd 226.502 Recovery = 104.86%						
Co 228.616†	24166.9	524.91 ug/L	7.555	524.91 ppb	7.555	1.44%
QC value within limits for Co 228.616 Recovery = 104.98%						
Cr 267.716†	44051.4	520.33 ug/L	6.691	520.33 ppb	6.691	1.29%
QC value within limits for Cr 267.716 Recovery = 104.07%						
Cu 324.752†	161876.4	516.73 ug/L	7.238	516.73 ppb	7.238	1.40%
QC value within limits for Cu 324.752 Recovery = 103.35%						
Fe 238.204 Radial†	549.6	5182.1 ug/L	89.63	5182.1 ppb	89.63	1.73%
QC value within limits for Fe 238.204 Radial Recovery = 103.64%						
K 766.490 Radial†	25152.7	5032.7 ug/L	48.25	5032.7 ppb	48.25	0.96%
QC value within limits for K 766.490 Radial Recovery = 100.65%						
Mg 279.077 IEC†	150.2	5272.9 ug/L	126.32	5272.9 ppb	126.32	2.40%
QC value within limits for Mg 279.077 IEC Recovery = 105.46%						
Mn 257.610†	442858.4	519.61 ug/L	1.927	519.61 ppb	1.927	0.37%
QC value within limits for Mn 257.610 Recovery = 103.92%						
Mo 202.031†	6983.1	518.82 ug/L	5.553	518.82 ppb	5.553	1.07%
QC value within limits for Mo 202.031 Recovery = 103.76%						
Na 589.592 Radial†	31431.3	10184 ug/L	86.6	10184 ppb	86.6	0.85%
QC value within limits for Na 589.592 Radial Recovery = 101.84%						
Ni 231.604†	19903.2	523.62 ug/L	6.990	523.62 ppb	6.990	1.33%
QC value within limits for Ni 231.604 Recovery = 104.72%						
P 214.914†	4060.2	2490.6 ug/L	25.35	2490.6 ppb	25.35	1.02%
QC value within limits for P 214.914 Recovery = 99.62%						
Pb 220.353†	4029.9	517.82 ug/L	7.642	517.82 ppb	7.642	1.48%
QC value within limits for Pb 220.353 Recovery = 103.56%						
S 181.975 Axial†	704.2	1050.0 ug/L	19.44	1050.0 ppb	19.44	1.85%
QC value within limits for S 181.975 Axial Recovery = 105.00%						
Sb 206.836†	1411.7	534.85 ug/L	3.802	534.85 ppb	3.802	0.71%
QC value within limits for Sb 206.836 Recovery = 106.97%						
Se 196.026†	794.3	549.99 ug/L	4.993	549.99 ppb	4.993	0.91%
QC value within limits for Se 196.026 Recovery = 110.00%						
Si 251.611†	78273.2	2632.7 ug/L	34.53	2632.7 ppb	34.53	1.31%
QC value within limits for Si 251.611 Recovery = 105.31%						
Sn 189.927†	2834.8	525.09 ug/L	3.510	525.09 ppb	3.510	0.67%
QC value within limits for Sn 189.927 Recovery = 105.02%						
Sr 421.552†	71633.5	510.56 ug/L	5.978	510.56 ppb	5.978	1.17%
QC value within limits for Sr 421.552 Recovery = 102.11%						
Ti 334.940†	300376.2	515.12 ug/L	7.105	515.12 ppb	7.105	1.38%
QC value within limits for Ti 334.940 Recovery = 103.02%						
Tl 190.801†	1618.5	521.22 ug/L	7.543	521.22 ppb	7.543	1.45%
QC value within limits for Tl 190.801 Recovery = 104.24%						
U 409.014†	16677.9	530.90 ug/L	7.709	530.90 ppb	7.709	1.45%
QC value within limits for U 409.014 Recovery = 106.18%						
V 292.402†	71924.1	525.81 ug/L	6.512	525.81 ppb	6.512	1.24%
QC value within limits for V 292.402 Recovery = 105.16%						
Zn 213.857†	52902.2	523.07 ug/L	6.450	523.07 ppb	6.450	1.23%
QC value within limits for Zn 213.857 Recovery = 104.61%						
SiO2†	78222.1	5593.8 ug/L	57.56	5593.8 ppb	57.56	1.03%
QC value within limits for SiO2 Recovery = 104.61%						

All analyte(s) passed QC.

Sequence No.: 5
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 12:01:12
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5039.4	5039.4	105	%			12:03:05
1	Y RADIAL	5419.9	5419.9	105.7	%			12:03:05
1	Al 396.153Radial†	-11.5	-7.7	-6.1915	ug/L	-6.1915	ppb	12:03:05
1	Ca 317.933Radial†	9.8	-5.8	-9.8013	ug/L	-9.8013	ppb	12:03:25
1	Fe 238.204 Radial†	9.2	-1.1	-10.382	ug/L	-10.382	ppb	12:03:25
1	K 766.490 Radial†	3143.6	201.4	40.348	ug/L	40.348	ppb	12:03:05
1	Mg 279.077 IEC†	3.0	1.4	47.818	ug/L	47.818	ppb	12:03:25
1	Na 589.592 Radial†	-1559.3	84.4	27.336	ug/L	27.336	ppb	12:03:05
1	Sr 421.552†	-14.7	-31.2	-0.2225	ug/L	-0.2225	ppb	12:03:05
1	Sc 361.383	845694.0	845694.0	103.91	%			12:04:22
1	Y 371.029	711161.0	711161.0	103.67	%			12:04:22
1	Ag 328.068†	460.5	161.6	0.7921	ug/L	0.7921	ppb	12:04:22
1	As 188.979†	-13.7	5.7	2.5626	ug/L	2.5626	ppb	12:04:42
1	B 249.677†	-146.1	378.0	9.2006	ug/L	9.2006	ppb	12:04:42
1	Ba 233.527†	-10.9	-11.9	-0.0975	ug/L	-0.0975	ppb	12:04:42
1	Be 313.107†	-4349.8	126.1	0.0504	ug/L	0.0504	ppb	12:04:22
1	Cd 226.502†	-191.2	13.6	0.1611	ug/L	0.1611	ppb	12:04:42
1	Co 228.616†	-75.8	-0.2	-0.0033	ug/L	-0.0033	ppb	12:04:42
1	Cr 267.716†	59.3	-38.7	-0.4567	ug/L	-0.4567	ppb	12:04:42
1	Cu 324.752†	6533.8	-10.2	-0.0345	ug/L	-0.0345	ppb	12:04:22
1	Mn 257.610†	400.8	-18.6	-0.0248	ug/L	-0.0248	ppb	12:04:42
1	Mo 202.031†	28.1	7.8	0.5762	ug/L	0.5762	ppb	12:04:42
1	Ni 231.604†	88.0	9.5	0.2505	ug/L	0.2505	ppb	12:04:42
1	P 214.914†	217.2	-18.9	-12.037	ug/L	-12.037	ppb	12:04:42
1	Pb 220.353†	-61.4	5.5	0.7057	ug/L	0.7057	ppb	12:04:42
1	S 181.975 Axial†	54.8	6.2	9.3139	ug/L	9.3139	ppb	12:04:42
1	Sb 206.836†	36.9	2.8	1.0282	ug/L	1.0282	ppb	12:04:42
1	Se 196.026†	-31.7	-0.2	-0.1402	ug/L	-0.1402	ppb	12:04:42
1	Si 251.611†	458.3	-4.8	-0.1684	ug/L	-0.1684	ppb	12:04:42
1	Sn 189.927†	7.3	0.9	0.1705	ug/L	0.1705	ppb	12:04:42
1	Ti 334.940†	-1362.7	75.6	0.1236	ug/L	0.1236	ppb	12:04:22
1	Tl 190.801†	-32.5	12.6	4.0332	ug/L	4.0332	ppb	12:04:42
1	U 409.014†	-2040.3	77.4	2.4755	ug/L	2.4755	ppb	12:04:22
1	V 292.402†	-1347.0	110.8	0.8147	ug/L	0.8147	ppb	12:04:22
1	Zn 213.857†	869.2	-23.9	-0.2385	ug/L	-0.2385	ppb	12:04:42
1	SiO2†	451.8	-21.4	-1.5516	ug/L	-1.5516	ppb	12:05:38
2	Sc Radial	5125.1	5125.1	107	%			12:03:30
2	Y RADIAL	5468.2	5468.2	106.6	%			12:03:30
2	Al 396.153Radial†	11.4	13.9	11.122	ug/L	11.122	ppb	12:03:30
2	Ca 317.933Radial†	17.8	1.5	2.5212	ug/L	2.5212	ppb	12:03:50
2	Fe 238.204 Radial†	9.3	-1.2	-11.076	ug/L	-11.076	ppb	12:03:50
2	K 766.490 Radial†	3017.8	33.8	6.7504	ug/L	6.7504	ppb	12:03:30
2	Mg 279.077 IEC†	2.6	0.9	31.858	ug/L	31.858	ppb	12:03:50
2	Na 589.592 Radial†	-1486.0	177.7	57.578	ug/L	57.578	ppb	12:03:30
2	Sr 421.552†	9.6	-8.3	-0.0589	ug/L	-0.0589	ppb	12:03:30
2	Sc 361.383	839886.4	839886.4	103.20	%			12:04:47
2	Y 371.029	707032.6	707032.6	103.07	%			12:04:47
2	Ag 328.068†	330.6	38.8	0.1871	ug/L	0.1871	ppb	12:04:47
2	As 188.979†	-18.1	1.3	0.5708	ug/L	0.5708	ppb	12:05:07
2	B 249.677†	-105.3	416.5	10.139	ug/L	10.139	ppb	12:05:07
2	Ba 233.527†	-6.6	-7.8	-0.0646	ug/L	-0.0646	ppb	12:05:07
2	Be 313.107†	-4336.2	110.4	0.0440	ug/L	0.0440	ppb	12:04:47
2	Cd 226.502†	-179.2	23.9	0.2816	ug/L	0.2816	ppb	12:05:07
2	Co 228.616†	-70.3	4.6	0.1011	ug/L	0.1011	ppb	12:05:07
2	Cr 267.716†	92.3	-6.3	-0.0752	ug/L	-0.0752	ppb	12:05:07
2	Cu 324.752†	6568.7	67.1	0.2127	ug/L	0.2127	ppb	12:04:47
2	Mn 257.610†	389.4	-27.0	-0.0340	ug/L	-0.0340	ppb	12:05:07
2	Mo 202.031†	25.5	5.4	0.4020	ug/L	0.4020	ppb	12:05:07
2	Ni 231.604†	94.2	16.1	0.4248	ug/L	0.4248	ppb	12:05:07

2	P 214.914†	224.8	-10.0	-6.4222 ug/L	-6.4222 ppb	12:05:07
2	Pb 220.353†	-53.2	13.1	1.6766 ug/L	1.6766 ppb	12:05:07
2	S 181.975 Axial†	43.6	-4.2	-6.2772 ug/L	-6.2772 ppb	12:05:07
2	Sb 206.836†	39.0	5.0	1.8512 ug/L	1.8512 ppb	12:05:07
2	Se 196.026†	-24.1	7.0	4.6470 ug/L	4.6470 ppb	12:05:07
2	Si 251.611†	448.7	-11.1	-0.3785 ug/L	-0.3785 ppb	12:05:07
2	Sn 189.927†	10.1	3.7	0.6831 ug/L	0.6831 ppb	12:05:07
2	Ti 334.940†	-1388.1	41.9	0.0689 ug/L	0.0689 ppb	12:04:47
2	Tl 190.801†	-39.4	5.7	1.8298 ug/L	1.8298 ppb	12:05:07
2	U 409.014†	-2053.7	50.9	1.6263 ug/L	1.6263 ppb	12:04:47
2	V 292.402†	-1406.4	44.3	0.3305 ug/L	0.3305 ppb	12:04:47
2	Zn 213.857†	886.0	-1.8	-0.0196 ug/L	-0.0196 ppb	12:05:07
2	SiO2†	440.4	-29.5	-2.1241 ug/L	-2.1241 ppb	12:05:43
3	Sc Radial	5037.6	5037.6	105 %		12:03:55
3	Y RADIAL	5418.8	5418.8	105.6 %		12:03:55
3	Al 396.153Radial†	-20.1	-15.8	-12.742 ug/L	-12.742 ppb	12:03:55
3	Ca 317.933Radial†	14.2	-1.6	-2.7610 ug/L	-2.7610 ppb	12:04:15
3	Fe 238.204 Radial†	10.5	0.1	1.4058 ug/L	1.4058 ppb	12:04:15
3	K 766.490 Radial†	3036.4	100.5	20.115 ug/L	20.115 ppb	12:03:55
3	Mg 279.077 IEC†	0.5	-1.0	-36.847 ug/L	-36.847 ppb	12:04:15
3	Na 589.592 Radial†	-1529.1	112.6	36.494 ug/L	36.494 ppb	12:03:55
3	Sr 421.552†	-4.6	-21.6	-0.1537 ug/L	-0.1537 ppb	12:03:55
3	Sc 361.383	837886.7	837886.7	102.95 %		12:05:12
3	Y 371.029	706163.9	706163.9	102.95 %		12:05:12
3	Ag 328.068†	480.5	185.1	0.9167 ug/L	0.9167 ppb	12:05:12
3	As 188.979†	-17.3	2.1	0.9314 ug/L	0.9314 ppb	12:05:32
3	B 249.677†	-84.3	436.6	10.627 ug/L	10.627 ppb	12:05:32
3	Ba 233.527†	3.5	1.9	0.0188 ug/L	0.0188 ppb	12:05:32
3	Be 313.107†	-4269.0	165.6	0.0656 ug/L	0.0656 ppb	12:05:12
3	Cd 226.502†	-190.1	13.0	0.1513 ug/L	0.1513 ppb	12:05:32
3	Co 228.616†	-72.4	2.4	0.0540 ug/L	0.0540 ppb	12:05:32
3	Cr 267.716†	66.2	-31.5	-0.3686 ug/L	-0.3686 ppb	12:05:32
3	Cu 324.752†	6403.3	-78.3	-0.2489 ug/L	-0.2489 ppb	12:05:12
3	Mn 257.610†	382.4	-32.9	-0.0369 ug/L	-0.0369 ppb	12:05:32
3	Mo 202.031†	31.6	11.4	0.8458 ug/L	0.8458 ppb	12:05:32
3	Ni 231.604†	80.2	2.8	0.0725 ug/L	0.0725 ppb	12:05:32
3	P 214.914†	227.9	-6.5	-4.1238 ug/L	-4.1238 ppb	12:05:32
3	Pb 220.353†	-83.5	-16.5	-2.1149 ug/L	-2.1149 ppb	12:05:32
3	S 181.975 Axial†	51.7	3.7	5.5824 ug/L	5.5824 ppb	12:05:32
3	Sb 206.836†	45.9	11.9	4.3542 ug/L	4.3542 ppb	12:05:32
3	Se 196.026†	-25.0	6.1	4.0962 ug/L	4.0962 ppb	12:05:32
3	Si 251.611†	459.1	0.1	-0.0076 ug/L	-0.0076 ppb	12:05:32
3	Sn 189.927†	3.2	-3.0	-0.5496 ug/L	-0.5496 ppb	12:05:32
3	Ti 334.940†	-1473.7	-44.4	-0.0725 ug/L	-0.0725 ppb	12:05:12
3	Tl 190.801†	-31.4	13.4	4.2913 ug/L	4.2913 ppb	12:05:32
3	U 409.014†	-2165.7	-62.6	-1.9994 ug/L	-1.9994 ppb	12:05:12
3	V 292.402†	-1273.2	170.5	1.2371 ug/L	1.2371 ppb	12:05:12
3	Zn 213.857†	884.9	-0.8	-0.0079 ug/L	-0.0079 ppb	12:05:32
3	SiO2†	460.7	-8.7	-0.6465 ug/L	-0.6465 ppb	12:05:48

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	841155.7	103.35	%	0.498				0.48%
Sc Radial	5067.4	106	%	1.0				0.99%
Y 371.029	708119.2	103.23	%	0.389				0.38%
Y RADIAL	5435.6	106.0	%	0.55				0.52%
Ag 328.068†	128.5	0.6319	ug/L	0.39026	0.6319	ppb	0.39026	61.76%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.2	-2.6040	ug/L	12.33005	-2.6040	ppb	12.33005	473.51%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.0	1.3549	ug/L	1.06130	1.3549	ppb	1.06130	78.33%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	410.4	9.9888	ug/L	0.72480	9.9888	ppb	0.72480	7.26%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-5.9	-0.0478	ug/L	0.05992	-0.0478	ppb	0.05992	125.44%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	134.0	0.0533	ug/L	0.01111	0.0533	ppb	0.01111	20.83%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-2.0	-3.3471	ug/L	6.18211	-3.3471	ppb	6.18211	184.70%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	16.8	0.1980 ug/L	0.07254	0.1980 ppb	0.07254	36.63%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	2.3	0.0506 ug/L	0.05225	0.0506 ppb	0.05225	103.30%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-25.5	-0.3002 ug/L	0.19976	-0.3002 ppb	0.19976	66.55%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-7.1	-0.0235 ug/L	0.23099	-0.0235 ppb	0.23099	981.03%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	-0.7	-6.6840 ug/L	7.01461	-6.6840 ppb	7.01461	104.95%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	111.9	22.405 ug/L	16.9156	22.405 ppb	16.9156	75.50%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	0.4	14.276 ug/L	44.9872	14.276 ppb	44.9872	315.12%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	-26.1	-0.0319 ug/L	0.00630	-0.0319 ppb	0.00630	19.76%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	8.2	0.6080 ug/L	0.22359	0.6080 ppb	0.22359	36.78%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	124.9	40.469 ug/L	15.5080	40.469 ppb	15.5080	38.32%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	9.5	0.2493 ug/L	0.17612	0.2493 ppb	0.17612	70.65%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-11.8	-7.5276 ug/L	4.07075	-7.5276 ppb	4.07075	54.08%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	0.7	0.0891 ug/L	1.96951	0.0891 ppb	1.96951	>999.9%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	1.9	2.8730 ug/L	8.14105	2.8730 ppb	8.14105	283.36%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	6.6	2.4112 ug/L	1.73227	2.4112 ppb	1.73227	71.84%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	4.3	2.8677 ug/L	2.61939	2.8677 ppb	2.61939	91.34%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	-5.3	-0.1848 ug/L	0.18602	-0.1848 ppb	0.18602	100.65%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	0.6	0.1013 ug/L	0.61928	0.1013 ppb	0.61928	611.23%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-20.4	-0.1450 ug/L	0.08214	-0.1450 ppb	0.08214	56.63%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	24.4	0.0400 ug/L	0.10118	0.0400 ppb	0.10118	253.00%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	10.6	3.3848 ug/L	1.35283	3.3848 ppb	1.35283	39.97%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	21.9	0.7008 ug/L	2.37669	0.7008 ppb	2.37669	339.14%
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	108.5	0.7941 ug/L	0.45365	0.7941 ppb	0.45365	57.13%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-8.8	-0.0886 ug/L	0.12988	-0.0886 ppb	0.12988	146.52%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	-19.9	-1.4407 ug/L	0.74504	-1.4407 ppb	0.74504	51.71%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/14/2010 12:56:37
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5080.6	5080.6	106	%			12:58:29
1	Y RADIAL	5380.4	5380.4	104.9	%			12:58:29
1	Al 396.153Radial†	6507.0	6139.8	4901.0	ug/L	4901.0	ppb	12:58:29
1	Ca 317.933Radial†	3156.1	2961.3	4986.6	ug/L	4986.6	ppb	12:58:49
1	Fe 238.204 Radial†	597.4	553.5	5218.4	ug/L	5218.4	ppb	12:58:49
1	K 766.490 Radial†	29634.5	25159.8	5034.1	ug/L	5034.1	ppb	12:58:29
1	Mg 279.077 IEC†	159.2	148.6	5216.5	ug/L	5216.5	ppb	12:58:49
1	Na 589.592 Radial†	32363.8	32088.0	10397	ug/L	10397	ppb	12:58:29
1	Sr 421.552†	76641.7	72260.7	515.03	ug/L	515.03	ppb	12:58:29
1	Sc 361.383	849249.7	849249.7	104.35	%			12:59:46
1	Y 371.029	702077.5	702077.5	102.35	%			12:59:46
1	Ag 328.068†	105680.6	100995.8	499.42	ug/L	499.42	ppb	12:59:52
1	As 188.979†	1158.5	1129.1	512.54	ug/L	512.54	ppb	13:00:12
1	B 249.677†	21496.9	21119.8	511.71	ug/L	511.71	ppb	12:59:52
1	Ba 233.527†	64066.6	61395.8	510.36	ug/L	510.36	ppb	12:59:52
1	Be 313.107†	1328516.2	1277475.7	508.52	ug/L	508.52	ppb	12:59:46
1	Cd 226.502†	45474.6	43777.4	512.98	ug/L	512.98	ppb	12:59:52
1	Co 228.616†	24661.8	23707.0	514.92	ug/L	514.92	ppb	12:59:52
1	Cr 267.716†	44904.7	42938.0	507.18	ug/L	507.18	ppb	12:59:52
1	Cu 324.752†	172012.6	158547.6	506.11	ug/L	506.11	ppb	12:59:52
1	Mn 257.610†	451814.7	432585.5	507.57	ug/L	507.57	ppb	12:59:46
1	Mo 202.031†	7168.7	6850.7	509.00	ug/L	509.00	ppb	13:00:12
1	Ni 231.604†	20328.4	19406.3	510.55	ug/L	510.55	ppb	12:59:52
1	P 214.914†	4426.4	4014.1	2463.1	ug/L	2463.1	ppb	13:00:12
1	Pb 220.353†	4085.9	3980.2	511.43	ug/L	511.43	ppb	13:00:12
1	S 181.975 Axial†	760.9	682.7	1018.0	ug/L	1018.0	ppb	13:00:12
1	Sb 206.836†	1483.8	1389.2	526.22	ug/L	526.22	ppb	13:00:12
1	Se 196.026†	802.3	799.2	553.36	ug/L	553.36	ppb	13:00:12
1	Si 251.611†	80538.0	76736.5	2581.0	ug/L	2581.0	ppb	12:59:52
1	Sn 189.927†	2891.9	2765.3	512.24	ug/L	512.24	ppb	13:00:12
1	Ti 334.940†	305591.4	294245.9	504.62	ug/L	504.62	ppb	12:59:52
1	Tl 190.801†	1621.2	1597.5	514.42	ug/L	514.42	ppb	13:00:12
1	U 409.014†	14944.0	16362.3	520.84	ug/L	520.84	ppb	12:59:52
1	V 292.402†	71858.1	70271.3	513.74	ug/L	513.74	ppb	12:59:52
1	Zn 213.857†	54888.1	51740.8	511.58	ug/L	511.58	ppb	12:59:52
1	SiO2†	79966.4	76178.4	5447.5	ug/L	5447.5	ppb	13:01:19
2	Sc Radial	5092.3	5092.3	106	%			12:58:54
2	Y RADIAL	5383.9	5383.9	105.0	%			12:58:54
2	Al 396.153Radial†	6534.5	6151.5	4910.5	ug/L	4910.5	ppb	12:58:54
2	Ca 317.933Radial†	3190.1	2986.4	5028.9	ug/L	5028.9	ppb	12:59:14
2	Fe 238.204 Radial†	599.8	554.5	5228.2	ug/L	5228.2	ppb	12:59:14
2	K 766.490 Radial†	29776.8	25229.3	5048.0	ug/L	5048.0	ppb	12:58:54
2	Mg 279.077 IEC†	160.4	149.4	5244.6	ug/L	5244.6	ppb	12:59:14
2	Na 589.592 Radial†	32318.8	31975.4	10360	ug/L	10360	ppb	12:58:54
2	Sr 421.552†	76821.6	72263.4	515.05	ug/L	515.05	ppb	12:58:54
2	Sc 361.383	853746.4	853746.4	104.90	%			13:00:17
2	Y 371.029	704533.1	704533.1	102.71	%			13:00:17
2	Ag 328.068†	106314.8	101066.9	499.78	ug/L	499.78	ppb	13:00:23
2	As 188.979†	1162.7	1127.2	511.73	ug/L	511.73	ppb	13:00:43
2	B 249.677†	21883.9	21380.2	518.04	ug/L	518.04	ppb	13:00:23
2	Ba 233.527†	64755.6	61729.2	513.13	ug/L	513.13	ppb	13:00:23
2	Be 313.107†	1327782.3	1270070.3	505.59	ug/L	505.59	ppb	13:00:17
2	Cd 226.502†	45921.1	43973.6	515.28	ug/L	515.28	ppb	13:00:23
2	Co 228.616†	24876.5	23787.2	516.65	ug/L	516.65	ppb	13:00:23
2	Cr 267.716†	45315.6	43103.1	509.13	ug/L	509.13	ppb	13:00:23
2	Cu 324.752†	174499.0	160049.6	510.91	ug/L	510.91	ppb	13:00:23
2	Mn 257.610†	452811.9	431255.5	506.01	ug/L	506.01	ppb	13:00:17
2	Mo 202.031†	7169.8	6815.6	506.39	ug/L	506.39	ppb	13:00:43
2	Ni 231.604†	20527.6	19493.5	512.84	ug/L	512.84	ppb	13:00:23

2	P 214.914†	4389.3	3956.4	2425.3 ug/L	2425.3 ppb	13:00:43
2	Pb 220.353†	4045.7	3921.3	503.88 ug/L	503.88 ppb	13:00:43
2	S 181.975 Axial†	781.7	698.7	1041.9 ug/L	1041.9 ppb	13:00:43
2	Sb 206.836†	1482.1	1380.1	522.77 ug/L	522.77 ppb	13:00:43
2	Se 196.026†	782.4	776.3	538.04 ug/L	538.04 ppb	13:00:43
2	Si 251.611†	81597.1	77339.6	2601.4 ug/L	2601.4 ppb	13:00:23
2	Sn 189.927†	2887.0	2746.0	508.69 ug/L	508.69 ppb	13:00:43
2	Ti 334.940†	309321.3	296259.1	508.08 ug/L	508.08 ppb	13:00:23
2	Tl 190.801†	1621.9	1590.0	512.04 ug/L	512.04 ppb	13:00:43
2	U 409.014†	15111.5	16446.5	523.53 ug/L	523.53 ppb	13:00:23
2	V 292.402†	72592.8	70608.9	516.14 ug/L	516.14 ppb	13:00:23
2	Zn 213.857†	55389.3	51941.6	513.56 ug/L	513.56 ppb	13:00:23
2	SiO2†	80432.2	76218.8	5450.5 ug/L	5450.5 ppb	13:01:24
3	Sc Radial	5142.0	5142.0	107 %		12:59:19
3	Y RADIAL	5465.4	5465.4	106.5 %		12:59:19
3	Al 396.153Radial†	6633.0	6183.8	4936.6 ug/L	4936.6 ppb	12:59:19
3	Ca 317.933Radial†	3165.0	2934.0	4940.7 ug/L	4940.7 ppb	12:59:39
3	Fe 238.204 Radial†	594.2	543.8	5127.6 ug/L	5127.6 ppb	12:59:39
3	K 766.490 Radial†	30044.7	25208.2	5043.8 ug/L	5043.8 ppb	12:59:19
3	Mg 279.077 IEC†	163.3	150.7	5289.9 ug/L	5289.9 ppb	12:59:39
3	Na 589.592 Radial†	32594.9	31938.9	10348 ug/L	10348 ppb	12:59:19
3	Sr 421.552†	77620.7	72309.7	515.38 ug/L	515.38 ppb	12:59:19
3	Sc 361.383	856662.7	856662.7	105.26 %		13:00:48
3	Y 371.029	708557.2	708557.2	103.29 %		13:00:48
3	Ag 328.068†	107652.8	101993.2	504.30 ug/L	504.30 ppb	13:00:53
3	As 188.979†	1159.2	1120.1	508.50 ug/L	508.50 ppb	13:01:14
3	B 249.677†	21767.1	21198.2	513.63 ug/L	513.63 ppb	13:00:53
3	Ba 233.527†	64600.5	61371.7	510.16 ug/L	510.16 ppb	13:00:53
3	Be 313.107†	1335950.0	1273521.1	506.95 ug/L	506.95 ppb	13:00:48
3	Cd 226.502†	45973.1	43874.0	514.12 ug/L	514.12 ppb	13:00:53
3	Co 228.616†	24867.3	23697.7	514.71 ug/L	514.71 ppb	13:00:53
3	Cr 267.716†	45301.7	42942.8	507.24 ug/L	507.24 ppb	13:00:53
3	Cu 324.752†	173686.9	158711.8	506.64 ug/L	506.64 ppb	13:00:53
3	Mn 257.610†	453916.2	430835.3	505.50 ug/L	505.50 ppb	13:00:48
3	Mo 202.031†	7171.4	6793.8	504.77 ug/L	504.77 ppb	13:01:14
3	Ni 231.604†	20545.3	19443.8	511.53 ug/L	511.53 ppb	13:00:53
3	P 214.914†	4394.1	3946.7	2420.1 ug/L	2420.1 ppb	13:01:14
3	Pb 220.353†	4055.2	3917.2	503.37 ug/L	503.37 ppb	13:01:14
3	S 181.975 Axial†	770.4	685.5	1022.1 ug/L	1022.1 ppb	13:01:14
3	Sb 206.836†	1490.2	1383.0	523.78 ug/L	523.78 ppb	13:01:14
3	Se 196.026†	792.3	783.0	542.24 ug/L	542.24 ppb	13:01:14
3	Si 251.611†	81272.0	76765.9	2582.1 ug/L	2582.1 ppb	13:00:53
3	Sn 189.927†	2894.7	2743.9	508.29 ug/L	508.29 ppb	13:01:14
3	Ti 334.940†	308645.2	294613.0	505.24 ug/L	505.24 ppb	13:00:53
3	Tl 190.801†	1610.6	1574.1	506.92 ug/L	506.92 ppb	13:01:14
3	U 409.014†	14887.3	16184.6	515.18 ug/L	515.18 ppb	13:00:53
3	V 292.402†	72649.4	70427.2	514.81 ug/L	514.81 ppb	13:00:53
3	Zn 213.857†	55308.3	51684.9	511.03 ug/L	511.03 ppb	13:00:53
3	SiO2†	79701.5	75263.6	5382.1 ug/L	5382.1 ppb	13:01:29

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	853219.6	104.84	%	0.459				0.44%
Sc Radial	5105.0	107	%	0.7				0.64%
Y 371.029	705055.9	102.78	%	0.477				0.46%
Y RADIAL	5409.9	105.5	%	0.94				0.89%
Ag 328.068†	101352.0	501.17	ug/L	2.720	501.17	ppb	2.720	0.54%
QC value within limits for Ag 328.068 Recovery = 100.23%								
Al 396.153Radial†	6158.4	4916.1	ug/L	18.40	4916.1	ppb	18.40	0.37%
QC value within limits for Al 396.153Radial Recovery = 98.32%								
As 188.979†	1125.5	510.92	ug/L	2.139	510.92	ppb	2.139	0.42%
QC value within limits for As 188.979 Recovery = 102.18%								
B 249.677†	21232.7	514.46	ug/L	3.246	514.46	ppb	3.246	0.63%
QC value within limits for B 249.677 Recovery = 102.89%								
Ba 233.527†	61498.9	511.22	ug/L	1.660	511.22	ppb	1.660	0.32%
QC value within limits for Ba 233.527 Recovery = 102.24%								
Be 313.107†	1273689.0	507.02	ug/L	1.468	507.02	ppb	1.468	0.29%
QC value within limits for Be 313.107 Recovery = 101.40%								
Ca 317.933Radial†	2960.6	4985.4	ug/L	44.12	4985.4	ppb	44.12	0.89%

QC value within limits for Ca 317.933Radial Recovery = 99.71%

Cd 226.502†	43875.0	514.12 ug/L	1.150	514.12 ppb	1.150	0.22%
QC value within limits for Cd 226.502 Recovery = 102.82%						
Co 228.616†	23730.6	515.42 ug/L	1.064	515.42 ppb	1.064	0.21%
QC value within limits for Co 228.616 Recovery = 103.08%						
Cr 267.716†	42994.6	507.85 ug/L	1.109	507.85 ppb	1.109	0.22%
QC value within limits for Cr 267.716 Recovery = 101.57%						
Cu 324.752†	159103.0	507.89 ug/L	2.630	507.89 ppb	2.630	0.52%
QC value within limits for Cu 324.752 Recovery = 101.58%						
Fe 238.204 Radial†	550.6	5191.4 ug/L	55.45	5191.4 ppb	55.45	1.07%
QC value within limits for Fe 238.204 Radial Recovery = 103.83%						
K 766.490 Radial†	25199.1	5042.0 ug/L	7.15	5042.0 ppb	7.15	0.14%
QC value within limits for K 766.490 Radial Recovery = 100.84%						
Mg 279.077 IEC†	149.6	5250.3 ug/L	37.00	5250.3 ppb	37.00	0.70%
QC value within limits for Mg 279.077 IEC Recovery = 105.01%						
Mn 257.610†	431558.8	506.36 ug/L	1.076	506.36 ppb	1.076	0.21%
QC value within limits for Mn 257.610 Recovery = 101.27%						
Mo 202.031†	6820.0	506.72 ug/L	2.134	506.72 ppb	2.134	0.42%
QC value within limits for Mo 202.031 Recovery = 101.34%						
Na 589.592 Radial†	32000.8	10368 ug/L	25.2	10368 ppb	25.2	0.24%
QC value within limits for Na 589.592 Radial Recovery = 103.68%						
Ni 231.604†	19447.9	511.64 ug/L	1.152	511.64 ppb	1.152	0.23%
QC value within limits for Ni 231.604 Recovery = 102.33%						
P 214.914†	3972.4	2436.2 ug/L	23.49	2436.2 ppb	23.49	0.96%
QC value within limits for P 214.914 Recovery = 97.45%						
Pb 220.353†	3939.5	506.22 ug/L	4.518	506.22 ppb	4.518	0.89%
QC value within limits for Pb 220.353 Recovery = 101.24%						
S 181.975 Axial†	689.0	1027.3 ug/L	12.78	1027.3 ppb	12.78	1.24%
QC value within limits for S 181.975 Axial Recovery = 102.73%						
Sb 206.836†	1384.1	524.26 ug/L	1.769	524.26 ppb	1.769	0.34%
QC value within limits for Sb 206.836 Recovery = 104.85%						
Se 196.026†	786.2	544.55 ug/L	7.919	544.55 ppb	7.919	1.45%
QC value within limits for Se 196.026 Recovery = 108.91%						
Si 251.611†	76947.3	2588.2 ug/L	11.47	2588.2 ppb	11.47	0.44%
QC value within limits for Si 251.611 Recovery = 103.53%						
Sn 189.927†	2751.7	509.74 ug/L	2.174	509.74 ppb	2.174	0.43%
QC value within limits for Sn 189.927 Recovery = 101.95%						
Sr 421.552†	72277.9	515.15 ug/L	0.197	515.15 ppb	0.197	0.04%
QC value within limits for Sr 421.552 Recovery = 103.03%						
Ti 334.940†	295039.3	505.98 ug/L	1.842	505.98 ppb	1.842	0.36%
QC value within limits for Ti 334.940 Recovery = 101.20%						
Tl 190.801†	1587.2	511.13 ug/L	3.833	511.13 ppb	3.833	0.75%
QC value within limits for Tl 190.801 Recovery = 102.23%						
U 409.014†	16331.1	519.85 ug/L	4.263	519.85 ppb	4.263	0.82%
QC value within limits for U 409.014 Recovery = 103.97%						
V 292.402†	70435.8	514.90 ug/L	1.202	514.90 ppb	1.202	0.23%
QC value within limits for V 292.402 Recovery = 102.98%						
Zn 213.857†	51789.1	512.06 ug/L	1.333	512.06 ppb	1.333	0.26%
QC value within limits for Zn 213.857 Recovery = 102.41%						
SiO2†	75886.9	5426.7 ug/L	38.68	5426.7 ppb	38.68	0.71%
QC value within limits for SiO2 Recovery = 101.48%						

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 13:03:39
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4987.0	4987.0	104	%			13:05:32
1	Y RADIAL	5370.5	5370.5	104.7	%			13:05:32
1	Al 396.153Radial†	8.8	11.7	9.3202	ug/L	9.3202	ppb	13:05:32
1	Ca 317.933Radial†	14.3	-1.4	-2.3378	ug/L	-2.3378	ppb	13:05:52
1	Fe 238.204 Radial†	10.0	-0.3	-2.9480	ug/L	-2.9480	ppb	13:05:52
1	K 766.490 Radial†	3048.2	141.1	28.234	ug/L	28.234	ppb	13:05:32
1	Mg 279.077 IEC†	2.6	0.9	33.258	ug/L	33.258	ppb	13:05:52
1	Na 589.592 Radial†	-1312.7	305.7	99.050	ug/L	99.050	ppb	13:05:32
1	Sr 421.552†	19.4	1.4	0.0101	ug/L	0.0101	ppb	13:05:32
1	Sc 361.383	827537.7	827537.7	101.68	%			13:06:49
1	Y 371.029	696029.9	696029.9	101.47	%			13:06:49
1	Ag 328.068†	481.6	192.1	0.9458	ug/L	0.9458	ppb	13:06:49
1	As 188.979†	-21.3	-2.1	-0.9391	ug/L	-0.9391	ppb	13:07:09
1	B 249.677†	-247.9	274.7	6.6860	ug/L	6.6860	ppb	13:07:09
1	Ba 233.527†	-7.7	-9.0	-0.0739	ug/L	-0.0739	ppb	13:07:09
1	Be 313.107†	-4347.7	36.4	0.0150	ug/L	0.0150	ppb	13:06:49
1	Cd 226.502†	-175.2	25.3	0.2965	ug/L	0.2965	ppb	13:07:09
1	Co 228.616†	-74.1	-0.2	-0.0022	ug/L	-0.0022	ppb	13:07:09
1	Cr 267.716†	69.8	-27.1	-0.3183	ug/L	-0.3183	ppb	13:07:09
1	Cu 324.752†	6445.9	41.4	0.1325	ug/L	0.1325	ppb	13:06:49
1	Mn 257.610†	380.2	-30.4	-0.0373	ug/L	-0.0373	ppb	13:07:09
1	Mo 202.031†	31.9	12.1	0.8965	ug/L	0.8965	ppb	13:07:09
1	Ni 231.604†	88.1	11.5	0.3039	ug/L	0.3039	ppb	13:07:09
1	P 214.914†	221.7	-9.8	-6.2871	ug/L	-6.2871	ppb	13:07:09
1	Pb 220.353†	-68.7	-3.0	-0.3809	ug/L	-0.3809	ppb	13:07:09
1	S 181.975 Axial†	43.7	-3.5	-5.1640	ug/L	-5.1640	ppb	13:07:09
1	Sb 206.836†	37.9	4.5	1.6848	ug/L	1.6848	ppb	13:07:09
1	Se 196.026†	-31.4	-0.5	-0.3561	ug/L	-0.3561	ppb	13:07:09
1	Si 251.611†	436.3	-16.8	-0.5763	ug/L	-0.5763	ppb	13:07:09
1	Sn 189.927†	7.7	1.5	0.2716	ug/L	0.2716	ppb	13:07:09
1	Ti 334.940†	-1259.2	148.6	0.2525	ug/L	0.2525	ppb	13:06:49
1	Tl 190.801†	-26.9	17.4	5.5829	ug/L	5.5829	ppb	13:07:09
1	U 409.014†	-2107.1	-31.4	-1.0007	ug/L	-1.0007	ppb	13:06:49
1	V 292.402†	-1352.1	77.4	0.5701	ug/L	0.5701	ppb	13:06:49
1	Zn 213.857†	852.9	-21.5	-0.2164	ug/L	-0.2164	ppb	13:07:09
1	SiO2†	447.0	-16.6	-1.2124	ug/L	-1.2124	ppb	13:08:05
2	Sc Radial	5127.0	5127.0	107	%			13:05:57
2	Y RADIAL	5537.0	5537.0	107.9	%			13:05:57
2	Al 396.153Radial†	10.7	13.3	10.608	ug/L	10.608	ppb	13:05:57
2	Ca 317.933Radial†	12.9	-3.1	-5.2095	ug/L	-5.2095	ppb	13:06:17
2	Fe 238.204 Radial†	11.9	1.2	11.585	ug/L	11.585	ppb	13:06:17
2	K 766.490 Radial†	2916.5	-61.9	-12.438	ug/L	-12.438	ppb	13:05:57
2	Mg 279.077 IEC†	4.1	2.3	81.643	ug/L	81.643	ppb	13:06:17
2	Na 589.592 Radial†	-1370.2	286.5	92.818	ug/L	92.818	ppb	13:05:57
2	Sr 421.552†	4.5	-13.0	-0.0924	ug/L	-0.0924	ppb	13:05:57
2	Sc 361.383	850529.5	850529.5	104.50	%			13:07:14
2	Y 371.029	714886.0	714886.0	104.22	%			13:07:14
2	Ag 328.068†	392.9	94.4	0.4665	ug/L	0.4665	ppb	13:07:14
2	As 188.979†	-22.0	-2.2	-0.9730	ug/L	-0.9730	ppb	13:07:34
2	B 249.677†	-232.7	295.9	7.1993	ug/L	7.1993	ppb	13:07:34
2	Ba 233.527†	-13.3	-14.2	-0.1155	ug/L	-0.1155	ppb	13:07:34
2	Be 313.107†	-4394.5	107.2	0.0429	ug/L	0.0429	ppb	13:07:14
2	Cd 226.502†	-170.2	34.7	0.4064	ug/L	0.4064	ppb	13:07:34
2	Co 228.616†	-77.6	-1.6	-0.0323	ug/L	-0.0323	ppb	13:07:34
2	Cr 267.716†	87.4	-12.1	-0.1431	ug/L	-0.1431	ppb	13:07:34
2	Cu 324.752†	6299.7	-269.9	-0.8644	ug/L	-0.8644	ppb	13:07:14
2	Mn 257.610†	436.2	13.1	0.0132	ug/L	0.0132	ppb	13:07:34
2	Mo 202.031†	32.6	11.9	0.8820	ug/L	0.8820	ppb	13:07:34
2	Ni 231.604†	82.1	3.4	0.0894	ug/L	0.0894	ppb	13:07:34

2	P 214.914†	231.5	-6.4	-3.9080 ug/L	-3.9080 ppb	13:07:34
2	Pb 220.353†	-64.5	2.8	0.3673 ug/L	0.3673 ppb	13:07:34
2	S 181.975 Axial†	51.0	2.4	3.5500 ug/L	3.5500 ppb	13:07:34
2	Sb 206.836†	45.1	10.4	3.8114 ug/L	3.8114 ppb	13:07:34
2	Se 196.026†	-32.6	-0.9	-0.5380 ug/L	-0.5380 ppb	13:07:34
2	Si 251.611†	454.4	-11.1	-0.3854 ug/L	-0.3854 ppb	13:07:34
2	Sn 189.927†	3.1	-3.2	-0.5836 ug/L	-0.5836 ppb	13:07:34
2	Ti 334.940†	-1368.4	77.6	0.1232 ug/L	0.1232 ppb	13:07:14
2	Tl 190.801†	-30.8	14.4	4.6029 ug/L	4.6029 ppb	13:07:34
2	U 409.014†	-1932.3	191.9	6.1290 ug/L	6.1290 ppb	13:07:14
2	V 292.402†	-1328.5	135.9	1.0044 ug/L	1.0044 ppb	13:07:14
2	Zn 213.857†	860.7	-36.7	-0.3666 ug/L	-0.3666 ppb	13:07:34
2	SiO2†	483.1	6.1	0.4101 ug/L	0.4101 ppb	13:08:10
3	Sc Radial	5101.5	5101.5	106 %		13:06:22
3	Y RADIAL	5480.6	5480.6	106.8 %		13:06:22
3	Al 396.153Radial†	-4.9	-1.4	-1.0971 ug/L	-1.0971 ppb	13:06:22
3	Ca 317.933Radial†	16.0	-0.1	-0.1339 ug/L	-0.1339 ppb	13:06:42
3	Fe 238.204 Radial†	9.7	-0.8	-7.4898 ug/L	-7.4898 ppb	13:06:42
3	K 766.490 Radial†	2946.3	-20.3	-4.1110 ug/L	-4.1110 ppb	13:06:22
3	Mg 279.077 IEC†	3.2	1.5	53.318 ug/L	53.318 ppb	13:06:42
3	Na 589.592 Radial†	-1243.5	399.1	129.30 ug/L	129.30 ppb	13:06:22
3	Sr 421.552†	16.0	-2.2	-0.0155 ug/L	-0.0155 ppb	13:06:22
3	Sc 361.383	854914.3	854914.3	105.04 %		13:07:39
3	Y 371.029	718778.0	718778.0	104.78 %		13:07:39
3	Ag 328.068†	370.7	71.3	0.3440 ug/L	0.3440 ppb	13:07:39
3	As 188.979†	-17.3	2.4	1.0608 ug/L	1.0608 ppb	13:07:59
3	B 249.677†	-237.0	292.9	7.1295 ug/L	7.1295 ppb	13:07:59
3	Ba 233.527†	-10.5	-11.5	-0.0946 ug/L	-0.0946 ppb	13:07:59
3	Be 313.107†	-4327.1	192.9	0.0773 ug/L	0.0773 ppb	13:07:39
3	Cd 226.502†	-179.8	26.4	0.3113 ug/L	0.3113 ppb	13:07:59
3	Co 228.616†	-76.0	0.3	0.0068 ug/L	0.0068 ppb	13:07:59
3	Cr 267.716†	83.6	-16.2	-0.1929 ug/L	-0.1929 ppb	13:07:59
3	Cu 324.752†	6412.3	-193.6	-0.6222 ug/L	-0.6222 ppb	13:07:39
3	Mn 257.610†	407.8	-16.0	-0.0217 ug/L	-0.0217 ppb	13:07:59
3	Mo 202.031†	18.8	-1.4	-0.1081 ug/L	-0.1081 ppb	13:07:59
3	Ni 231.604†	84.6	5.4	0.1431 ug/L	0.1431 ppb	13:07:59
3	P 214.914†	218.0	-20.4	-12.856 ug/L	-12.856 ppb	13:07:59
3	Pb 220.353†	-56.3	11.0	1.4107 ug/L	1.4107 ppb	13:07:59
3	S 181.975 Axial†	41.3	-7.1	-10.600 ug/L	-10.600 ppb	13:07:59
3	Sb 206.836†	39.9	5.3	1.9291 ug/L	1.9291 ppb	13:07:59
3	Se 196.026†	-25.8	5.8	3.8715 ug/L	3.8715 ppb	13:07:59
3	Si 251.611†	444.8	-22.4	-0.7545 ug/L	-0.7545 ppb	13:07:59
3	Sn 189.927†	9.8	3.2	0.5928 ug/L	0.5928 ppb	13:07:59
3	Ti 334.940†	-1283.1	165.5	0.2766 ug/L	0.2766 ppb	13:07:39
3	Tl 190.801†	-35.3	10.3	3.3075 ug/L	3.3075 ppb	13:07:59
3	U 409.014†	-1918.3	214.8	6.8610 ug/L	6.8610 ppb	13:07:39
3	V 292.402†	-1424.5	51.0	0.3814 ug/L	0.3814 ppb	13:07:39
3	Zn 213.857†	870.7	-31.4	-0.3126 ug/L	-0.3126 ppb	13:07:59
3	SiO2†	467.5	-11.2	-0.7987 ug/L	-0.7987 ppb	13:08:15

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	844327.2	103.74	%	1.807				1.74%
Sc Radial	5071.8	106	%	1.6				1.47%
Y 371.029	709898.0	103.49	%	1.774				1.71%
Y RADIAL	5462.7	106.5	%	1.65				1.55%
Ag 328.068†	119.3	0.5854	ug/L	0.31803	0.5854	ppb	0.31803	54.33%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	7.9	6.2771	ug/L	6.41864	6.2771	ppb	6.41864	102.26%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-0.6	-0.2838	ug/L	1.16453	-0.2838	ppb	1.16453	410.36%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	287.8	7.0049	ug/L	0.27842	7.0049	ppb	0.27842	3.97%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-11.6	-0.0947	ug/L	0.02083	-0.0947	ppb	0.02083	22.01%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	112.2	0.0451	ug/L	0.03118	0.0451	ppb	0.03118	69.19%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-1.5	-2.5604	ug/L	2.54515	-2.5604	ppb	2.54515	99.40%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	28.8	0.3381 ug/L	0.05966	0.3381 ppb	0.05966	17.65%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-0.5	-0.0093 ug/L	0.02048	-0.0093 ppb	0.02048	220.99%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-18.4	-0.2181 ug/L	0.09028	-0.2181 ppb	0.09028	41.39%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-140.7	-0.4513 ug/L	0.51994	-0.4513 ppb	0.51994	115.20%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	0.0	0.3822 ug/L	9.96375	0.3822 ppb	9.96375	>999.9%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	19.6	3.8950 ug/L	21.48524	3.8950 ppb	21.48524	551.61%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.6	56.073 ug/L	24.3103	56.073 ppb	24.3103	43.35%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-11.1	-0.0153 ug/L	0.02586	-0.0153 ppb	0.02586	169.23%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	7.5	0.5568 ug/L	0.57588	0.5568 ppb	0.57588	103.43%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	330.4	107.06 ug/L	19.514	107.06 ppb	19.514	18.23%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	6.8	0.1788 ug/L	0.11161	0.1788 ppb	0.11161	62.42%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-12.2	-7.6838 ug/L	4.63482	-7.6838 ppb	4.63482	60.32%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	3.6	0.4657 ug/L	0.89983	0.4657 ppb	0.89983	193.21%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-2.7	-4.0713 ug/L	7.13795	-4.0713 ppb	7.13795	175.32%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	6.7	2.4751 ug/L	1.16372	2.4751 ppb	1.16372	47.02%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.5	0.9925 ug/L	2.49497	0.9925 ppb	2.49497	251.38%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-16.8	-0.5721 ug/L	0.18458	-0.5721 ppb	0.18458	32.26%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	0.5	0.0936 ug/L	0.60806	0.0936 ppb	0.60806	649.65%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-4.6	-0.0326 ug/L	0.05335	-0.0326 ppb	0.05335	163.58%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	130.6	0.2174 ug/L	0.08252	0.2174 ppb	0.08252	37.96%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	14.1	4.4978 ug/L	1.14135	4.4978 ppb	1.14135	25.38%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	125.1	3.9964 ug/L	4.34310	3.9964 ppb	4.34310	108.67%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	88.1	0.6520 ug/L	0.31950	0.6520 ppb	0.31950	49.01%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-29.9	-0.2985 ug/L	0.07610	-0.2985 ppb	0.07610	25.49%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-7.2	-0.5336 ug/L	0.84312	-0.5336 ppb	0.84312	157.99%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

User canceled analysis.

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Analysis Begun

Start Time: 1/14/2010 14:19:45 **Plasma On Time: 1/11/2010 06:15:31**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601 **Autosampler Model: S10**

Sample Information File: C:\pe\Optima3\Sample Information\011410.sif
Batch ID:
Results Data Set: 011410
Results Library: C:\pe\Optima3\Results\Results.mdb

==========

Sequence No.: 8 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/14/2010 14:19:46**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: CCV

Rep#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5299.2	5299.2	111	%			14:21:38
1	Y RADIAL	5597.1	5597.1	109.1	%			14:21:38
1	Al 396.153Radial†	6499.8	5880.1	4693.7	ug/L	4693.7	ppb	14:21:38
1	Ca 317.933Radial†	3184.5	2864.2	4823.1	ug/L	4823.1	ppb	14:21:58
1	Fe 238.204 Radial†	593.9	527.1	4969.9	ug/L	4969.9	ppb	14:21:58
1	K 766.490 Radial†	29695.7	24062.2	4814.5	ug/L	4814.5	ppb	14:21:38
1	Mg 279.077 IEC†	157.3	140.7	4938.7	ug/L	4938.7	ppb	14:21:58
1	Na 589.592 Radial†	32039.0	30535.3	9893.6	ug/L	9893.6	ppb	14:21:38
1	Sr 421.552†	76899.3	69512.1	495.44	ug/L	495.44	ppb	14:21:38
1	Sc 361.383	884305.8	884305.8	108.66	%			14:22:56
1	Y 371.029	730225.6	730225.6	106.45	%			14:22:56
1	Ag 328.068†	107664.7	98807.0	488.53	ug/L	488.53	ppb	14:23:01
1	As 188.979†	1165.5	1091.5	495.49	ug/L	495.49	ppb	14:23:21
1	B 249.677†	21705.0	20494.6	496.58	ug/L	496.58	ppb	14:23:01
1	Ba 233.527†	64479.2	59341.5	493.29	ug/L	493.29	ppb	14:23:01
1	Be 313.107†	1339129.0	1236771.8	492.33	ug/L	492.33	ppb	14:22:56
1	Cd 226.502†	45442.1	42019.9	492.39	ug/L	492.39	ppb	14:23:01
1	Co 228.616†	24864.3	22956.4	498.60	ug/L	498.60	ppb	14:23:01
1	Cr 267.716†	45240.4	41541.0	490.67	ug/L	490.67	ppb	14:23:01
1	Cu 324.752†	174942.6	154709.3	493.85	ug/L	493.85	ppb	14:23:01
1	Mn 257.610†	455171.9	418510.5	491.05	ug/L	491.05	ppb	14:22:56
1	Mo 202.031†	7167.4	6577.1	488.67	ug/L	488.67	ppb	14:23:21
1	Ni 231.604†	20482.3	18775.6	493.95	ug/L	493.95	ppb	14:23:01
1	P 214.914†	4382.8	3805.8	2332.6	ug/L	2332.6	ppb	14:23:21
1	Pb 220.353†	4040.8	3783.5	486.17	ug/L	486.17	ppb	14:23:21
1	S 181.975 Axial†	773.6	665.6	992.41	ug/L	992.41	ppb	14:23:21
1	Sb 206.836†	1494.5	1342.7	508.43	ug/L	508.43	ppb	14:23:21
1	Se 196.026†	776.2	744.8	516.07	ug/L	516.07	ppb	14:23:21
1	Si 251.611†	81310.2	74387.5	2502.1	ug/L	2502.1	ppb	14:23:01
1	Sn 189.927†	2879.1	2643.6	489.72	ug/L	489.72	ppb	14:23:21
1	Ti 334.940†	309731.8	286446.9	491.25	ug/L	491.25	ppb	14:23:01
1	Tl 190.801†	1627.8	1542.0	496.58	ug/L	496.58	ppb	14:23:21
1	U 409.014†	15387.1	16202.4	515.80	ug/L	515.80	ppb	14:23:01
1	V 292.402†	72457.5	68093.0	497.78	ug/L	497.78	ppb	14:23:01
1	Zn 213.857†	55167.2	49912.5	493.50	ug/L	493.50	ppb	14:23:01
1	SiO2†	80213.4	73367.7	5246.6	ug/L	5246.6	ppb	14:24:28
2	Sc Radial	5320.4	5320.4	111	%			14:22:03
2	Y RADIAL	5674.7	5674.7	110.6	%			14:22:03
2	Al 396.153Radial†	6540.6	5893.4	4704.2	ug/L	4704.2	ppb	14:22:03
2	Ca 317.933Radial†	3169.2	2838.8	4780.4	ug/L	4780.4	ppb	14:22:23
2	Fe 238.204 Radial†	592.6	523.8	4939.0	ug/L	4939.0	ppb	14:22:23
2	K 766.490 Radial†	29566.9	23839.0	4769.8	ug/L	4769.8	ppb	14:22:03
2	Mg 279.077 IEC†	160.0	142.6	5006.0	ug/L	5006.0	ppb	14:22:23
2	Na 589.592 Radial†	31893.6	30288.7	9813.7	ug/L	9813.7	ppb	14:22:03
2	Sr 421.552†	76846.6	69186.9	493.12	ug/L	493.12	ppb	14:22:03
2	Sc 361.383	878170.1	878170.1	107.90	%			14:23:26

2	Y 371.029	725074.6	725074.6	105.70 %		14:23:26
2	Ag 328.068†	107229.6	99096.1	489.95 ug/L	489.95 ppb	14:23:32
2	As 188.979†	1144.6	1079.6	490.15 ug/L	490.15 ppb	14:23:52
2	B 249.677†	21655.4	20588.2	498.87 ug/L	498.87 ppb	14:23:32
2	Ba 233.527†	64349.9	59636.4	495.74 ug/L	495.74 ppb	14:23:32
2	Be 313.107†	1333400.6	1240074.0	493.64 ug/L	493.64 ppb	14:23:26
2	Cd 226.502†	45296.2	42176.9	494.24 ug/L	494.24 ppb	14:23:32
2	Co 228.616†	24699.3	22963.4	498.76 ug/L	498.76 ppb	14:23:32
2	Cr 267.716†	45139.9	41738.7	493.01 ug/L	493.01 ppb	14:23:32
2	Cu 324.752†	174556.7	155476.7	496.30 ug/L	496.30 ppb	14:23:32
2	Mn 257.610†	453256.0	419661.8	492.39 ug/L	492.39 ppb	14:23:26
2	Mo 202.031†	7167.5	6623.3	492.09 ug/L	492.09 ppb	14:23:52
2	Ni 231.604†	20442.3	18870.3	496.45 ug/L	496.45 ppb	14:23:32
2	P 214.914†	4363.0	3815.6	2338.4 ug/L	2338.4 ppb	14:23:52
2	Pb 220.353†	4028.9	3798.5	488.10 ug/L	488.10 ppb	14:23:52
2	S 181.975 Axial†	763.6	661.3	985.97 ug/L	985.97 ppb	14:23:52
2	Sb 206.836†	1487.5	1345.8	509.66 ug/L	509.66 ppb	14:23:52
2	Se 196.026†	782.5	755.6	523.23 ug/L	523.23 ppb	14:23:52
2	Si 251.611†	81051.1	74670.2	2511.6 ug/L	2511.6 ppb	14:23:32
2	Sn 189.927†	2868.8	2652.6	491.37 ug/L	491.37 ppb	14:23:52
2	Ti 334.940†	309374.9	288107.8	494.09 ug/L	494.09 ppb	14:23:32
2	Tl 190.801†	1614.0	1539.7	495.87 ug/L	495.87 ppb	14:23:52
2	U 409.014†	15395.7	16309.3	519.21 ug/L	519.21 ppb	14:23:32
2	V 292.402†	72461.6	68562.7	501.23 ug/L	501.23 ppb	14:23:32
2	Zn 213.857†	55040.1	50149.5	495.84 ug/L	495.84 ppb	14:23:32
2	SiO2†	81544.2	75116.9	5371.9 ug/L	5371.9 ppb	14:24:33
3	Sc Radial	5241.9	5241.9	109 %		14:22:28
3	Y RADIAL	5584.5	5584.5	108.9 %		14:22:28
3	Al 396.153Radial†	6452.4	5901.1	4710.6 ug/L	4710.6 ppb	14:22:28
3	Ca 317.933Radial†	3122.3	2838.7	4780.3 ug/L	4780.3 ppb	14:22:48
3	Fe 238.204 Radial†	583.8	523.8	4938.4 ug/L	4938.4 ppb	14:22:48
3	K 766.490 Radial†	29233.5	23933.3	4788.7 ug/L	4788.7 ppb	14:22:28
3	Mg 279.077 IEC†	157.3	142.3	4995.7 ug/L	4995.7 ppb	14:22:48
3	Na 589.592 Radial†	31557.7	30412.1	9853.7 ug/L	9853.7 ppb	14:22:28
3	Sr 421.552†	76113.8	69554.3	495.74 ug/L	495.74 ppb	14:22:28
3	Sc 361.383	883226.4	883226.4	108.52 %		14:23:57
3	Y 371.029	730246.7	730246.7	106.46 %		14:23:57
3	Ag 328.068†	104918.0	96397.1	476.66 ug/L	476.66 ppb	14:24:03
3	As 188.979†	1150.8	1079.3	489.92 ug/L	489.92 ppb	14:24:23
3	B 249.677†	21313.1	20157.9	488.42 ug/L	488.42 ppb	14:24:03
3	Ba 233.527†	63364.8	58387.2	485.36 ug/L	485.36 ppb	14:24:03
3	Be 313.107†	1343105.2	1241942.0	494.36 ug/L	494.36 ppb	14:23:57
3	Cd 226.502†	44641.6	41333.4	484.34 ug/L	484.34 ppb	14:24:03
3	Co 228.616†	24372.0	22530.7	489.37 ug/L	489.37 ppb	14:24:03
3	Cr 267.716†	44452.4	40865.7	482.70 ug/L	482.70 ppb	14:24:03
3	Cu 324.752†	170965.7	151241.5	482.78 ug/L	482.78 ppb	14:24:03
3	Mn 257.610†	454989.9	418854.8	491.45 ug/L	491.45 ppb	14:23:57
3	Mo 202.031†	7141.6	6561.5	487.50 ug/L	487.50 ppb	14:24:23
3	Ni 231.604†	20126.9	18471.2	485.95 ug/L	485.95 ppb	14:24:03
3	P 214.914†	4313.7	3747.1	2297.3 ug/L	2297.3 ppb	14:24:23
3	Pb 220.353†	4020.0	3768.9	484.31 ug/L	484.31 ppb	14:24:23
3	S 181.975 Axial†	766.0	659.4	983.17 ug/L	983.17 ppb	14:24:23
3	Sb 206.836†	1483.2	1334.0	505.15 ug/L	505.15 ppb	14:24:23
3	Se 196.026†	769.7	739.6	512.52 ug/L	512.52 ppb	14:24:23
3	Si 251.611†	79525.8	72834.7	2449.7 ug/L	2449.7 ppb	14:24:03
3	Sn 189.927†	2844.2	2614.7	484.36 ug/L	484.36 ppb	14:24:23
3	Ti 334.940†	303939.9	281458.2	482.69 ug/L	482.69 ppb	14:24:03
3	Tl 190.801†	1608.8	1526.3	491.56 ug/L	491.56 ppb	14:24:23
3	U 409.014†	15089.8	15945.7	507.62 ug/L	507.62 ppb	14:24:03
3	V 292.402†	71260.8	67071.8	490.40 ug/L	490.40 ppb	14:24:03
3	Zn 213.857†	54067.4	48961.1	484.08 ug/L	484.08 ppb	14:24:03
3	SiO2†	80978.6	74163.0	5303.6 ug/L	5303.6 ppb	14:24:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	881900.8	108.36	%	0.402				0.37%
Sc Radial	5287.2	110	%	0.8				0.77%
Y 371.029	728515.6	106.20	%	0.434				0.41%
Y RADIAL	5618.8	109.5	%	0.95				0.87%

Ag 328.068†	98100.1	485.05 ug/L	7.299	485.05 ppb	7.299	1.50%
QC value within limits for Ag 328.068 Recovery = 97.01%						
Al 396.153Radial†	5891.5	4702.8 ug/L	8.53	4702.8 ppb	8.53	0.18%
QC value within limits for Al 396.153Radial Recovery = 94.06%						
As 188.979†	1083.5	491.85 ug/L	3.152	491.85 ppb	3.152	0.64%
QC value within limits for As 188.979 Recovery = 98.37%						
B 249.677†	20413.6	494.62 ug/L	5.492	494.62 ppb	5.492	1.11%
QC value within limits for B 249.677 Recovery = 98.92%						
Ba 233.527†	59121.7	491.46 ug/L	5.426	491.46 ppb	5.426	1.10%
QC value within limits for Ba 233.527 Recovery = 98.29%						
Be 313.107†	1239595.9	493.44 ug/L	1.032	493.44 ppb	1.032	0.21%
QC value within limits for Be 313.107 Recovery = 98.69%						
Ca 317.933Radial†	2847.2	4794.6 ug/L	24.69	4794.6 ppb	24.69	0.51%
QC value within limits for Ca 317.933Radial Recovery = 95.89%						
Cd 226.502†	41843.4	490.32 ug/L	5.262	490.32 ppb	5.262	1.07%
QC value within limits for Cd 226.502 Recovery = 98.06%						
Co 228.616†	22816.9	495.58 ug/L	5.374	495.58 ppb	5.374	1.08%
QC value within limits for Co 228.616 Recovery = 99.12%						
Cr 267.716†	41381.8	488.80 ug/L	5.406	488.80 ppb	5.406	1.11%
QC value within limits for Cr 267.716 Recovery = 97.76%						
Cu 324.752†	153809.2	490.98 ug/L	7.200	490.98 ppb	7.200	1.47%
QC value within limits for Cu 324.752 Recovery = 98.20%						
Fe 238.204 Radial†	524.9	4949.1 ug/L	18.04	4949.1 ppb	18.04	0.36%
QC value within limits for Fe 238.204 Radial Recovery = 98.98%						
K 766.490 Radial†	23944.9	4791.0 ug/L	22.43	4791.0 ppb	22.43	0.47%
QC value within limits for K 766.490 Radial Recovery = 95.82%						
Mg 279.077 IEC†	141.9	4980.1 ug/L	36.25	4980.1 ppb	36.25	0.73%
QC value within limits for Mg 279.077 IEC Recovery = 99.60%						
Mn 257.610†	419009.0	491.63 ug/L	0.690	491.63 ppb	0.690	0.14%
QC value within limits for Mn 257.610 Recovery = 98.33%						
Mo 202.031†	6587.3	489.42 ug/L	2.387	489.42 ppb	2.387	0.49%
QC value within limits for Mo 202.031 Recovery = 97.88%						
Na 589.592 Radial†	30412.0	9853.7 ug/L	39.95	9853.7 ppb	39.95	0.41%
QC value within limits for Na 589.592 Radial Recovery = 98.54%						
Ni 231.604†	18705.7	492.12 ug/L	5.486	492.12 ppb	5.486	1.11%
QC value within limits for Ni 231.604 Recovery = 98.42%						
P 214.914†	3789.5	2322.8 ug/L	22.25	2322.8 ppb	22.25	0.96%
QC value within limits for P 214.914 Recovery = 92.91%						
Pb 220.353†	3783.6	486.20 ug/L	1.896	486.20 ppb	1.896	0.39%
QC value within limits for Pb 220.353 Recovery = 97.24%						
S 181.975 Axial†	662.1	987.18 ug/L	4.737	987.18 ppb	4.737	0.48%
QC value within limits for S 181.975 Axial Recovery = 98.72%						
Sb 206.836†	1340.8	507.75 ug/L	2.331	507.75 ppb	2.331	0.46%
QC value within limits for Sb 206.836 Recovery = 101.55%						
Se 196.026†	746.7	517.27 ug/L	5.455	517.27 ppb	5.455	1.05%
QC value within limits for Se 196.026 Recovery = 103.45%						
Si 251.611†	73964.1	2487.8 ug/L	33.30	2487.8 ppb	33.30	1.34%
QC value within limits for Si 251.611 Recovery = 99.51%						
Sn 189.927†	2637.0	488.48 ug/L	3.663	488.48 ppb	3.663	0.75%
QC value within limits for Sn 189.927 Recovery = 97.70%						
Sr 421.552†	69417.8	494.77 ug/L	1.433	494.77 ppb	1.433	0.29%
QC value within limits for Sr 421.552 Recovery = 98.95%						
Ti 334.940†	285337.6	489.34 ug/L	5.934	489.34 ppb	5.934	1.21%
QC value within limits for Ti 334.940 Recovery = 97.87%						
Tl 190.801†	1536.0	494.67 ug/L	2.721	494.67 ppb	2.721	0.55%
QC value within limits for Tl 190.801 Recovery = 98.93%						
U 409.014†	16152.5	514.21 ug/L	5.955	514.21 ppb	5.955	1.16%
QC value within limits for U 409.014 Recovery = 102.84%						
V 292.402†	67909.2	496.47 ug/L	5.531	496.47 ppb	5.531	1.11%
QC value within limits for V 292.402 Recovery = 99.29%						
Zn 213.857†	49674.4	491.14 ug/L	6.227	491.14 ppb	6.227	1.27%
QC value within limits for Zn 213.857 Recovery = 98.23%						
SiO2†	74215.9	5307.4 ug/L	62.74	5307.4 ppb	62.74	1.18%
QC value within limits for SiO2 Recovery = 99.25%						

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/14/2010 14:26:49
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5329.2	5329.2	111	%			14:28:42
1	Y RADIAL	5698.1	5698.1	111.1	%			14:28:42
1	Al 396.153Radial†	240.3	219.3	175.46	ug/L	175.46	ppb	14:28:42
1	Ca 317.933Radial†	150.4	120.1	202.23	ug/L	202.23	ppb	14:29:02
1	Fe 238.204 Radial†	22.9	10.7	100.45	ug/L	100.45	ppb	14:29:02
1	K 766.490 Radial†	3645.3	490.0	97.913	ug/L	97.913	ppb	14:28:42
1	Mg 279.077 IEC†	11.0	8.4	293.54	ug/L	293.54	ppb	14:29:02
1	Na 589.592 Radial†	-282.0	1313.4	425.55	ug/L	425.55	ppb	14:28:42
1	Sr 421.552†	779.6	683.7	4.8717	ug/L	4.8717	ppb	14:28:42
1	Sc 361.383	895366.8	895366.8	110.01	%			14:29:59
1	Y 371.029	752624.5	752624.5	109.72	%			14:29:59
1	Ag 328.068†	1493.2	1075.7	5.2877	ug/L	5.2877	ppb	14:29:59
1	As 188.979†	49.4	63.8	28.757	ug/L	28.757	ppb	14:30:19
1	B 249.677†	1914.9	2259.1	54.953	ug/L	54.953	ppb	14:29:59
1	Ba 233.527†	646.5	586.2	4.8766	ug/L	4.8766	ppb	14:30:19
1	Be 313.107†	9192.6	12668.1	5.0435	ug/L	5.0435	ppb	14:29:59
1	Cd 226.502†	269.8	442.8	5.1954	ug/L	5.1954	ppb	14:30:19
1	Co 228.616†	175.9	232.5	5.0605	ug/L	5.0605	ppb	14:30:19
1	Cr 267.716†	537.4	392.7	4.6188	ug/L	4.6188	ppb	14:30:19
1	Cu 324.752†	9904.8	2705.1	8.6063	ug/L	8.6063	ppb	14:29:59
1	Mn 257.610†	9996.7	8682.5	10.179	ug/L	10.179	ppb	14:29:59
1	Mo 202.031†	165.9	131.5	9.7716	ug/L	9.7716	ppb	14:30:19
1	Ni 231.604†	300.9	198.4	5.2204	ug/L	5.2204	ppb	14:30:19
1	P 214.914†	452.5	183.5	115.42	ug/L	115.42	ppb	14:30:19
1	Pb 220.353†	17.0	80.0	10.298	ug/L	10.298	ppb	14:30:19
1	S 181.975 Axial†	119.1	61.8	92.150	ug/L	92.150	ppb	14:30:19
1	Sb 206.836†	66.5	27.7	10.481	ug/L	10.481	ppb	14:30:19
1	Se 196.026†	25.8	53.8	36.351	ug/L	36.351	ppb	14:30:19
1	Si 251.611†	3781.1	2991.0	100.73	ug/L	100.73	ppb	14:29:59
1	Sn 189.927†	65.5	53.5	9.9195	ug/L	9.9195	ppb	14:30:19
1	Ti 334.940†	1893.3	3108.0	5.3060	ug/L	5.3060	ppb	14:29:59
1	Tl 190.801†	36.6	77.2	24.757	ug/L	24.757	ppb	14:30:19
1	U 409.014†	-98.8	1951.1	62.292	ug/L	62.292	ppb	14:29:59
1	V 292.402†	-648.3	817.8	6.1406	ug/L	6.1406	ppb	14:29:59
1	Zn 213.857†	1763.3	742.5	7.3506	ug/L	7.3506	ppb	14:30:19
1	SiO2†	3717.7	2923.1	209.30	ug/L	209.30	ppb	14:31:15
2	Sc Radial	5330.3	5330.3	111	%			14:29:07
2	Y RADIAL	5708.1	5708.1	111.3	%			14:29:07
2	Al 396.153Radial†	279.2	254.2	203.47	ug/L	203.47	ppb	14:29:07
2	Ca 317.933Radial†	153.2	122.6	206.38	ug/L	206.38	ppb	14:29:27
2	Fe 238.204 Radial†	20.6	8.7	81.470	ug/L	81.470	ppb	14:29:27
2	K 766.490 Radial†	3635.8	480.7	96.065	ug/L	96.065	ppb	14:29:07
2	Mg 279.077 IEC†	11.7	9.0	316.87	ug/L	316.87	ppb	14:29:27
2	Na 589.592 Radial†	-354.0	1248.8	404.61	ug/L	404.61	ppb	14:29:07
2	Sr 421.552†	819.2	719.1	5.1243	ug/L	5.1243	ppb	14:29:07
2	Sc 361.383	901922.6	901922.6	110.82	%			14:30:24
2	Y 371.029	757947.1	757947.1	110.49	%			14:30:24
2	Ag 328.068†	1464.9	1040.3	5.1020	ug/L	5.1020	ppb	14:30:24
2	As 188.979†	50.8	64.7	29.150	ug/L	29.150	ppb	14:30:44
2	B 249.677†	1929.5	2259.6	54.970	ug/L	54.970	ppb	14:30:24
2	Ba 233.527†	643.9	579.6	4.8209	ug/L	4.8209	ppb	14:30:44
2	Be 313.107†	9291.8	12696.9	5.0548	ug/L	5.0548	ppb	14:30:24
2	Cd 226.502†	264.2	436.0	5.1176	ug/L	5.1176	ppb	14:30:44
2	Co 228.616†	165.7	222.2	4.8360	ug/L	4.8360	ppb	14:30:44
2	Cr 267.716†	525.9	378.9	4.4523	ug/L	4.4523	ppb	14:30:44
2	Cu 324.752†	9988.7	2715.5	8.6352	ug/L	8.6352	ppb	14:30:24
2	Mn 257.610†	10022.9	8640.1	10.127	ug/L	10.127	ppb	14:30:24
2	Mo 202.031†	168.7	132.9	9.8737	ug/L	9.8737	ppb	14:30:44
2	Ni 231.604†	285.7	182.7	4.8071	ug/L	4.8071	ppb	14:30:44

2	P 214.914†	464.3	191.1	120.33 ug/L	120.33 ppb	14:30:44
2	Pb 220.353†	31.8	93.2	12.001 ug/L	12.001 ppb	14:30:44
2	S 181.975 Axial†	121.1	62.8	93.711 ug/L	93.711 ppb	14:30:44
2	Sb 206.836†	72.3	32.5	12.225 ug/L	12.225 ppb	14:30:44
2	Se 196.026†	17.5	46.2	31.191 ug/L	31.191 ppb	14:30:44
2	Si 251.611†	3803.9	2986.6	100.58 ug/L	100.58 ppb	14:30:24
2	Sn 189.927†	62.7	50.4	9.3625 ug/L	9.3625 ppb	14:30:44
2	Ti 334.940†	1859.4	3064.9	5.2284 ug/L	5.2284 ppb	14:30:24
2	Tl 190.801†	35.6	76.0	24.375 ug/L	24.375 ppb	14:30:44
2	U 409.014†	96.2	2127.8	67.936 ug/L	67.936 ppb	14:30:24
2	V 292.402†	-681.6	792.1	5.9706 ug/L	5.9706 ppb	14:30:24
2	Zn 213.857†	1760.1	727.9	7.2096 ug/L	7.2096 ppb	14:30:44
2	SiO2†	3774.6	2949.8	211.21 ug/L	211.21 ppb	14:31:20
3	Sc Radial	5441.1	5441.1	114 %		14:29:32
3	Y RADIAL	5814.8	5814.8	113.4 %		14:29:32
3	Al 396.153Radial†	251.2	224.5	179.60 ug/L	179.60 ppb	14:29:32
3	Ca 317.933Radial†	153.3	119.9	201.87 ug/L	201.87 ppb	14:29:52
3	Fe 238.204 Radial†	24.1	11.3	106.61 ug/L	106.61 ppb	14:29:52
3	K 766.490 Radial†	3596.7	379.8	75.840 ug/L	75.840 ppb	14:29:32
3	Mg 279.077 IEC†	12.4	9.4	331.64 ug/L	331.64 ppb	14:29:52
3	Na 589.592 Radial†	-317.2	1287.6	417.19 ug/L	417.19 ppb	14:29:32
3	Sr 421.552†	825.9	710.0	5.0596 ug/L	5.0596 ppb	14:29:32
3	Sc 361.383	889612.0	889612.0	109.31 %		14:30:50
3	Y 371.029	749218.6	749218.6	109.22 %		14:30:50
3	Ag 328.068†	1511.4	1101.1	5.4175 ug/L	5.4175 ppb	14:30:50
3	As 188.979†	50.3	64.9	29.250 ug/L	29.250 ppb	14:31:10
3	B 249.677†	1941.2	2294.5	55.813 ug/L	55.813 ppb	14:30:50
3	Ba 233.527†	648.6	591.9	4.9251 ug/L	4.9251 ppb	14:31:10
3	Be 313.107†	9118.5	12654.3	5.0381 ug/L	5.0381 ppb	14:30:50
3	Cd 226.502†	260.7	436.0	5.1142 ug/L	5.1142 ppb	14:31:10
3	Co 228.616†	175.4	233.2	5.0759 ug/L	5.0759 ppb	14:31:10
3	Cr 267.716†	525.7	385.2	4.5316 ug/L	4.5316 ppb	14:31:10
3	Cu 324.752†	9952.2	2806.8	8.9319 ug/L	8.9319 ppb	14:30:50
3	Mn 257.610†	9864.1	8619.9	10.105 ug/L	10.105 ppb	14:30:50
3	Mo 202.031†	172.1	138.1	10.262 ug/L	10.262 ppb	14:31:10
3	Ni 231.604†	279.1	180.2	4.7410 ug/L	4.7410 ppb	14:31:10
3	P 214.914†	468.7	200.9	126.51 ug/L	126.51 ppb	14:31:10
3	Pb 220.353†	14.1	77.5	9.9782 ug/L	9.9782 ppb	14:31:10
3	S 181.975 Axial†	122.7	65.8	98.131 ug/L	98.131 ppb	14:31:10
3	Sb 206.836†	70.0	31.3	11.791 ug/L	11.791 ppb	14:31:10
3	Se 196.026†	18.5	47.3	32.048 ug/L	32.048 ppb	14:31:10
3	Si 251.611†	3726.9	2963.7	99.799 ug/L	99.799 ppb	14:30:50
3	Sn 189.927†	60.8	49.5	9.1832 ug/L	9.1832 ppb	14:31:10
3	Ti 334.940†	1891.6	3117.5	5.3198 ug/L	5.3198 ppb	14:30:50
3	Tl 190.801†	32.2	73.3	23.520 ug/L	23.520 ppb	14:31:10
3	U 409.014†	-139.6	1913.3	61.083 ug/L	61.083 ppb	14:30:50
3	V 292.402†	-560.1	894.7	6.6999 ug/L	6.6999 ppb	14:30:50
3	Zn 213.857†	1769.7	758.6	7.5135 ug/L	7.5135 ppb	14:31:10
3	SiO2†	3764.1	2987.3	213.89 ug/L	213.89 ppb	14:31:25

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	895633.8	110.05	%	0.757				0.69%
Sc Radial	5366.9	112	%	1.3				1.20%
Y 371.029	753263.4	109.81	%	0.641				0.58%
Y RADIAL	5740.4	111.9	%	1.26				1.13%
Ag 328.068†	1072.4	5.2691	ug/L	0.15855	5.2691	ppb	0.15855	3.01%
QC value within limits for Ag 328.068 Recovery = 105.38%								
Al 396.153Radial†	232.7	186.18	ug/L	15.116	186.18	ppb	15.116	8.12%
QC value within limits for Al 396.153Radial Recovery = 93.09%								
As 188.979†	64.5	29.052	ug/L	0.2608	29.052	ppb	0.2608	0.90%
QC value within limits for As 188.979 Recovery = 96.84%								
B 249.677†	2271.1	55.245	ug/L	0.4916	55.245	ppb	0.4916	0.89%
QC value within limits for B 249.677 Recovery = 110.49%								
Ba 233.527†	585.9	4.8742	ug/L	0.05214	4.8742	ppb	0.05214	1.07%
QC value within limits for Ba 233.527 Recovery = 97.48%								
Be 313.107†	12673.1	5.0455	ug/L	0.00851	5.0455	ppb	0.00851	0.17%
QC value within limits for Be 313.107 Recovery = 100.91%								
Ca 317.933Radial†	120.8	203.49	ug/L	2.507	203.49	ppb	2.507	1.23%

QC value within limits for Ca 317.933Radial Recovery = 101.75%

Cd 226.502†	438.3	5.1424 ug/L	0.04591	5.1424 ppb	0.04591	0.89%
QC value within limits for Cd 226.502 Recovery = 102.85%						
Co 228.616†	229.3	4.9908 ug/L	0.13429	4.9908 ppb	0.13429	2.69%
QC value within limits for Co 228.616 Recovery = 99.82%						
Cr 267.716†	385.6	4.5342 ug/L	0.08326	4.5342 ppb	0.08326	1.84%
QC value within limits for Cr 267.716 Recovery = 90.68%						
Cu 324.752†	2742.5	8.7245 ug/L	0.18020	8.7245 ppb	0.18020	2.07%
QC value within limits for Cu 324.752 Recovery = 87.24%						
Fe 238.204 Radial†	10.2	96.175 ug/L	13.1019	96.175 ppb	13.1019	13.62%
QC value within limits for Fe 238.204 Radial Recovery = 96.18%						
K 766.490 Radial†	450.2	89.939 ug/L	12.2455	89.939 ppb	12.2455	13.62%
QC value less than the lower limit for K 766.490 Radial Recovery = 59.96%						
Mg 279.077 IEC†	8.9	314.01 ug/L	19.211	314.01 ppb	19.211	6.12%
QC value within limits for Mg 279.077 IEC Recovery = 104.67%						
Mn 257.610†	8647.5	10.137 ug/L	0.0382	10.137 ppb	0.0382	0.38%
QC value within limits for Mn 257.610 Recovery = 101.37%						
Mo 202.031†	134.2	9.9690 ug/L	0.25857	9.9690 ppb	0.25857	2.59%
QC value within limits for Mo 202.031 Recovery = 99.69%						
Na 589.592 Radial†	1283.3	415.78 ug/L	10.542	415.78 ppb	10.542	2.54%
QC value greater than the upper limit for Na 589.592 Radial Recovery = 138.59%						
Ni 231.604†	187.1	4.9228 ug/L	0.25981	4.9228 ppb	0.25981	5.28%
QC value within limits for Ni 231.604 Recovery = 98.46%						
P 214.914†	191.8	120.75 ug/L	5.558	120.75 ppb	5.558	4.60%
QC value within limits for P 214.914 Recovery = 80.50%						
Pb 220.353†	83.6	10.759 ug/L	1.0873	10.759 ppb	1.0873	10.11%
QC value within limits for Pb 220.353 Recovery = 107.59%						
S 181.975 Axial†	63.5	94.664 ug/L	3.1024	94.664 ppb	3.1024	3.28%
QC value within limits for S 181.975 Axial Recovery = 94.66%						
Sb 206.836†	30.5	11.499 ug/L	0.9079	11.499 ppb	0.9079	7.90%
QC value within limits for Sb 206.836 Recovery = 114.99%						
Se 196.026†	49.1	33.197 ug/L	2.7652	33.197 ppb	2.7652	8.33%
QC value within limits for Se 196.026 Recovery = 110.66%						
Si 251.611†	2980.4	100.37 ug/L	0.498	100.37 ppb	0.498	0.50%
QC value within limits for Si 251.611 Recovery = 100.37%						
Sn 189.927†	51.1	9.4884 ug/L	0.38393	9.4884 ppb	0.38393	4.05%
QC value within limits for Sn 189.927 Recovery = 94.88%						
Sr 421.552†	704.3	5.0185 ug/L	0.13121	5.0185 ppb	0.13121	2.61%
QC value within limits for Sr 421.552 Recovery = 100.37%						
Ti 334.940†	3096.8	5.2847 ug/L	0.04929	5.2847 ppb	0.04929	0.93%
QC value within limits for Ti 334.940 Recovery = 105.69%						
Tl 190.801†	75.5	24.217 ug/L	0.6333	24.217 ppb	0.6333	2.61%
QC value within limits for Tl 190.801 Recovery = 121.09%						
U 409.014†	1997.4	63.770 ug/L	3.6579	63.770 ppb	3.6579	5.74%
QC value within limits for U 409.014 Recovery = 127.54%						
V 292.402†	834.9	6.2704 ug/L	0.38158	6.2704 ppb	0.38158	6.09%
QC value within limits for V 292.402 Recovery = 125.41%						
Zn 213.857†	743.0	7.3579 ug/L	0.15211	7.3579 ppb	0.15211	2.07%
QC value within limits for Zn 213.857 Recovery = 73.58%						
SiO2†	2953.4	211.47 ug/L	2.306	211.47 ppb	2.306	1.09%
QC value within limits for SiO2 Recovery = 99.28%						

QC Failed. Continue with analysis.

Sequence No.: 10
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 14:33:36
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5495.7	5495.7	115	%			14:35:28
1	Y RADIAL	5892.5	5892.5	114.9	%			14:35:28
1	Al 396.153Radial†	6.9	9.2	7.4120	ug/L	7.4120	ppb	14:35:28
1	Ca 317.933Radial†	24.3	6.1	10.189	ug/L	10.189	ppb	14:35:48
1	Fe 238.204 Radial†	12.4	1.0	9.0056	ug/L	9.0056	ppb	14:35:48
1	K 766.490 Radial†	2767.1	-375.0	-75.179	ug/L	-75.179	ppb	14:35:28
1	Mg 279.077 IEC†	1.5	-0.2	-6.2703	ug/L	-6.2703	ppb	14:35:48
1	Na 589.592 Radial†	-1355.8	384.9	124.71	ug/L	124.71	ppb	14:35:28
1	Sr 421.552†	21.1	1.2	0.0085	ug/L	0.0085	ppb	14:35:28
1	Sc 361.383	888911.9	888911.9	109.22	%			14:36:45
1	Y 371.029	747538.3	747538.3	108.98	%			14:36:45
1	Ag 328.068†	341.1	30.7	0.1491	ug/L	0.1491	ppb	14:36:45
1	As 188.979†	-24.0	-3.1	-1.3881	ug/L	-1.3881	ppb	14:37:05
1	B 249.677†	-347.1	200.7	4.8832	ug/L	4.8832	ppb	14:37:05
1	Ba 233.527†	5.9	3.9	0.0348	ug/L	0.0348	ppb	14:37:05
1	Be 313.107†	-4319.9	357.1	0.1426	ug/L	0.1426	ppb	14:36:45
1	Cd 226.502†	-176.2	36.2	0.4258	ug/L	0.4258	ppb	14:37:05
1	Co 228.616†	-67.5	10.9	0.2358	ug/L	0.2358	ppb	14:37:05
1	Cr 267.716†	69.3	-32.2	-0.3829	ug/L	-0.3829	ppb	14:37:05
1	Cu 324.752†	6464.9	-379.0	-1.2151	ug/L	-1.2151	ppb	14:36:45
1	Mn 257.610†	414.4	-24.9	-0.0281	ug/L	-0.0281	ppb	14:37:05
1	Mo 202.031†	22.1	0.9	0.0681	ug/L	0.0681	ppb	14:37:05
1	Ni 231.604†	76.0	-5.6	-0.1469	ug/L	-0.1469	ppb	14:37:05
1	P 214.914†	215.0	-31.0	-19.547	ug/L	-19.547	ppb	14:37:05
1	Pb 220.353†	-73.5	-2.8	-0.3510	ug/L	-0.3510	ppb	14:37:05
1	S 181.975 Axial†	46.9	-3.5	-5.2386	ug/L	-5.2386	ppb	14:37:05
1	Sb 206.836†	50.4	13.4	4.9078	ug/L	4.9078	ppb	14:37:05
1	Se 196.026†	-29.0	3.8	2.5919	ug/L	2.5919	ppb	14:37:05
1	Si 251.611†	534.2	43.2	1.4572	ug/L	1.4572	ppb	14:37:05
1	Sn 189.927†	6.9	0.2	0.0315	ug/L	0.0315	ppb	14:37:05
1	Ti 334.940†	-1296.3	200.2	0.3409	ug/L	0.3409	ppb	14:36:45
1	Tl 190.801†	-38.1	9.0	2.8908	ug/L	2.8908	ppb	14:37:05
1	U 409.014†	-1875.5	323.8	10.342	ug/L	10.342	ppb	14:36:45
1	V 292.402†	-1385.6	138.6	1.0187	ug/L	1.0187	ppb	14:36:45
1	Zn 213.857†	818.8	-110.7	-1.1019	ug/L	-1.1019	ppb	14:37:05
1	SiO2†	544.1	42.0	3.0079	ug/L	3.0079	ppb	14:38:01
2	Sc Radial	5532.6	5532.6	115	%			14:35:53
2	Y RADIAL	5901.3	5901.3	115.0	%			14:35:53
2	Al 396.153Radial†	-0.9	2.5	1.9305	ug/L	1.9305	ppb	14:35:53
2	Ca 317.933Radial†	25.0	6.5	10.971	ug/L	10.971	ppb	14:36:13
2	Fe 238.204 Radial†	9.1	-2.0	-18.491	ug/L	-18.491	ppb	14:36:13
2	K 766.490 Radial†	2687.7	-459.8	-92.173	ug/L	-92.173	ppb	14:35:53
2	Mg 279.077 IEC†	3.4	1.4	50.720	ug/L	50.720	ppb	14:36:13
2	Na 589.592 Radial†	-1361.4	387.9	125.69	ug/L	125.69	ppb	14:35:53
2	Sr 421.552†	-14.1	-29.4	-0.2096	ug/L	-0.2096	ppb	14:35:53
2	Sc 361.383	899671.4	899671.4	110.54	%			14:37:11
2	Y 371.029	756888.9	756888.9	110.34	%			14:37:11
2	Ag 328.068†	359.7	43.8	0.2031	ug/L	0.2031	ppb	14:37:11
2	As 188.979†	-14.4	5.8	2.6007	ug/L	2.6007	ppb	14:37:31
2	B 249.677†	-325.5	224.1	5.4567	ug/L	5.4567	ppb	14:37:31
2	Ba 233.527†	-11.7	-12.1	-0.0978	ug/L	-0.0978	ppb	14:37:31
2	Be 313.107†	-4373.3	356.0	0.1423	ug/L	0.1423	ppb	14:37:11
2	Cd 226.502†	-181.3	33.6	0.3979	ug/L	0.3979	ppb	14:37:31
2	Co 228.616†	-78.7	1.5	0.0345	ug/L	0.0345	ppb	14:37:31
2	Cr 267.716†	74.2	-28.6	-0.3411	ug/L	-0.3411	ppb	14:37:31
2	Cu 324.752†	6494.7	-422.8	-1.3584	ug/L	-1.3584	ppb	14:37:11
2	Mn 257.610†	435.3	-10.5	-0.0162	ug/L	-0.0162	ppb	14:37:31
2	Mo 202.031†	32.7	10.3	0.7634	ug/L	0.7634	ppb	14:37:31
2	Ni 231.604†	84.3	1.1	0.0298	ug/L	0.0298	ppb	14:37:31

2	P 214.914†	210.3	-37.6	-23.739 ug/L	-23.739 ppb	14:37:31
2	Pb 220.353†	-59.6	10.7	1.3708 ug/L	1.3708 ppb	14:37:31
2	S 181.975 Axial†	50.5	-0.8	-1.1940 ug/L	-1.1940 ppb	14:37:31
2	Sb 206.836†	38.4	2.0	0.7503 ug/L	0.7503 ppb	14:37:31
2	Se 196.026†	-23.9	8.7	5.7643 ug/L	5.7643 ppb	14:37:31
2	Si 251.611†	513.2	18.4	0.6111 ug/L	0.6111 ppb	14:37:31
2	Sn 189.927†	10.1	3.0	0.5631 ug/L	0.5631 ppb	14:37:31
2	Ti 334.940†	-1275.3	233.3	0.3915 ug/L	0.3915 ppb	14:37:11
2	Tl 190.801†	-33.5	13.6	4.3422 ug/L	4.3422 ppb	14:37:31
2	U 409.014†	-1768.3	441.3	14.096 ug/L	14.096 ppb	14:37:11
2	V 292.402†	-1345.0	190.4	1.4147 ug/L	1.4147 ppb	14:37:11
2	Zn 213.857†	813.1	-124.8	-1.2410 ug/L	-1.2410 ppb	14:37:31
2	SiO2†	550.5	41.8	2.9755 ug/L	2.9755 ppb	14:38:06
3	Sc Radial	5506.7	5506.7	115 %		14:36:19
3	Y RADIAL	5927.1	5927.1	115.5 %		14:36:19
3	Al 396.153Radial†	0.5	3.7	2.9593 ug/L	2.9593 ppb	14:36:19
3	Ca 317.933Radial†	23.1	4.9	8.3156 ug/L	8.3156 ppb	14:36:39
3	Fe 238.204 Radial†	10.8	-0.5	-4.3327 ug/L	-4.3327 ppb	14:36:39
3	K 766.490 Radial†	2831.9	-323.4	-64.847 ug/L	-64.847 ppb	14:36:19
3	Mg 279.077 IEC†	0.7	-0.9	-30.126 ug/L	-30.126 ppb	14:36:39
3	Na 589.592 Radial†	-1387.6	359.6	116.52 ug/L	116.52 ppb	14:36:19
3	Sr 421.552†	-2.6	-19.4	-0.1387 ug/L	-0.1387 ppb	14:36:19
3	Sc 361.383	896520.6	896520.6	110.16 %		14:37:36
3	Y 371.029	755611.4	755611.4	110.15 %		14:37:36
3	Ag 328.068†	263.1	-42.8	-0.2154 ug/L	-0.2154 ppb	14:37:36
3	As 188.979†	-20.9	-0.1	-0.0519 ug/L	-0.0519 ppb	14:37:56
3	B 249.677†	-338.4	211.3	5.1430 ug/L	5.1430 ppb	14:37:56
3	Ba 233.527†	6.7	4.6	0.0410 ug/L	0.0410 ppb	14:37:56
3	Be 313.107†	-4401.6	316.4	0.1265 ug/L	0.1265 ppb	14:37:36
3	Cd 226.502†	-182.5	31.9	0.3762 ug/L	0.3762 ppb	14:37:56
3	Co 228.616†	-70.1	9.0	0.1956 ug/L	0.1956 ppb	14:37:56
3	Cr 267.716†	76.7	-26.1	-0.3106 ug/L	-0.3106 ppb	14:37:56
3	Cu 324.752†	6518.4	-380.6	-1.2210 ug/L	-1.2210 ppb	14:37:36
3	Mn 257.610†	429.5	-14.3	-0.0160 ug/L	-0.0160 ppb	14:37:56
3	Mo 202.031†	21.7	0.3	0.0251 ug/L	0.0251 ppb	14:37:56
3	Ni 231.604†	91.3	7.7	0.2036 ug/L	0.2036 ppb	14:37:56
3	P 214.914†	210.4	-36.9	-23.274 ug/L	-23.274 ppb	14:37:56
3	Pb 220.353†	-66.9	3.9	0.4972 ug/L	0.4972 ppb	14:37:56
3	S 181.975 Axial†	45.1	-5.5	-8.2040 ug/L	-8.2040 ppb	14:37:56
3	Sb 206.836†	35.3	-0.7	-0.2547 ug/L	-0.2547 ppb	14:37:56
3	Se 196.026†	-26.5	6.3	4.2218 ug/L	4.2218 ppb	14:37:56
3	Si 251.611†	512.6	19.5	0.6565 ug/L	0.6565 ppb	14:37:56
3	Sn 189.927†	8.8	1.8	0.3394 ug/L	0.3394 ppb	14:37:56
3	Ti 334.940†	-1301.2	205.8	0.3520 ug/L	0.3520 ppb	14:37:36
3	Tl 190.801†	-27.6	18.8	6.0197 ug/L	6.0197 ppb	14:37:56
3	U 409.014†	-1881.1	333.3	10.646 ug/L	10.646 ppb	14:37:36
3	V 292.402†	-1364.3	168.6	1.2370 ug/L	1.2370 ppb	14:37:36
3	Zn 213.857†	819.9	-116.0	-1.1561 ug/L	-1.1561 ppb	14:37:56
3	SiO2†	560.8	52.8	3.7878 ug/L	3.7878 ppb	14:38:11

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	895034.6	109.97	%	0.680				0.62%
Sc Radial	5511.7	115	%	0.4				0.34%
Y 371.029	753346.2	109.82	%	0.739				0.67%
Y RADIAL	5907.0	115.2	%	0.35				0.30%
Ag 328.068†	10.6	0.0456	ug/L	0.22763	0.0456	ppb	0.22763	498.93%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	5.1	4.1006	ug/L	2.91352	4.1006	ppb	2.91352	71.05%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	0.9	0.3869	ug/L	2.03028	0.3869	ppb	2.03028	524.74%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	212.0	5.1610	ug/L	0.28717	5.1610	ppb	0.28717	5.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-1.2	-0.0073	ug/L	0.07844	-0.0073	ppb	0.07844	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	343.2	0.1371	ug/L	0.00923	0.1371	ppb	0.00923	6.73%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.8	9.8252	ug/L	1.36458	9.8252	ppb	1.36458	13.89%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              33.9      0.4000 ug/L       0.02484      0.4000 ppb       0.02484   6.21%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               7.1      0.1553 ug/L       0.10654      0.1553 ppb       0.10654  68.60%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -29.0     -0.3448 ug/L       0.03626     -0.3448 ppb       0.03626  10.52%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             -394.1     -1.2649 ug/L       0.08109     -1.2649 ppb       0.08109   6.41%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        -0.5     -4.6061 ug/L      13.75039     -4.6061 ppb      13.75039 298.53%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -386.1     -77.400 ug/L       13.7979     -77.400 ppb       13.7979  17.83%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.1      4.7744 ug/L      41.53913      4.7744 ppb      41.53913 870.03%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -16.6     -0.0201 ug/L       0.00691     -0.0201 ppb       0.00691  34.38%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               3.9      0.2856 ug/L       0.41440      0.2856 ppb       0.41440 145.12%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      377.5      122.31 ug/L         5.034      122.31 ppb         5.034   4.12%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               1.1      0.0288 ug/L       0.17527      0.0288 ppb       0.17527 608.16%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -35.2     -22.187 ug/L        2.2975     -22.187 ppb        2.2975  10.36%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†               3.9      0.5057 ug/L       0.86094      0.5057 ppb       0.86094 170.25%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.3     -4.8788 ug/L       3.51881     -4.8788 ppb       3.51881  72.12%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               4.9      1.8011 ug/L       2.73701      1.8011 ppb       2.73701 151.96%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               6.3      4.1927 ug/L       1.58640      4.1927 ppb       1.58640  37.84%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              27.0      0.9082 ug/L       0.47594      0.9082 ppb       0.47594  52.40%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.7      0.3113 ug/L       0.26688      0.3113 ppb       0.26688  85.73%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†             -15.9     -0.1133 ug/L       0.11123     -0.1133 ppb       0.11123  98.20%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             213.1      0.3615 ug/L       0.02662      0.3615 ppb       0.02662   7.36%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              13.8      4.4176 ug/L       1.56582      4.4176 ppb       1.56582  35.45%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              366.1      11.694 ug/L        2.0851      11.694 ppb        2.0851  17.83%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              165.9      1.2234 ug/L       0.19835      1.2234 ppb       0.19835  16.21%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -117.1     -1.1663 ug/L       0.07009     -1.1663 ppb       0.07009   6.01%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    45.5      3.2571 ug/L       0.45991      3.2571 ppb       0.45991  14.12%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 1/14/2010 15:04:17 Plasma On Time: 1/11/2010 06:15:31
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\011410A.sif
Batch ID:
Results Data Set: 011410
Results Library: C:\pe\Optima3\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 7
Sample ID: CCV Date Collected: 1/14/2010 15:04:18
Analyst: Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5393.2	5393.2	113	%			15:06:10
1	Y RADIAL	5721.8	5721.8	111.5	%			15:06:10
1	Al 396.153Radial†	6562.4	5833.2	4653.8	ug/L	4653.8	ppb	15:06:10
1	Ca 317.933Radial†	3162.3	2794.2	4705.3	ug/L	4705.3	ppb	15:06:30
1	Fe 238.204 Radial†	587.8	512.3	4831.9	ug/L	4831.9	ppb	15:06:30
1	K 766.490 Radial†	29827.7	23711.4	4744.3	ug/L	4744.3	ppb	15:06:10
1	Mg 279.077 IEC†	161.7	142.2	4991.7	ug/L	4991.7	ppb	15:06:30
1	Na 589.592 Radial†	31619.5	29657.7	9609.2	ug/L	9609.2	ppb	15:06:10
1	Sr 421.552†	76700.1	68123.0	485.54	ug/L	485.54	ppb	15:06:10
1	Sc 361.383	808099.6	808099.6	99.292	%			15:07:28
1	Y 371.029	670449.2	670449.2	97.739	%			15:07:28
1	Ag 328.068†	105432.3	105903.0	523.49	ug/L	523.49	ppb	15:07:33
1	As 188.979†	1172.2	1199.4	544.26	ug/L	544.26	ppb	15:07:53
1	B 249.677†	20952.6	21620.6	523.90	ug/L	523.90	ppb	15:07:33
1	Ba 233.527†	64121.9	64578.0	536.79	ug/L	536.79	ppb	15:07:33
1	Be 313.107†	1226025.1	1239085.5	493.33	ug/L	493.33	ppb	15:07:28
1	Cd 226.502†	45122.5	45642.0	534.89	ug/L	534.89	ppb	15:07:33
1	Co 228.616†	24563.6	24811.6	538.92	ug/L	538.92	ppb	15:07:33
1	Cr 267.716†	44927.0	45151.8	533.32	ug/L	533.32	ppb	15:07:33
1	Cu 324.752†	172001.4	166930.6	532.84	ug/L	532.84	ppb	15:07:33
1	Mn 257.610†	418840.5	421424.8	494.45	ug/L	494.45	ppb	15:07:28
1	Mo 202.031†	7181.6	7213.6	535.90	ug/L	535.90	ppb	15:07:53
1	Ni 231.604†	20360.1	20430.3	537.49	ug/L	537.49	ppb	15:07:33
1	P 214.914†	4387.0	4190.4	2570.8	ug/L	2570.8	ppb	15:07:53
1	Pb 220.353†	4058.4	4151.9	533.46	ug/L	533.46	ppb	15:07:53
1	S 181.975 Axial†	760.2	719.1	1072.3	ug/L	1072.3	ppb	15:07:53
1	Sb 206.836†	1505.9	1484.0	561.80	ug/L	561.80	ppb	15:07:53
1	Se 196.026†	781.7	817.7	564.52	ug/L	564.52	ppb	15:07:53
1	Si 251.611†	79955.2	80079.8	2693.4	ug/L	2693.4	ppb	15:07:33
1	Sn 189.927†	2894.8	2909.3	538.84	ug/L	538.84	ppb	15:07:53
1	Ti 334.940†	306032.4	309603.1	530.93	ug/L	530.93	ppb	15:07:33
1	Tl 190.801†	1624.3	1679.8	540.74	ug/L	540.74	ppb	15:07:53
1	U 409.014†	14978.4	17126.3	545.23	ug/L	545.23	ppb	15:07:33
1	V 292.402†	71889.2	73809.4	539.71	ug/L	539.71	ppb	15:07:33
1	Zn 213.857†	54122.9	53648.8	530.44	ug/L	530.44	ppb	15:07:33
1	SiO2†	80124.7	80240.2	5738.0	ug/L	5738.0	ppb	15:09:01
2	Sc Radial	5242.8	5242.8	109	%			15:06:35
2	Y RADIAL	5583.5	5583.5	108.9	%			15:06:35
2	Al 396.153Radial†	6394.1	5846.7	4666.9	ug/L	4666.9	ppb	15:06:35
2	Ca 317.933Radial†	3166.7	2878.8	4847.8	ug/L	4847.8	ppb	15:06:55
2	Fe 238.204 Radial†	582.0	522.0	4922.1	ug/L	4922.1	ppb	15:06:55
2	K 766.490 Radial†	29139.7	23842.8	4770.6	ug/L	4770.6	ppb	15:06:35
2	Mg 279.077 IEC†	157.8	142.7	5010.2	ug/L	5010.2	ppb	15:06:55
2	Na 589.592 Radial†	30721.0	29642.3	9604.3	ug/L	9604.3	ppb	15:06:35
2	Sr 421.552†	74654.8	68208.4	486.15	ug/L	486.15	ppb	15:06:35
2	Sc 361.383	884833.7	884833.7	108.72	%			15:07:59
2	Y 371.029	732103.3	732103.3	106.73	%			15:07:59

2	Ag 328.068†	106254.5	97450.8	481.84 ug/L	481.84 ppb	15:08:04
2	As 188.979†	1153.6	1079.9	490.23 ug/L	490.23 ppb	15:08:24
2	B 249.677†	21428.1	20228.0	490.11 ug/L	490.11 ppb	15:08:04
2	Ba 233.527†	64131.9	58986.7	490.34 ug/L	490.34 ppb	15:08:04
2	Be 313.107†	1323294.0	1221471.6	486.24 ug/L	486.24 ppb	15:07:59
2	Cd 226.502†	45304.5	41868.4	490.62 ug/L	490.62 ppb	15:08:04
2	Co 228.616†	24637.7	22734.3	493.79 ug/L	493.79 ppb	15:08:04
2	Cr 267.716†	44882.9	41187.3	486.50 ug/L	486.50 ppb	15:08:04
2	Cu 324.752†	173248.5	153055.0	488.57 ug/L	488.57 ppb	15:08:04
2	Mn 257.610†	449754.3	413277.5	484.91 ug/L	484.91 ppb	15:07:59
2	Mo 202.031†	7168.9	6574.6	488.48 ug/L	488.48 ppb	15:08:24
2	Ni 231.604†	20325.1	18619.8	489.86 ug/L	489.86 ppb	15:08:04
2	P 214.914†	4362.2	3784.4	2320.0 ug/L	2320.0 ppb	15:08:24
2	Pb 220.353†	4015.6	3758.1	482.92 ug/L	482.92 ppb	15:08:24
2	S 181.975 Axial†	762.4	654.8	976.40 ug/L	976.40 ppb	15:08:24
2	Sb 206.836†	1496.8	1344.0	508.90 ug/L	508.90 ppb	15:08:24
2	Se 196.026†	787.7	754.9	522.70 ug/L	522.70 ppb	15:08:24
2	Si 251.611†	80602.5	73691.9	2478.6 ug/L	2478.6 ppb	15:08:04
2	Sn 189.927†	2880.3	2643.2	489.63 ug/L	489.63 ppb	15:08:24
2	Ti 334.940†	306954.2	283721.9	486.58 ug/L	486.58 ppb	15:08:04
2	Tl 190.801†	1619.7	1533.7	493.88 ug/L	493.88 ppb	15:08:24
2	U 409.014†	15055.0	15888.5	505.79 ug/L	505.79 ppb	15:08:04
2	V 292.402†	71936.1	67573.6	494.03 ug/L	494.03 ppb	15:08:04
2	Zn 213.857†	54877.4	49615.7	490.57 ug/L	490.57 ppb	15:08:04
2	SiO2†	80616.9	73694.9	5270.0 ug/L	5270.0 ppb	15:09:06
3	Sc Radial	5517.4	5517.4	115 %		15:07:01
3	Y RADIAL	5866.5	5866.5	114.4 %		15:07:01
3	Al 396.153Radial†	6573.8	5711.9	4559.0 ug/L	4559.0 ppb	15:07:01
3	Ca 317.933Radial†	3161.4	2730.2	4597.5 ug/L	4597.5 ppb	15:07:21
3	Fe 238.204 Radial†	581.8	495.4	4671.2 ug/L	4671.2 ppb	15:07:21
3	K 766.490 Radial†	30144.4	23390.1	4680.1 ug/L	4680.1 ppb	15:07:01
3	Mg 279.077 IEC†	159.7	137.1	4814.7 ug/L	4814.7 ppb	15:07:21
3	Na 589.592 Radial†	31672.7	29071.6	9419.4 ug/L	9419.4 ppb	15:07:01
3	Sr 421.552†	76866.2	66733.7	475.64 ug/L	475.64 ppb	15:07:01
3	Sc 361.383	894749.4	894749.4	109.94 %		15:08:30
3	Y 371.029	741475.5	741475.5	108.09 %		15:08:30
3	Ag 328.068†	106229.4	96344.9	476.31 ug/L	476.31 ppb	15:08:35
3	As 188.979†	1157.1	1071.3	486.23 ug/L	486.23 ppb	15:08:55
3	B 249.677†	21235.6	19834.4	480.60 ug/L	480.60 ppb	15:08:35
3	Ba 233.527†	63719.7	57958.0	481.78 ug/L	481.78 ppb	15:08:35
3	Be 313.107†	1337354.0	1220771.9	485.94 ug/L	485.94 ppb	15:08:30
3	Cd 226.502†	45133.7	41251.3	483.40 ug/L	483.40 ppb	15:08:35
3	Co 228.616†	24473.5	22333.8	485.10 ug/L	485.10 ppb	15:08:35
3	Cr 267.716†	44805.8	40659.7	480.26 ug/L	480.26 ppb	15:08:35
3	Cu 324.752†	171478.0	149678.7	477.79 ug/L	477.79 ppb	15:08:35
3	Mn 257.610†	452644.7	411322.2	482.60 ug/L	482.60 ppb	15:08:30
3	Mo 202.031†	7182.5	6513.9	483.95 ug/L	483.95 ppb	15:08:55
3	Ni 231.604†	20205.6	18303.9	481.54 ug/L	481.54 ppb	15:08:35
3	P 214.914†	4368.5	3745.7	2297.6 ug/L	2297.6 ppb	15:08:55
3	Pb 220.353†	4043.1	3742.2	480.87 ug/L	480.87 ppb	15:08:55
3	S 181.975 Axial†	774.7	658.2	981.41 ug/L	981.41 ppb	15:08:55
3	Sb 206.836†	1505.7	1336.9	506.13 ug/L	506.13 ppb	15:08:55
3	Se 196.026†	777.7	737.8	510.38 ug/L	510.38 ppb	15:08:55
3	Si 251.611†	80022.1	72342.3	2433.2 ug/L	2433.2 ppb	15:08:35
3	Sn 189.927†	2880.8	2614.3	484.24 ug/L	484.24 ppb	15:08:55
3	Ti 334.940†	304810.7	278643.4	477.86 ug/L	477.86 ppb	15:08:35
3	Tl 190.801†	1621.6	1518.9	489.12 ug/L	489.12 ppb	15:08:55
3	U 409.014†	15032.7	15714.7	500.28 ug/L	500.28 ppb	15:08:35
3	V 292.402†	71664.0	66592.9	486.92 ug/L	486.92 ppb	15:08:35
3	Zn 213.857†	54487.1	48701.2	481.54 ug/L	481.54 ppb	15:08:35
3	SiO2†	79818.6	72146.9	5159.2 ug/L	5159.2 ppb	15:09:11

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	862560.9	105.98	%	5.827				5.50%
Sc Radial	5384.5	112	%	2.9				2.55%
Y 371.029	714676.0	104.19	%	5.625				5.40%
Y RADIAL	5723.9	111.6	%	2.76				2.47%
Ag 328.068†	99899.6	493.88	ug/L	25.791	493.88	ppb	25.791	5.22%

QC value within limits for Ag 328.068 Recovery = 98.78%

Al 396.153Radial†	5797.3	4626.6 ug/L	58.87	4626.6 ppb	58.87	1.27%

QC value within limits for Al 396.153Radial Recovery = 92.53%

As 188.979†	1116.9	506.91 ug/L	32.414	506.91 ppb	32.414	6.39%

QC value within limits for As 188.979 Recovery = 101.38%

B 249.677†	20561.0	498.20 ug/L	22.752	498.20 ppb	22.752	4.57%

QC value within limits for B 249.677 Recovery = 99.64%

Ba 233.527†	60507.6	502.97 ug/L	29.602	502.97 ppb	29.602	5.89%

QC value within limits for Ba 233.527 Recovery = 100.59%

Be 313.107†	1227109.7	488.50 ug/L	4.186	488.50 ppb	4.186	0.86%

QC value within limits for Be 313.107 Recovery = 97.70%

Ca 317.933Radial†	2801.1	4716.9 ug/L	125.53	4716.9 ppb	125.53	2.66%

QC value within limits for Ca 317.933Radial Recovery = 94.34%

Cd 226.502†	42920.5	502.97 ug/L	27.879	502.97 ppb	27.879	5.54%

QC value within limits for Cd 226.502 Recovery = 100.59%

Co 228.616†	23293.3	505.94 ug/L	28.894	505.94 ppb	28.894	5.71%

QC value within limits for Co 228.616 Recovery = 101.19%

Cr 267.716†	42333.0	500.03 ug/L	28.999	500.03 ppb	28.999	5.80%

QC value within limits for Cr 267.716 Recovery = 100.01%

Cu 324.752†	156554.8	499.73 ug/L	29.175	499.73 ppb	29.175	5.84%

QC value within limits for Cu 324.752 Recovery = 99.95%

Fe 238.204 Radial†	509.9	4808.4 ug/L	127.09	4808.4 ppb	127.09	2.64%

QC value within limits for Fe 238.204 Radial Recovery = 96.17%

K 766.490 Radial†	23648.1	4731.7 ug/L	46.57	4731.7 ppb	46.57	0.98%

QC value within limits for K 766.490 Radial Recovery = 94.63%

Mg 279.077 IEC†	140.7	4938.9 ug/L	107.94	4938.9 ppb	107.94	2.19%

QC value within limits for Mg 279.077 IEC Recovery = 98.78%

Mn 257.610†	415341.5	487.32 ug/L	6.285	487.32 ppb	6.285	1.29%

QC value within limits for Mn 257.610 Recovery = 97.46%

Mo 202.031†	6767.4	502.78 ug/L	28.775	502.78 ppb	28.775	5.72%

QC value within limits for Mo 202.031 Recovery = 100.56%

Na 589.592 Radial†	29457.2	9544.3 ug/L	108.21	9544.3 ppb	108.21	1.13%

QC value within limits for Na 589.592 Radial Recovery = 95.44%

Ni 231.604†	19118.0	502.96 ug/L	30.187	502.96 ppb	30.187	6.00%

QC value within limits for Ni 231.604 Recovery = 100.59%

P 214.914†	3906.9	2396.1 ug/L	151.71	2396.1 ppb	151.71	6.33%

QC value within limits for P 214.914 Recovery = 95.85%

Pb 220.353†	3884.1	499.08 ug/L	29.787	499.08 ppb	29.787	5.97%

QC value within limits for Pb 220.353 Recovery = 99.82%

S 181.975 Axial†	677.4	1010.0 ug/L	54.00	1010.0 ppb	54.00	5.35%

QC value within limits for S 181.975 Axial Recovery = 101.00%

Sb 206.836†	1388.3	525.61 ug/L	31.376	525.61 ppb	31.376	5.97%

QC value within limits for Sb 206.836 Recovery = 105.12%

Se 196.026†	770.1	532.53 ug/L	28.379	532.53 ppb	28.379	5.33%

QC value within limits for Se 196.026 Recovery = 106.51%

Si 251.611†	75371.4	2535.1 ug/L	139.00	2535.1 ppb	139.00	5.48%

QC value within limits for Si 251.611 Recovery = 101.40%

Sn 189.927†	2722.3	504.24 ug/L	30.084	504.24 ppb	30.084	5.97%

QC value within limits for Sn 189.927 Recovery = 100.85%

Sr 421.552†	67688.4	482.44 ug/L	5.900	482.44 ppb	5.900	1.22%

QC value within limits for Sr 421.552 Recovery = 96.49%

Ti 334.940†	290656.2	498.46 ug/L	28.460	498.46 ppb	28.460	5.71%

QC value within limits for Ti 334.940 Recovery = 99.69%

Tl 190.801†	1577.5	507.92 ug/L	28.525	507.92 ppb	28.525	5.62%

QC value within limits for Tl 190.801 Recovery = 101.58%

U 409.014†	16243.2	517.10 ug/L	24.514	517.10 ppb	24.514	4.74%

QC value within limits for U 409.014 Recovery = 103.42%

V 292.402†	69325.3	506.89 ug/L	28.645	506.89 ppb	28.645	5.65%

QC value within limits for V 292.402 Recovery = 101.38%

Zn 213.857†	50655.2	500.85 ug/L	26.019	500.85 ppb	26.019	5.19%

QC value within limits for Zn 213.857 Recovery = 100.17%

SiO2†	75360.7	5389.1 ug/L	307.22	5389.1 ppb	307.22	5.70%

QC value within limits for SiO2 Recovery = 100.78%

All analyte(s) passed QC.

Sequence No.: 2
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 15:11:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5318.2	5318.2	111	%			15:13:13
1	Y RADIAL	5716.9	5716.9	111.5	%			15:13:13
1	Al 396.153Radial†	-11.2	-6.9	-5.5406	ug/L	-5.5406	ppb	15:13:13
1	Ca 317.933Radial†	21.4	4.1	6.9170	ug/L	6.9170	ppb	15:13:33
1	Fe 238.204 Radial†	7.0	-3.6	-33.607	ug/L	-33.607	ppb	15:13:33
1	K 766.490 Radial†	2747.4	-312.2	-62.601	ug/L	-62.601	ppb	15:13:13
1	Mg 279.077 IEC†	-0.6	-2.0	-70.813	ug/L	-70.813	ppb	15:13:33
1	Na 589.592 Radial†	-1368.4	334.1	108.27	ug/L	108.27	ppb	15:13:13
1	Sr 421.552†	-2.4	-19.4	-0.1380	ug/L	-0.1380	ppb	15:13:13
1	Sc 361.383	879394.6	879394.6	108.05	%			15:14:30
1	Y 371.029	738335.7	738335.7	107.64	%			15:14:30
1	Ag 328.068†	391.1	80.4	0.3801	ug/L	0.3801	ppb	15:14:30
1	As 188.979†	-27.2	-6.3	-2.8418	ug/L	-2.8418	ppb	15:14:50
1	B 249.677†	-394.9	153.0	3.7300	ug/L	3.7300	ppb	15:14:50
1	Ba 233.527†	-16.7	-16.9	-0.1391	ug/L	-0.1391	ppb	15:14:50
1	Be 313.107†	-4379.7	258.9	0.1038	ug/L	0.1038	ppb	15:14:30
1	Cd 226.502†	-192.8	19.2	0.2298	ug/L	0.2298	ppb	15:14:50
1	Co 228.616†	-79.2	-0.7	-0.0126	ug/L	-0.0126	ppb	15:14:50
1	Cr 267.716†	81.3	-20.5	-0.2447	ug/L	-0.2447	ppb	15:14:50
1	Cu 324.752†	6453.8	-325.2	-1.0451	ug/L	-1.0451	ppb	15:14:30
1	Mn 257.610†	395.4	-38.3	-0.0454	ug/L	-0.0454	ppb	15:14:50
1	Mo 202.031†	33.0	11.2	0.8283	ug/L	0.8283	ppb	15:14:50
1	Ni 231.604†	84.9	3.4	0.0897	ug/L	0.0897	ppb	15:14:50
1	P 214.914†	213.1	-30.7	-19.356	ug/L	-19.356	ppb	15:14:50
1	Pb 220.353†	-71.0	-1.1	-0.1369	ug/L	-0.1369	ppb	15:14:50
1	S 181.975 Axial†	48.7	-1.4	-2.0725	ug/L	-2.0725	ppb	15:14:50
1	Sb 206.836†	48.1	11.8	4.3197	ug/L	4.3197	ppb	15:14:50
1	Se 196.026†	-31.9	0.8	0.4529	ug/L	0.4529	ppb	15:14:50
1	Si 251.611†	477.5	-3.9	-0.1428	ug/L	-0.1428	ppb	15:14:50
1	Sn 189.927†	3.6	-2.7	-0.5074	ug/L	-0.5074	ppb	15:14:50
1	Ti 334.940†	-1227.9	250.6	0.4326	ug/L	0.4326	ppb	15:14:30
1	Tl 190.801†	-31.6	14.7	4.6887	ug/L	4.6887	ppb	15:14:50
1	U 409.014†	-1887.2	294.4	9.4068	ug/L	9.4068	ppb	15:14:30
1	V 292.402†	-1381.5	128.6	0.9607	ug/L	0.9607	ppb	15:14:30
1	Zn 213.857†	817.2	-104.0	-1.0331	ug/L	-1.0331	ppb	15:14:50
1	SiO2†	478.0	-13.8	-1.0118	ug/L	-1.0118	ppb	15:15:46
2	Sc Radial	5371.2	5371.2	112	%			15:13:38
2	Y RADIAL	5762.4	5762.4	112.3	%			15:13:38
2	Al 396.153Radial†	3.0	5.9	4.7564	ug/L	4.7564	ppb	15:13:38
2	Ca 317.933Radial†	23.7	6.0	10.076	ug/L	10.076	ppb	15:13:58
2	Fe 238.204 Radial†	9.1	-1.8	-16.554	ug/L	-16.554	ppb	15:13:58
2	K 766.490 Radial†	2756.1	-328.9	-65.938	ug/L	-65.938	ppb	15:13:38
2	Mg 279.077 IEC†	1.0	-0.6	-20.917	ug/L	-20.917	ppb	15:13:58
2	Na 589.592 Radial†	-1376.1	339.4	109.95	ug/L	109.95	ppb	15:13:38
2	Sr 421.552†	-12.0	-27.9	-0.1989	ug/L	-0.1989	ppb	15:13:38
2	Sc 361.383	885556.4	885556.4	108.81	%			15:14:55
2	Y 371.029	743465.9	743465.9	108.38	%			15:14:55
2	Ag 328.068†	343.8	34.4	0.1636	ug/L	0.1636	ppb	15:14:55
2	As 188.979†	-21.0	-0.5	-0.2131	ug/L	-0.2131	ppb	15:15:15
2	B 249.677†	-375.1	173.8	4.2313	ug/L	4.2313	ppb	15:15:15
2	Ba 233.527†	-1.5	-2.9	-0.0226	ug/L	-0.0226	ppb	15:15:15
2	Be 313.107†	-4524.5	154.0	0.0619	ug/L	0.0619	ppb	15:14:55
2	Cd 226.502†	-186.8	25.9	0.3057	ug/L	0.3057	ppb	15:15:15
2	Co 228.616†	-70.3	8.1	0.1757	ug/L	0.1757	ppb	15:15:15
2	Cr 267.716†	60.4	-40.2	-0.4748	ug/L	-0.4748	ppb	15:15:15
2	Cu 324.752†	6467.6	-354.1	-1.1337	ug/L	-1.1337	ppb	15:14:55
2	Mn 257.610†	415.9	-22.1	-0.0266	ug/L	-0.0266	ppb	15:15:15
2	Mo 202.031†	23.5	2.3	0.1666	ug/L	0.1666	ppb	15:15:15
2	Ni 231.604†	85.3	3.3	0.0870	ug/L	0.0870	ppb	15:15:15

2	P 214.914†	209.5	-35.4	-22.333 ug/L	-22.333 ppb	15:15:15
2	Pb 220.353†	-64.2	5.6	0.7169 ug/L	0.7169 ppb	15:15:15
2	S 181.975 Axial†	41.0	-8.8	-13.100 ug/L	-13.100 ppb	15:15:15
2	Sb 206.836†	37.9	2.1	0.7644 ug/L	0.7644 ppb	15:15:15
2	Se 196.026†	-23.7	8.6	5.7101 ug/L	5.7101 ppb	15:15:15
2	Si 251.611†	491.1	5.5	0.1837 ug/L	0.1837 ppb	15:15:15
2	Sn 189.927†	6.0	-0.6	-0.1129 ug/L	-0.1129 ppb	15:15:15
2	Ti 334.940†	-1313.1	180.2	0.3105 ug/L	0.3105 ppb	15:14:55
2	Tl 190.801†	-34.0	12.7	4.0549 ug/L	4.0549 ppb	15:15:15
2	U 409.014†	-2069.7	138.8	4.4371 ug/L	4.4371 ppb	15:14:55
2	V 292.402†	-1399.0	121.4	0.8887 ug/L	0.8887 ppb	15:14:55
2	Zn 213.857†	831.0	-96.6	-0.9611 ug/L	-0.9611 ppb	15:15:15
2	SiO2†	518.7	20.5	1.4672 ug/L	1.4672 ppb	15:15:51
3	Sc Radial	5368.5	5368.5	112 %		15:14:03
3	Y RADIAL	5754.2	5754.2	112.2 %		15:14:03
3	Al 396.153Radial†	-14.0	-9.2	-7.4208 ug/L	-7.4208 ppb	15:14:03
3	Ca 317.933Radial†	21.1	3.7	6.2056 ug/L	6.2056 ppb	15:14:23
3	Fe 238.204 Radial†	12.0	0.8	7.4565 ug/L	7.4565 ppb	15:14:23
3	K 766.490 Radial†	2746.9	-335.9	-67.340 ug/L	-67.340 ppb	15:14:03
3	Mg 279.077 IEC†	0.6	-1.0	-35.658 ug/L	-35.658 ppb	15:14:23
3	Na 589.592 Radial†	-1346.0	365.7	118.48 ug/L	118.48 ppb	15:14:03
3	Sr 421.552†	51.9	29.1	0.2076 ug/L	0.2076 ppb	15:14:03
3	Sc 361.383	875213.3	875213.3	107.54 %		15:15:20
3	Y 371.029	735677.8	735677.8	107.25 %		15:15:20
3	Ag 328.068†	340.9	35.5	0.1711 ug/L	0.1711 ppb	15:15:20
3	As 188.979†	-20.3	-0.0	-0.0177 ug/L	-0.0177 ppb	15:15:40
3	B 249.677†	-423.9	124.3	3.0243 ug/L	3.0243 ppb	15:15:40
3	Ba 233.527†	11.9	9.6	0.0818 ug/L	0.0818 ppb	15:15:40
3	Be 313.107†	-4427.3	195.3	0.0781 ug/L	0.0781 ppb	15:15:20
3	Cd 226.502†	-189.9	21.0	0.2477 ug/L	0.2477 ppb	15:15:40
3	Co 228.616†	-68.2	9.3	0.2020 ug/L	0.2020 ppb	15:15:40
3	Cr 267.716†	77.9	-23.3	-0.2779 ug/L	-0.2779 ppb	15:15:40
3	Cu 324.752†	6534.7	-221.4	-0.7128 ug/L	-0.7128 ppb	15:15:20
3	Mn 257.610†	436.5	1.6	0.0041 ug/L	0.0041 ppb	15:15:40
3	Mo 202.031†	29.9	8.5	0.6284 ug/L	0.6284 ppb	15:15:40
3	Ni 231.604†	79.9	-0.8	-0.0217 ug/L	-0.0217 ppb	15:15:40
3	P 214.914†	205.3	-37.0	-23.488 ug/L	-23.488 ppb	15:15:40
3	Pb 220.353†	-84.0	-13.5	-1.7296 ug/L	-1.7296 ppb	15:15:40
3	S 181.975 Axial†	46.2	-3.4	-5.1468 ug/L	-5.1468 ppb	15:15:40
3	Sb 206.836†	47.4	11.3	4.1576 ug/L	4.1576 ppb	15:15:40
3	Se 196.026†	-32.8	-0.1	-0.0402 ug/L	-0.0402 ppb	15:15:40
3	Si 251.611†	483.5	3.7	0.1183 ug/L	0.1183 ppb	15:15:40
3	Sn 189.927†	5.8	-0.7	-0.1280 ug/L	-0.1280 ppb	15:15:40
3	Ti 334.940†	-1334.2	146.3	0.2499 ug/L	0.2499 ppb	15:15:20
3	Tl 190.801†	-30.4	15.6	4.9983 ug/L	4.9983 ppb	15:15:40
3	U 409.014†	-1812.5	355.5	11.355 ug/L	11.355 ppb	15:15:20
3	V 292.402†	-1371.4	131.9	0.9802 ug/L	0.9802 ppb	15:15:20
3	Zn 213.857†	815.9	-101.7	-1.0135 ug/L	-1.0135 ppb	15:15:40
3	SiO2†	494.2	3.3	0.2216 ug/L	0.2216 ppb	15:15:56

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	880054.8	108.13	%	0.639				0.59%
Sc Radial	5352.6	112	%	0.6				0.56%
Y 371.029	739159.8	107.76	%	0.577				0.54%
Y RADIAL	5744.5	112.0	%	0.47				0.42%
Ag 328.068†	50.1	0.2382	ug/L	0.12289	0.2382	ppb	0.12289	51.58%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-3.4	-2.7350	ug/L	6.55551	-2.7350	ppb	6.55551	239.69%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-2.3	-1.0242	ug/L	1.57716	-1.0242	ppb	1.57716	153.99%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	150.4	3.6618	ug/L	0.60636	3.6618	ppb	0.60636	16.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3.4	-0.0267	ug/L	0.11051	-0.0267	ppb	0.11051	414.48%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	202.7	0.0813	ug/L	0.02113	0.0813	ppb	0.02113	26.01%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.6	7.7329	ug/L	2.06014	7.7329	ppb	2.06014	26.64%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	22.0	0.2611 ug/L	0.03968	0.2611 ppb	0.03968	15.20%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	5.6	0.1217 ug/L	0.11701	0.1217 ppb	0.11701	96.16%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-28.0	-0.3325 ug/L	0.12441	-0.3325 ppb	0.12441	37.42%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-300.2	-0.9638 ug/L	0.22190	-0.9638 ppb	0.22190	23.02%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-1.5	-14.235 ug/L	20.6296	-14.235 ppb	20.6296	144.93%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-325.7	-65.293 ug/L	2.4345	-65.293 ppb	2.4345	3.73%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-1.2	-42.462 ug/L	25.6345	-42.462 ppb	25.6345	60.37%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-19.6	-0.0226 ug/L	0.02498	-0.0226 ppb	0.02498	110.31%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	7.3	0.5411 ug/L	0.33939	0.5411 ppb	0.33939	62.72%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	346.4	112.23 ug/L	5.476	112.23 ppb	5.476	4.88%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	2.0	0.0516 ug/L	0.06356	0.0516 ppb	0.06356	123.09%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-34.4	-21.726 ug/L	2.1317	-21.726 ppb	2.1317	9.81%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-3.0	-0.3832 ug/L	1.24170	-0.3832 ppb	1.24170	324.05%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-4.5	-6.7732 ug/L	5.69095	-6.7732 ppb	5.69095	84.02%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	8.4	3.0806 ug/L	2.00751	3.0806 ppb	2.00751	65.17%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	3.1	2.0409 ug/L	3.18715	2.0409 ppb	3.18715	156.16%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	1.8	0.0531 ug/L	0.17273	0.0531 ppb	0.17273	325.44%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-1.4	-0.2494 ug/L	0.22351	-0.2494 ppb	0.22351	89.60%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-6.0	-0.0431 ug/L	0.21922	-0.0431 ppb	0.21922	508.65%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	192.4	0.3310 ug/L	0.09307	0.3310 ppb	0.09307	28.12%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	14.3	4.5806 ug/L	0.48087	4.5806 ppb	0.48087	10.50%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	262.9	8.3995 ug/L	3.56711	8.3995 ppb	3.56711	42.47%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	127.3	0.9432 ug/L	0.04820	0.9432 ppb	0.04820	5.11%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-100.8	-1.0026 ug/L	0.03722	-1.0026 ppb	0.03722	3.71%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	3.4	0.2257 ug/L	1.23948	0.2257 ppb	1.23948	549.25%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 7
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/14/2010 15:45:46
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5272.2	5272.2	110	%			15:47:38
1	Y RADIAL	5550.7	5550.7	108.2	%			15:47:38
1	Al 396.153Radial†	6480.8	5892.9	4703.9	ug/L	4703.9	ppb	15:47:38
1	Ca 317.933Radial†	3088.7	2791.8	4701.2	ug/L	4701.2	ppb	15:47:58
1	Fe 238.204 Radial†	576.6	514.1	4847.6	ug/L	4847.6	ppb	15:47:58
1	K 766.490 Radial†	29458.3	23983.9	4798.9	ug/L	4798.9	ppb	15:47:38
1	Mg 279.077 IEC†	155.1	139.4	4894.6	ug/L	4894.6	ppb	15:47:58
1	Na 589.592 Radial†	30855.3	29607.9	9593.1	ug/L	9593.1	ppb	15:47:38
1	Sr 421.552†	75525.1	68619.2	489.08	ug/L	489.08	ppb	15:47:38
1	Sc 361.383	877672.9	877672.9	107.84	%			15:48:55
1	Y 371.029	726579.4	726579.4	105.92	%			15:48:55
1	Ag 328.068†	105009.5	97093.7	480.06	ug/L	480.06	ppb	15:49:00
1	As 188.979†	1149.7	1084.9	492.47	ug/L	492.47	ppb	15:49:20
1	B 249.677†	21211.8	20188.2	489.16	ug/L	489.16	ppb	15:49:00
1	Ba 233.527†	63505.5	58887.2	489.51	ug/L	489.51	ppb	15:49:00
1	Be 313.107†	1320423.8	1228740.6	489.12	ug/L	489.12	ppb	15:48:55
1	Cd 226.502†	44725.9	41671.9	488.32	ug/L	488.32	ppb	15:49:00
1	Co 228.616†	24392.2	22691.6	492.87	ug/L	492.87	ppb	15:49:00
1	Cr 267.716†	44466.6	41138.1	485.92	ug/L	485.92	ppb	15:49:00
1	Cu 324.752†	171314.2	152561.5	486.99	ug/L	486.99	ppb	15:49:00
1	Mn 257.610†	450224.8	417089.0	489.37	ug/L	489.37	ppb	15:48:55
1	Mo 202.031†	7122.9	6585.7	489.30	ug/L	489.30	ppb	15:49:20
1	Ni 231.604†	20086.4	18551.0	488.04	ug/L	488.04	ppb	15:49:00
1	P 214.914†	4344.4	3800.7	2330.8	ug/L	2330.8	ppb	15:49:20
1	Pb 220.353†	4030.2	3801.8	488.53	ug/L	488.53	ppb	15:49:20
1	S 181.975 Axial†	759.1	657.5	980.36	ug/L	980.36	ppb	15:49:20
1	Sb 206.836†	1479.5	1339.2	507.23	ug/L	507.23	ppb	15:49:20
1	Se 196.026†	777.3	751.1	519.93	ug/L	519.93	ppb	15:49:20
1	Si 251.611†	79738.0	73495.1	2472.0	ug/L	2472.0	ppb	15:49:00
1	Sn 189.927†	2876.7	2661.5	493.00	ug/L	493.00	ppb	15:49:20
1	Ti 334.940†	304335.3	283597.0	486.36	ug/L	486.36	ppb	15:49:00
1	Tl 190.801†	1613.6	1540.2	495.98	ug/L	495.98	ppb	15:49:20
1	U 409.014†	15059.4	16005.5	509.54	ug/L	509.54	ppb	15:49:00
1	V 292.402†	71363.9	67582.9	494.12	ug/L	494.12	ppb	15:49:00
1	Zn 213.857†	54149.8	49352.8	487.97	ug/L	487.97	ppb	15:49:00
1	SiO2†	78960.5	72763.9	5203.3	ug/L	5203.3	ppb	15:50:28
2	Sc Radial	5184.5	5184.5	108	%			15:48:03
2	Y RADIAL	5528.7	5528.7	107.8	%			15:48:03
2	Al 396.153Radial†	6290.1	5816.4	4642.7	ug/L	4642.7	ppb	15:48:03
2	Ca 317.933Radial†	3112.1	2860.9	4817.7	ug/L	4817.7	ppb	15:48:23
2	Fe 238.204 Radial†	575.8	522.2	4924.0	ug/L	4924.0	ppb	15:48:23
2	K 766.490 Radial†	28705.0	23740.6	4750.2	ug/L	4750.2	ppb	15:48:03
2	Mg 279.077 IEC†	156.8	143.4	5033.6	ug/L	5033.6	ppb	15:48:23
2	Na 589.592 Radial†	29979.7	29273.0	9484.6	ug/L	9484.6	ppb	15:48:03
2	Sr 421.552†	73397.4	67813.7	483.33	ug/L	483.33	ppb	15:48:03
2	Sc 361.383	876326.5	876326.5	107.67	%			15:49:26
2	Y 371.029	726682.4	726682.4	105.94	%			15:49:26
2	Ag 328.068†	104067.0	96367.9	476.52	ug/L	476.52	ppb	15:49:31
2	As 188.979†	1127.9	1066.4	484.10	ug/L	484.10	ppb	15:49:51
2	B 249.677†	21078.3	20094.5	486.87	ug/L	486.87	ppb	15:49:31
2	Ba 233.527†	63232.7	58724.3	488.15	ug/L	488.15	ppb	15:49:31
2	Be 313.107†	1322048.1	1232130.4	490.46	ug/L	490.46	ppb	15:49:26
2	Cd 226.502†	44766.4	41773.2	489.50	ug/L	489.50	ppb	15:49:31
2	Co 228.616†	24254.1	22598.0	490.83	ug/L	490.83	ppb	15:49:31
2	Cr 267.716†	44305.7	41052.0	484.90	ug/L	484.90	ppb	15:49:31
2	Cu 324.752†	169384.0	151012.9	482.06	ug/L	482.06	ppb	15:49:31
2	Mn 257.610†	448400.1	416035.7	488.14	ug/L	488.14	ppb	15:49:26
2	Mo 202.031†	7067.8	6544.7	486.26	ug/L	486.26	ppb	15:49:51
2	Ni 231.604†	20032.7	18529.7	487.49	ug/L	487.49	ppb	15:49:31

2	P 214.914†	4312.8	3777.6	2316.9 ug/L	2316.9 ppb	15:49:51
2	Pb 220.353†	4004.6	3783.8	486.20 ug/L	486.20 ppb	15:49:51
2	S 181.975 Axial†	749.3	649.4	968.33 ug/L	968.33 ppb	15:49:51
2	Sb 206.836†	1470.6	1333.1	504.85 ug/L	504.85 ppb	15:49:51
2	Se 196.026†	775.6	750.7	519.84 ug/L	519.84 ppb	15:49:51
2	Si 251.611†	79033.3	72954.3	2453.8 ug/L	2453.8 ppb	15:49:31
2	Sn 189.927†	2843.7	2634.8	488.09 ug/L	488.09 ppb	15:49:51
2	Ti 334.940†	301938.5	281804.6	483.29 ug/L	483.29 ppb	15:49:31
2	Tl 190.801†	1586.9	1517.7	488.77 ug/L	488.77 ppb	15:49:51
2	U 409.014†	14835.5	15819.0	503.57 ug/L	503.57 ppb	15:49:31
2	V 292.402†	70966.2	67315.2	492.13 ug/L	492.13 ppb	15:49:31
2	Zn 213.857†	53937.1	49232.4	486.77 ug/L	486.77 ppb	15:49:31
2	SiO2†	79254.7	73149.5	5231.0 ug/L	5231.0 ppb	15:50:33
3	Sc Radial	5184.0	5184.0	108 %		15:48:28
3	Y RADIAL	5521.1	5521.1	107.6 %		15:48:28
3	Al 396.153Radial†	6410.0	5927.6	4732.0 ug/L	4732.0 ppb	15:48:28
3	Ca 317.933Radial†	3121.6	2870.0	4832.9 ug/L	4832.9 ppb	15:48:48
3	Fe 238.204 Radial†	579.8	526.0	4959.7 ug/L	4959.7 ppb	15:48:48
3	K 766.490 Radial†	29139.4	24144.3	4831.0 ug/L	4831.0 ppb	15:48:28
3	Mg 279.077 IEC†	158.8	145.3	5100.2 ug/L	5100.2 ppb	15:48:48
3	Na 589.592 Radial†	30320.3	29590.1	9587.4 ug/L	9587.4 ppb	15:48:28
3	Sr 421.552†	74504.0	68842.2	490.66 ug/L	490.66 ppb	15:48:28
3	Sc 361.383	876646.0	876646.0	107.71 %		15:49:57
3	Y 371.029	727449.0	727449.0	106.05 %		15:49:57
3	Ag 328.068†	105114.4	97305.1	481.14 ug/L	481.14 ppb	15:50:02
3	As 188.979†	1126.9	1065.1	483.57 ug/L	483.57 ppb	15:50:22
3	B 249.677†	21397.1	20383.3	493.88 ug/L	493.88 ppb	15:50:02
3	Ba 233.527†	63848.6	59274.6	492.73 ug/L	492.73 ppb	15:50:02
3	Be 313.107†	1317962.7	1227890.0	488.79 ug/L	488.79 ppb	15:49:57
3	Cd 226.502†	45198.9	42159.6	494.03 ug/L	494.03 ppb	15:50:02
3	Co 228.616†	24546.4	22861.3	496.54 ug/L	496.54 ppb	15:50:02
3	Cr 267.716†	44734.9	41435.6	489.43 ug/L	489.43 ppb	15:50:02
3	Cu 324.752†	171681.8	153088.8	488.68 ug/L	488.68 ppb	15:50:02
3	Mn 257.610†	447503.0	415051.1	486.99 ug/L	486.99 ppb	15:49:57
3	Mo 202.031†	7063.8	6538.6	485.81 ug/L	485.81 ppb	15:50:22
3	Ni 231.604†	20267.2	18740.7	493.04 ug/L	493.04 ppb	15:50:02
3	P 214.914†	4311.8	3775.1	2314.0 ug/L	2314.0 ppb	15:50:22
3	Pb 220.353†	3999.8	3778.0	485.47 ug/L	485.47 ppb	15:50:22
3	S 181.975 Axial†	756.8	656.1	978.34 ug/L	978.34 ppb	15:50:22
3	Sb 206.836†	1465.0	1327.4	502.76 ug/L	502.76 ppb	15:50:22
3	Se 196.026†	769.3	744.6	515.89 ug/L	515.89 ppb	15:50:22
3	Si 251.611†	80033.1	73855.7	2484.2 ug/L	2484.2 ppb	15:50:02
3	Sn 189.927†	2845.2	2635.4	488.19 ug/L	488.19 ppb	15:50:22
3	Ti 334.940†	305155.5	284689.1	488.23 ug/L	488.23 ppb	15:50:02
3	Tl 190.801†	1601.7	1530.9	492.98 ug/L	492.98 ppb	15:50:22
3	U 409.014†	15148.3	16104.5	512.68 ug/L	512.68 ppb	15:50:02
3	V 292.402†	71614.7	67893.2	496.30 ug/L	496.30 ppb	15:50:02
3	Zn 213.857†	54416.7	49659.3	490.98 ug/L	490.98 ppb	15:50:02
3	SiO2†	78801.3	72701.8	5198.9 ug/L	5198.9 ppb	15:50:38

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	876881.8	107.74	%	0.086				0.08%
Sc Radial	5213.6	109	%	1.1				0.97%
Y 371.029	726903.6	105.97	%	0.069				0.07%
Y RADIAL	5533.5	107.9	%	0.30				0.28%
Ag 328.068†	96922.2	479.24	ug/L	2.419	479.24	ppb	2.419	0.50%
QC value within limits for Ag 328.068 Recovery = 95.85%								
Al 396.153Radial†	5879.0	4692.9	ug/L	45.67	4692.9	ppb	45.67	0.97%
QC value within limits for Al 396.153Radial Recovery = 93.86%								
As 188.979†	1072.1	486.71	ug/L	4.988	486.71	ppb	4.988	1.02%
QC value within limits for As 188.979 Recovery = 97.34%								
B 249.677†	20222.0	489.97	ug/L	3.574	489.97	ppb	3.574	0.73%
QC value within limits for B 249.677 Recovery = 97.99%								
Ba 233.527†	58962.0	490.13	ug/L	2.350	490.13	ppb	2.350	0.48%
QC value within limits for Ba 233.527 Recovery = 98.03%								
Be 313.107†	1229587.0	489.46	ug/L	0.885	489.46	ppb	0.885	0.18%
QC value within limits for Be 313.107 Recovery = 97.89%								
Ca 317.933Radial†	2840.9	4783.9	ug/L	72.03	4783.9	ppb	72.03	1.51%

QC value within limits for Ca 317.933Radial Recovery = 95.68%

Cd 226.502†	41868.2	490.62 ug/L	3.014	490.62 ppb	3.014	0.61%
QC value within limits for Cd 226.502 Recovery = 98.12%						
Co 228.616†	22717.0	493.41 ug/L	2.891	493.41 ppb	2.891	0.59%
QC value within limits for Co 228.616 Recovery = 98.68%						
Cr 267.716†	41208.6	486.75 ug/L	2.376	486.75 ppb	2.376	0.49%
QC value within limits for Cr 267.716 Recovery = 97.35%						
Cu 324.752†	152221.1	485.91 ug/L	3.442	485.91 ppb	3.442	0.71%
QC value within limits for Cu 324.752 Recovery = 97.18%						
Fe 238.204 Radial†	520.8	4910.4 ug/L	57.28	4910.4 ppb	57.28	1.17%
QC value within limits for Fe 238.204 Radial Recovery = 98.21%						
K 766.490 Radial†	23956.3	4793.4 ug/L	40.71	4793.4 ppb	40.71	0.85%
QC value within limits for K 766.490 Radial Recovery = 95.87%						
Mg 279.077 IEC†	142.7	5009.5 ug/L	104.86	5009.5 ppb	104.86	2.09%
QC value within limits for Mg 279.077 IEC Recovery = 100.19%						
Mn 257.610†	416058.6	488.17 ug/L	1.194	488.17 ppb	1.194	0.24%
QC value within limits for Mn 257.610 Recovery = 97.63%						
Mo 202.031†	6556.4	487.12 ug/L	1.897	487.12 ppb	1.897	0.39%
QC value within limits for Mo 202.031 Recovery = 97.42%						
Na 589.592 Radial†	29490.3	9555.0 ug/L	61.04	9555.0 ppb	61.04	0.64%
QC value within limits for Na 589.592 Radial Recovery = 95.55%						
Ni 231.604†	18607.1	489.52 ug/L	3.056	489.52 ppb	3.056	0.62%
QC value within limits for Ni 231.604 Recovery = 97.90%						
P 214.914†	3784.5	2320.6 ug/L	8.99	2320.6 ppb	8.99	0.39%
QC value within limits for P 214.914 Recovery = 92.82%						
Pb 220.353†	3787.8	486.73 ug/L	1.598	486.73 ppb	1.598	0.33%
QC value within limits for Pb 220.353 Recovery = 97.35%						
S 181.975 Axial†	654.4	975.68 ug/L	6.440	975.68 ppb	6.440	0.66%
QC value within limits for S 181.975 Axial Recovery = 97.57%						
Sb 206.836†	1333.2	504.95 ug/L	2.237	504.95 ppb	2.237	0.44%
QC value within limits for Sb 206.836 Recovery = 100.99%						
Se 196.026†	748.8	518.56 ug/L	2.306	518.56 ppb	2.306	0.44%
QC value within limits for Se 196.026 Recovery = 103.71%						
Si 251.611†	73435.0	2470.0 ug/L	15.30	2470.0 ppb	15.30	0.62%
QC value within limits for Si 251.611 Recovery = 98.80%						
Sn 189.927†	2643.9	489.76 ug/L	2.803	489.76 ppb	2.803	0.57%
QC value within limits for Sn 189.927 Recovery = 97.95%						
Sr 421.552†	68425.1	487.69 ug/L	3.857	487.69 ppb	3.857	0.79%
QC value within limits for Sr 421.552 Recovery = 97.54%						
Ti 334.940†	283363.6	485.96 ug/L	2.494	485.96 ppb	2.494	0.51%
QC value within limits for Ti 334.940 Recovery = 97.19%						
Tl 190.801†	1529.6	492.58 ug/L	3.623	492.58 ppb	3.623	0.74%
QC value within limits for Tl 190.801 Recovery = 98.52%						
U 409.014†	15976.3	508.60 ug/L	4.623	508.60 ppb	4.623	0.91%
QC value within limits for U 409.014 Recovery = 101.72%						
V 292.402†	67597.1	494.19 ug/L	2.086	494.19 ppb	2.086	0.42%
QC value within limits for V 292.402 Recovery = 98.84%						
Zn 213.857†	49414.8	488.58 ug/L	2.169	488.58 ppb	2.169	0.44%
QC value within limits for Zn 213.857 Recovery = 97.72%						
SiO2†	72871.7	5211.1 ug/L	17.40	5211.1 ppb	17.40	0.33%
QC value within limits for SiO2 Recovery = 97.45%						

All analyte(s) passed QC.

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/14/2010 15:52:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5145.5	5145.5	107	%			15:54:40
1	Y RADIAL	5509.8	5509.8	107.4	%			15:54:40
1	Al 396.153Radial†	247.8	233.9	187.24	ug/L	187.24	ppb	15:54:40
1	Ca 317.933Radial†	141.2	116.3	195.84	ug/L	195.84	ppb	15:55:01
1	Fe 238.204 Radial†	21.1	9.7	91.581	ug/L	91.581	ppb	15:55:01
1	K 766.490 Radial†	3478.4	451.6	90.232	ug/L	90.232	ppb	15:54:40
1	Mg 279.077 IEC†	13.2	10.8	379.23	ug/L	379.23	ppb	15:55:01
1	Na 589.592 Radial†	-342.4	1248.1	404.39	ug/L	404.39	ppb	15:54:40
1	Sr 421.552†	740.4	672.3	4.7903	ug/L	4.7903	ppb	15:54:40
1	Sc 361.383	860600.3	860600.3	105.74	%			15:55:57
1	Y 371.029	723958.9	723958.9	105.54	%			15:55:57
1	Ag 328.068†	1422.6	1063.8	5.2241	ug/L	5.2241	ppb	15:55:57
1	As 188.979†	53.5	69.4	31.286	ug/L	31.286	ppb	15:56:17
1	B 249.677†	1662.1	2090.4	50.849	ug/L	50.849	ppb	15:55:57
1	Ba 233.527†	636.6	600.6	4.9943	ug/L	4.9943	ppb	15:56:17
1	Be 313.107†	8564.5	12411.6	4.9413	ug/L	4.9413	ppb	15:55:57
1	Cd 226.502†	251.3	435.2	5.1069	ug/L	5.1069	ppb	15:56:17
1	Co 228.616†	153.8	218.2	4.7480	ug/L	4.7480	ppb	15:56:17
1	Cr 267.716†	484.5	362.5	4.2614	ug/L	4.2614	ppb	15:56:17
1	Cu 324.752†	9710.8	2885.4	9.1817	ug/L	9.1817	ppb	15:55:57
1	Mn 257.610†	9589.7	8664.6	10.154	ug/L	10.154	ppb	15:55:57
1	Mo 202.031†	151.9	124.3	9.2359	ug/L	9.2359	ppb	15:56:17
1	Ni 231.604†	272.1	182.2	4.7922	ug/L	4.7922	ppb	15:56:17
1	P 214.914†	459.9	207.0	130.36	ug/L	130.36	ppb	15:56:17
1	Pb 220.353†	39.6	102.0	13.115	ug/L	13.115	ppb	15:56:17
1	S 181.975 Axial†	114.8	62.1	92.662	ug/L	92.662	ppb	15:56:17
1	Sb 206.836†	67.6	31.2	11.722	ug/L	11.722	ppb	15:56:17
1	Se 196.026†	22.2	51.4	34.683	ug/L	34.683	ppb	15:56:17
1	Si 251.611†	3449.4	2816.2	94.840	ug/L	94.840	ppb	15:56:17
1	Sn 189.927†	61.6	52.1	9.6680	ug/L	9.6680	ppb	15:56:17
1	Ti 334.940†	1733.9	3026.8	5.1592	ug/L	5.1592	ppb	15:55:57
1	Tl 190.801†	27.6	70.0	22.462	ug/L	22.462	ppb	15:56:17
1	U 409.014†	-108.2	1938.7	61.896	ug/L	61.896	ppb	15:55:57
1	V 292.402†	-708.5	737.1	5.5532	ug/L	5.5532	ppb	15:55:57
1	Zn 213.857†	1722.3	768.4	7.6115	ug/L	7.6115	ppb	15:56:17
1	SiO2†	3581.7	2931.0	209.88	ug/L	209.88	ppb	15:57:14
2	Sc Radial	5275.4	5275.4	110	%			15:55:06
2	Y RADIAL	5650.5	5650.5	110.2	%			15:55:06
2	Al 396.153Radial†	260.8	240.1	192.14	ug/L	192.14	ppb	15:55:06
2	Ca 317.933Radial†	145.2	116.7	196.53	ug/L	196.53	ppb	15:55:26
2	Fe 238.204 Radial†	21.7	9.9	92.939	ug/L	92.939	ppb	15:55:26
2	K 766.490 Radial†	3509.6	400.1	79.917	ug/L	79.917	ppb	15:55:06
2	Mg 279.077 IEC†	11.1	8.6	302.17	ug/L	302.17	ppb	15:55:26
2	Na 589.592 Radial†	-389.6	1213.1	393.04	ug/L	393.04	ppb	15:55:06
2	Sr 421.552†	743.9	658.4	4.6916	ug/L	4.6916	ppb	15:55:06
2	Sc 361.383	884317.2	884317.2	108.66	%			15:56:23
2	Y 371.029	743753.6	743753.6	108.43	%			15:56:23
2	Ag 328.068†	1414.1	1019.9	5.0117	ug/L	5.0117	ppb	15:56:23
2	As 188.979†	39.0	54.7	24.674	ug/L	24.674	ppb	15:56:43
2	B 249.677†	1706.2	2088.8	50.810	ug/L	50.810	ppb	15:56:23
2	Ba 233.527†	631.2	579.5	4.8210	ug/L	4.8210	ppb	15:56:43
2	Be 313.107†	8669.1	12290.7	4.8934	ug/L	4.8934	ppb	15:56:23
2	Cd 226.502†	251.3	428.9	5.0321	ug/L	5.0321	ppb	15:56:43
2	Co 228.616†	157.7	217.9	4.7429	ug/L	4.7429	ppb	15:56:43
2	Cr 267.716†	498.2	362.8	4.2660	ug/L	4.2660	ppb	15:56:43
2	Cu 324.752†	9844.5	2762.1	8.7882	ug/L	8.7882	ppb	15:56:23
2	Mn 257.610†	9742.3	8561.9	10.037	ug/L	10.037	ppb	15:56:23
2	Mo 202.031†	168.8	136.0	10.106	ug/L	10.106	ppb	15:56:43
2	Ni 231.604†	285.8	187.9	4.9424	ug/L	4.9424	ppb	15:56:43

2	P 214.914†	450.8	187.0	117.66 ug/L	117.66 ppb	15:56:43
2	Pb 220.353†	20.4	83.4	10.735 ug/L	10.735 ppb	15:56:43
2	S 181.975 Axial†	113.9	58.4	87.087 ug/L	87.087 ppb	15:56:43
2	Sb 206.836†	66.6	28.5	10.774 ug/L	10.774 ppb	15:56:43
2	Se 196.026†	27.7	55.9	37.705 ug/L	37.705 ppb	15:56:43
2	Si 251.611†	3419.1	2700.9	90.940 ug/L	90.940 ppb	15:56:43
2	Sn 189.927†	57.3	46.6	8.6452 ug/L	8.6452 ppb	15:56:43
2	Ti 334.940†	1799.2	3042.9	5.1932 ug/L	5.1932 ppb	15:56:23
2	Tl 190.801†	32.6	73.9	23.695 ug/L	23.695 ppb	15:56:43
2	U 409.014†	-110.3	1939.5	61.921 ug/L	61.921 ppb	15:56:23
2	V 292.402†	-619.7	836.8	6.2833 ug/L	6.2833 ppb	15:56:23
2	Zn 213.857†	1688.9	694.0	6.8691 ug/L	6.8691 ppb	15:56:43
2	SiO2†	3529.5	2792.1	199.90 ug/L	199.90 ppb	15:57:19
3	Sc Radial	5273.9	5273.9	110 %		15:55:31
3	Y RADIAL	5677.7	5677.7	110.7 %		15:55:31
3	Al 396.153Radial†	258.3	238.0	190.39 ug/L	190.39 ppb	15:55:31
3	Ca 317.933Radial†	145.3	116.8	196.75 ug/L	196.75 ppb	15:55:51
3	Fe 238.204 Radial†	23.8	11.7	110.56 ug/L	110.56 ppb	15:55:51
3	K 766.490 Radial†	3552.8	440.3	87.971 ug/L	87.971 ppb	15:55:31
3	Mg 279.077 IEC†	11.9	9.3	326.13 ug/L	326.13 ppb	15:55:51
3	Na 589.592 Radial†	-343.9	1254.5	406.48 ug/L	406.48 ppb	15:55:31
3	Sr 421.552†	753.8	667.6	4.7568 ug/L	4.7568 ppb	15:55:31
3	Sc 361.383	869022.1	869022.1	106.78 %		15:56:48
3	Y 371.029	731616.2	731616.2	106.66 %		15:56:48
3	Ag 328.068†	1414.6	1043.2	5.1289 ug/L	5.1289 ppb	15:56:48
3	As 188.979†	52.2	67.8	30.552 ug/L	30.552 ppb	15:57:08
3	B 249.677†	1655.0	2068.5	50.312 ug/L	50.312 ppb	15:56:48
3	Ba 233.527†	615.4	574.9	4.7826 ug/L	4.7826 ppb	15:57:08
3	Be 313.107†	8597.2	12363.8	4.9225 ug/L	4.9225 ppb	15:56:48
3	Cd 226.502†	249.2	431.0	5.0551 ug/L	5.0551 ppb	15:57:08
3	Co 228.616†	160.8	223.3	4.8603 ug/L	4.8603 ppb	15:57:08
3	Cr 267.716†	525.9	396.8	4.6661 ug/L	4.6661 ppb	15:57:08
3	Cu 324.752†	9786.0	2866.8	9.1219 ug/L	9.1219 ppb	15:56:48
3	Mn 257.610†	9672.0	8653.8	10.145 ug/L	10.145 ppb	15:56:48
3	Mo 202.031†	170.9	140.8	10.461 ug/L	10.461 ppb	15:57:08
3	Ni 231.604†	277.7	185.0	4.8664 ug/L	4.8664 ppb	15:57:08
3	P 214.914†	459.9	202.8	127.68 ug/L	127.68 ppb	15:57:08
3	Pb 220.353†	18.9	82.3	10.591 ug/L	10.591 ppb	15:57:08
3	S 181.975 Axial†	114.8	61.1	91.099 ug/L	91.099 ppb	15:57:08
3	Sb 206.836†	70.8	33.6	12.627 ug/L	12.627 ppb	15:57:08
3	Se 196.026†	25.8	54.5	36.875 ug/L	36.875 ppb	15:57:08
3	Si 251.611†	3448.5	2783.8	93.731 ug/L	93.731 ppb	15:57:08
3	Sn 189.927†	61.6	51.5	9.5605 ug/L	9.5605 ppb	15:57:08
3	Ti 334.940†	1808.1	3080.4	5.2544 ug/L	5.2544 ppb	15:56:48
3	Tl 190.801†	38.5	80.0	25.636 ug/L	25.636 ppb	15:57:08
3	U 409.014†	-30.4	2012.5	64.252 ug/L	64.252 ppb	15:56:48
3	V 292.402†	-658.9	790.1	5.9533 ug/L	5.9533 ppb	15:56:48
3	Zn 213.857†	1719.7	750.2	7.4283 ug/L	7.4283 ppb	15:57:08
3	SiO2†	3550.8	2869.2	205.41 ug/L	205.41 ppb	15:57:24

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	871313.2	107.06	%	1.477				1.38%
Sc Radial	5231.6	109	%	1.6				1.43%
Y 371.029	733109.5	106.87	%	1.455				1.36%
Y RADIAL	5612.7	109.4	%	1.76				1.61%
Ag 328.068†	1042.3	5.1216	ug/L	0.10639	5.1216	ppb	0.10639	2.08%
QC value within limits for Ag 328.068 Recovery = 102.43%								
Al 396.153Radial†	237.3	189.92	ug/L	2.483	189.92	ppb	2.483	1.31%
QC value within limits for Al 396.153Radial Recovery = 94.96%								
As 188.979†	64.0	28.837	ug/L	3.6241	28.837	ppb	3.6241	12.57%
QC value within limits for As 188.979 Recovery = 96.12%								
B 249.677†	2082.6	50.657	ug/L	0.2992	50.657	ppb	0.2992	0.59%
QC value within limits for B 249.677 Recovery = 101.31%								
Ba 233.527†	585.0	4.8660	ug/L	0.11280	4.8660	ppb	0.11280	2.32%
QC value within limits for Ba 233.527 Recovery = 97.32%								
Be 313.107†	12355.4	4.9191	ug/L	0.02416	4.9191	ppb	0.02416	0.49%
QC value within limits for Be 313.107 Recovery = 98.38%								
Ca 317.933Radial†	116.6	196.37	ug/L	0.478	196.37	ppb	0.478	0.24%

QC value within limits for Ca 317.933Radial Recovery = 98.19%

Cd 226.502†	431.7	5.0647 ug/L	0.03832	5.0647 ppb	0.03832	0.76%
QC value within limits for Cd 226.502 Recovery = 101.29%						
Co 228.616†	219.8	4.7837 ug/L	0.06633	4.7837 ppb	0.06633	1.39%
QC value within limits for Co 228.616 Recovery = 95.67%						
Cr 267.716†	374.0	4.3978 ug/L	0.23233	4.3978 ppb	0.23233	5.28%
QC value within limits for Cr 267.716 Recovery = 87.96%						
Cu 324.752†	2838.1	9.0306 ug/L	0.21204	9.0306 ppb	0.21204	2.35%
QC value within limits for Cu 324.752 Recovery = 90.31%						
Fe 238.204 Radial†	10.4	98.361 ug/L	10.5880	98.361 ppb	10.5880	10.76%
QC value within limits for Fe 238.204 Radial Recovery = 98.36%						
K 766.490 Radial†	430.7	86.040 ug/L	5.4214	86.040 ppb	5.4214	6.30%
QC value less than the lower limit for K 766.490 Radial Recovery = 57.36%						
Mg 279.077 IEC†	9.6	335.84 ug/L	39.435	335.84 ppb	39.435	11.74%
QC value within limits for Mg 279.077 IEC Recovery = 111.95%						
Mn 257.610†	8626.8	10.112 ug/L	0.0653	10.112 ppb	0.0653	0.65%
QC value within limits for Mn 257.610 Recovery = 101.12%						
Mo 202.031†	133.7	9.9345 ug/L	0.63052	9.9345 ppb	0.63052	6.35%
QC value within limits for Mo 202.031 Recovery = 99.34%						
Na 589.592 Radial†	1238.6	401.30 ug/L	7.231	401.30 ppb	7.231	1.80%
QC value greater than the upper limit for Na 589.592 Radial Recovery = 133.77%						
Ni 231.604†	185.0	4.8670 ug/L	0.07506	4.8670 ppb	0.07506	1.54%
QC value within limits for Ni 231.604 Recovery = 97.34%						
P 214.914†	199.0	125.24 ug/L	6.692	125.24 ppb	6.692	5.34%
QC value within limits for P 214.914 Recovery = 83.49%						
Pb 220.353†	89.2	11.480 ug/L	1.4178	11.480 ppb	1.4178	12.35%
QC value within limits for Pb 220.353 Recovery = 114.80%						
S 181.975 Axial†	60.5	90.283 ug/L	2.8758	90.283 ppb	2.8758	3.19%
QC value within limits for S 181.975 Axial Recovery = 90.28%						
Sb 206.836†	31.1	11.708 ug/L	0.9266	11.708 ppb	0.9266	7.91%
QC value within limits for Sb 206.836 Recovery = 117.08%						
Se 196.026†	53.9	36.421 ug/L	1.5614	36.421 ppb	1.5614	4.29%
QC value within limits for Se 196.026 Recovery = 121.40%						
Si 251.611†	2767.0	93.170 ug/L	2.0097	93.170 ppb	2.0097	2.16%
QC value within limits for Si 251.611 Recovery = 93.17%						
Sn 189.927†	50.1	9.2912 ug/L	0.56207	9.2912 ppb	0.56207	6.05%
QC value within limits for Sn 189.927 Recovery = 92.91%						
Sr 421.552†	666.1	4.7462 ug/L	0.05021	4.7462 ppb	0.05021	1.06%
QC value within limits for Sr 421.552 Recovery = 94.92%						
Ti 334.940†	3050.0	5.2023 ug/L	0.04826	5.2023 ppb	0.04826	0.93%
QC value within limits for Ti 334.940 Recovery = 104.05%						
Tl 190.801†	74.6	23.931 ug/L	1.6002	23.931 ppb	1.6002	6.69%
QC value within limits for Tl 190.801 Recovery = 119.66%						
U 409.014†	1963.6	62.690 ug/L	1.3527	62.690 ppb	1.3527	2.16%
QC value within limits for U 409.014 Recovery = 125.38%						
V 292.402†	788.0	5.9300 ug/L	0.36561	5.9300 ppb	0.36561	6.17%
QC value within limits for V 292.402 Recovery = 118.60%						
Zn 213.857†	737.5	7.3030 ug/L	0.38678	7.3030 ppb	0.38678	5.30%
QC value within limits for Zn 213.857 Recovery = 73.03%						
SiO2†	2864.1	205.06 ug/L	4.999	205.06 ppb	4.999	2.44%
QC value within limits for SiO2 Recovery = 96.27%						

QC Failed. Continue with analysis.

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 15:59:35
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4659.4	4659.4	97.2	%			16:01:27
1	Y RADIAL	5007.5	5007.5	97.62	%			16:01:27
1	Al 396.153Radial†	-10.2	-7.2	-5.8051	ug/L	-5.8051	ppb	16:01:27
1	Ca 317.933Radial†	18.9	4.3	7.2543	ug/L	7.2543	ppb	16:01:47
1	Fe 238.204 Radial†	8.0	-1.7	-15.719	ug/L	-15.719	ppb	16:01:47
1	K 766.490 Radial†	2779.1	70.3	14.065	ug/L	14.065	ppb	16:01:27
1	Mg 279.077 IEC†	0.7	-0.8	-29.417	ug/L	-29.417	ppb	16:01:47
1	Na 589.592 Radial†	-1362.2	166.1	53.833	ug/L	53.833	ppb	16:01:27
1	Sr 421.552†	11.4	-5.5	-0.0392	ug/L	-0.0392	ppb	16:01:27
1	Sc 361.383	866021.4	866021.4	106.41	%			16:02:44
1	Y 371.029	728495.4	728495.4	106.20	%			16:02:44
1	Ag 328.068†	339.5	37.5	0.1786	ug/L	0.1786	ppb	16:02:44
1	As 188.979†	-20.8	-0.7	-0.2960	ug/L	-0.2960	ppb	16:03:04
1	B 249.677†	-450.9	94.8	2.3095	ug/L	2.3095	ppb	16:03:04
1	Ba 233.527†	5.6	3.8	0.0326	ug/L	0.0326	ppb	16:03:04
1	Be 313.107†	-4421.1	157.4	0.0632	ug/L	0.0632	ppb	16:02:44
1	Cd 226.502†	-169.1	38.6	0.4554	ug/L	0.4554	ppb	16:03:04
1	Co 228.616†	-71.8	5.2	0.1147	ug/L	0.1147	ppb	16:03:04
1	Cr 267.716†	67.2	-32.6	-0.3853	ug/L	-0.3853	ppb	16:03:04
1	Cu 324.752†	6477.5	-210.7	-0.6758	ug/L	-0.6758	ppb	16:02:44
1	Mn 257.610†	415.1	-14.2	-0.0170	ug/L	-0.0170	ppb	16:03:04
1	Mo 202.031†	26.2	5.3	0.3956	ug/L	0.3956	ppb	16:03:04
1	Ni 231.604†	91.0	10.4	0.2745	ug/L	0.2745	ppb	16:03:04
1	P 214.914†	227.7	-13.9	-8.7010	ug/L	-8.7010	ppb	16:03:04
1	Pb 220.353†	-69.8	-1.0	-0.1272	ug/L	-0.1272	ppb	16:03:04
1	S 181.975 Axial†	45.0	-4.2	-6.2508	ug/L	-6.2508	ppb	16:03:04
1	Sb 206.836†	38.6	3.6	1.3250	ug/L	1.3250	ppb	16:03:04
1	Se 196.026†	-27.4	4.7	3.0652	ug/L	3.0652	ppb	16:03:04
1	Si 251.611†	475.4	0.9	0.0257	ug/L	0.0257	ppb	16:03:04
1	Sn 189.927†	10.4	3.6	0.6747	ug/L	0.6747	ppb	16:03:04
1	Ti 334.940†	-1301.9	163.5	0.2821	ug/L	0.2821	ppb	16:02:44
1	Tl 190.801†	-36.6	9.5	3.0463	ug/L	3.0463	ppb	16:03:04
1	U 409.014†	-2023.1	139.7	4.4642	ug/L	4.4642	ppb	16:02:44
1	V 292.402†	-1377.0	113.1	0.8317	ug/L	0.8317	ppb	16:02:44
1	Zn 213.857†	767.1	-139.4	-1.3898	ug/L	-1.3898	ppb	16:03:04
1	SiO2†	472.9	-11.8	-0.8576	ug/L	-0.8576	ppb	16:04:00
2	Sc Radial	5392.2	5392.2	113	%			16:01:52
2	Y RADIAL	5770.9	5770.9	112.5	%			16:01:52
2	Al 396.153Radial†	-1.0	2.3	1.8315	ug/L	1.8315	ppb	16:01:52
2	Ca 317.933Radial†	21.4	3.8	6.4600	ug/L	6.4600	ppb	16:02:12
2	Fe 238.204 Radial†	8.7	-2.1	-20.074	ug/L	-20.074	ppb	16:02:12
2	K 766.490 Radial†	2800.6	-298.9	-59.923	ug/L	-59.923	ppb	16:01:52
2	Mg 279.077 IEC†	1.8	0.1	2.9598	ug/L	2.9598	ppb	16:02:12
2	Na 589.592 Radial†	-1400.6	322.4	104.46	ug/L	104.46	ppb	16:01:52
2	Sr 421.552†	28.1	7.8	0.0552	ug/L	0.0552	ppb	16:01:52
2	Sc 361.383	861825.1	861825.1	105.89	%			16:03:09
2	Y 371.029	726215.3	726215.3	105.87	%			16:03:09
2	Ag 328.068†	319.1	19.8	0.0856	ug/L	0.0856	ppb	16:03:09
2	As 188.979†	-23.7	-3.6	-1.6058	ug/L	-1.6058	ppb	16:03:29
2	B 249.677†	-462.9	81.3	1.9827	ug/L	1.9827	ppb	16:03:29
2	Ba 233.527†	-16.6	-17.2	-0.1409	ug/L	-0.1409	ppb	16:03:29
2	Be 313.107†	-4400.2	156.9	0.0631	ug/L	0.0631	ppb	16:03:09
2	Cd 226.502†	-179.0	28.5	0.3387	ug/L	0.3387	ppb	16:03:29
2	Co 228.616†	-68.8	7.7	0.1694	ug/L	0.1694	ppb	16:03:29
2	Cr 267.716†	76.2	-23.8	-0.2841	ug/L	-0.2841	ppb	16:03:29
2	Cu 324.752†	6433.2	-222.9	-0.7188	ug/L	-0.7188	ppb	16:03:09
2	Mn 257.610†	418.4	-9.1	-0.0128	ug/L	-0.0128	ppb	16:03:29
2	Mo 202.031†	29.6	8.6	0.6392	ug/L	0.6392	ppb	16:03:29
2	Ni 231.604†	81.4	1.8	0.0462	ug/L	0.0462	ppb	16:03:29

2	P 214.914†	214.8	-25.0	-15.847 ug/L	-15.847 ppb	16:03:29
2	Pb 220.353†	-51.3	16.2	2.0754 ug/L	2.0754 ppb	16:03:29
2	S 181.975 Axial†	48.0	-1.2	-1.7421 ug/L	-1.7421 ppb	16:03:29
2	Sb 206.836†	31.6	-2.9	-1.0694 ug/L	-1.0694 ppb	16:03:29
2	Se 196.026†	-28.7	3.2	2.0994 ug/L	2.0994 ppb	16:03:29
2	Si 251.611†	479.3	6.7	0.2194 ug/L	0.2194 ppb	16:03:29
2	Sn 189.927†	-5.5	-11.4	-2.0993 ug/L	-2.0993 ppb	16:03:29
2	Ti 334.940†	-1264.5	192.9	0.3266 ug/L	0.3266 ppb	16:03:09
2	Tl 190.801†	-30.5	15.1	4.8186 ug/L	4.8186 ppb	16:03:29
2	U 409.014†	-1784.7	355.6	11.359 ug/L	11.359 ppb	16:03:09
2	V 292.402†	-1334.2	147.2	1.0953 ug/L	1.0953 ppb	16:03:09
2	Zn 213.857†	781.4	-122.4	-1.2179 ug/L	-1.2179 ppb	16:03:29
2	SiO2†	487.9	4.5	0.3057 ug/L	0.3057 ppb	16:04:05
3	Sc Radial	5260.1	5260.1	110 %		16:02:17
3	Y RADIAL	5637.3	5637.3	109.9 %		16:02:17
3	Al 396.153Radial†	-15.6	-10.9	-8.7458 ug/L	-8.7458 ppb	16:02:17
3	Ca 317.933Radial†	24.1	6.8	11.428 ug/L	11.428 ppb	16:02:37
3	Fe 238.204 Radial†	10.6	-0.2	-2.0976 ug/L	-2.0976 ppb	16:02:37
3	K 766.490 Radial†	2639.1	-383.5	-76.889 ug/L	-76.889 ppb	16:02:17
3	Mg 279.077 IEC†	-0.4	-1.9	-65.704 ug/L	-65.704 ppb	16:02:37
3	Na 589.592 Radial†	-1327.1	358.1	116.02 ug/L	116.02 ppb	16:02:17
3	Sr 421.552†	-6.5	-23.1	-0.1647 ug/L	-0.1647 ppb	16:02:17
3	Sc 361.383	868535.1	868535.1	106.72 %		16:03:34
3	Y 371.029	730952.8	730952.8	106.56 %		16:03:34
3	Ag 328.068†	391.0	84.8	0.4121 ug/L	0.4121 ppb	16:03:34
3	As 188.979†	-21.7	-1.5	-0.6640 ug/L	-0.6640 ppb	16:03:54
3	B 249.677†	-462.0	85.6	2.0843 ug/L	2.0843 ppb	16:03:54
3	Ba 233.527†	6.0	4.1	0.0359 ug/L	0.0359 ppb	16:03:54
3	Be 313.107†	-4385.5	202.8	0.0812 ug/L	0.0812 ppb	16:03:34
3	Cd 226.502†	-186.4	22.9	0.2699 ug/L	0.2699 ppb	16:03:54
3	Co 228.616†	-80.9	-3.1	-0.0688 ug/L	-0.0688 ppb	16:03:54
3	Cr 267.716†	68.6	-31.5	-0.3733 ug/L	-0.3733 ppb	16:03:54
3	Cu 324.752†	6325.9	-370.3	-1.1867 ug/L	-1.1867 ppb	16:03:34
3	Mn 257.610†	399.4	-30.1	-0.0328 ug/L	-0.0328 ppb	16:03:54
3	Mo 202.031†	13.9	-6.3	-0.4644 ug/L	-0.4644 ppb	16:03:54
3	Ni 231.604†	72.1	-7.6	-0.1992 ug/L	-0.1992 ppb	16:03:54
3	P 214.914†	235.3	-7.4	-4.4881 ug/L	-4.4881 ppb	16:03:54
3	Pb 220.353†	-51.9	15.9	2.0393 ug/L	2.0393 ppb	16:03:54
3	S 181.975 Axial†	39.9	-9.1	-13.569 ug/L	-13.569 ppb	16:03:54
3	Sb 206.836†	30.5	-4.1	-1.5002 ug/L	-1.5002 ppb	16:03:54
3	Se 196.026†	-37.4	-4.7	-3.1537 ug/L	-3.1537 ppb	16:03:54
3	Si 251.611†	490.4	13.6	0.4650 ug/L	0.4650 ppb	16:03:54
3	Sn 189.927†	14.8	7.8	1.4382 ug/L	1.4382 ppb	16:03:54
3	Ti 334.940†	-1308.7	160.6	0.2791 ug/L	0.2791 ppb	16:03:34
3	Tl 190.801†	-34.9	11.2	3.5679 ug/L	3.5679 ppb	16:03:54
3	U 409.014†	-1907.5	253.6	8.0989 ug/L	8.0989 ppb	16:03:34
3	V 292.402†	-1398.1	97.0	0.7078 ug/L	0.7078 ppb	16:03:34
3	Zn 213.857†	788.6	-121.3	-1.2070 ug/L	-1.2070 ppb	16:03:54
3	SiO2†	490.1	3.0	0.2286 ug/L	0.2286 ppb	16:04:10

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	865460.5	106.34	%	0.417				0.39%
Sc Radial	5103.9	107	%	8.2				7.65%
Y 371.029	728554.5	106.21	%	0.345				0.33%
Y RADIAL	5471.9	106.7	%	7.95				7.45%
Ag 328.068†	47.4	0.2254	ug/L	0.16820	0.2254	ppb	0.16820	74.62%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-5.3	-4.2398	ug/L	5.45962	-4.2398	ppb	5.45962	128.77%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.9	-0.8552	ug/L	0.67551	-0.8552	ppb	0.67551	78.99%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	87.3	2.1255	ug/L	0.16723	2.1255	ppb	0.16723	7.87%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3.1	-0.0241	ug/L	0.10113	-0.0241	ppb	0.10113	418.94%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	172.4	0.0691	ug/L	0.01042	0.0691	ppb	0.01042	15.07%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.0	8.3806	ug/L	2.66843	8.3806	ppb	2.66843	31.84%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	30.0	0.3546 ug/L	0.09376	0.3546 ppb	0.09376	26.44%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	3.3	0.0718 ug/L	0.12478	0.0718 ppb	0.12478	173.87%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-29.3	-0.3476 ug/L	0.05531	-0.3476 ppb	0.05531	15.91%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-267.9	-0.8604 ug/L	0.28339	-0.8604 ppb	0.28339	32.94%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-1.3	-12.630 ug/L	9.3780	-12.630 ppb	9.3780	74.25%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-204.0	-40.916 ug/L	48.3645	-40.916 ppb	48.3645	118.21%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	-0.9	-30.721 ug/L	34.3506	-30.721 ppb	34.3506	111.82%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-17.8	-0.0209 ug/L	0.01053	-0.0209 ppb	0.01053	50.44%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	2.6	0.1901 ug/L	0.57975	0.1901 ppb	0.57975	304.91%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	282.2	91.438 ug/L	33.0764	91.438 ppb	33.0764	36.17%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	1.5	0.0405 ug/L	0.23689	0.0405 ppb	0.23689	584.90%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-15.4	-9.6788 ug/L	5.74231	-9.6788 ppb	5.74231	59.33%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	10.4	1.3292 ug/L	1.26137	1.3292 ppb	1.26137	94.90%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-4.8	-7.1872 ug/L	5.96870	-7.1872 ppb	5.96870	83.05%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	-1.1	-0.4149 ug/L	1.52209	-0.4149 ppb	1.52209	366.85%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	1.1	0.6703 ug/L	3.34674	0.6703 ppb	3.34674	499.29%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	7.1	0.2367 ug/L	0.22015	0.2367 ppb	0.22015	93.01%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	0.0	0.0045 ug/L	1.86154	0.0045 ppb	1.86154	>999.9%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-6.9	-0.0496 ug/L	0.11033	-0.0496 ppb	0.11033	222.65%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	172.3	0.2959 ug/L	0.02661	0.2959 ppb	0.02661	8.99%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	11.9	3.8110 ug/L	0.91080	3.8110 ppb	0.91080	23.90%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	249.6	7.9740 ug/L	3.44894	7.9740 ppb	3.44894	43.25%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	119.1	0.8783 ug/L	0.19795	0.8783 ppb	0.19795	22.54%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-127.7	-1.2716 ug/L	0.10252	-1.2716 ppb	0.10252	8.06%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-1.4	-0.1077 ug/L	0.65051	-0.1077 ppb	0.65051	603.75%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 18
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/14/2010 17:01:21
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Rep#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5210.5	5210.5	109	%			17:03:13
1	Y RADIAL	5523.1	5523.1	107.7	%			17:03:13
1	Al 396.153Radial†	6451.1	5935.4	4737.9	ug/L	4737.9	ppb	17:03:13
1	Ca 317.933Radial†	3091.3	2827.4	4761.2	ug/L	4761.2	ppb	17:03:33
1	Fe 238.204 Radial†	568.7	513.0	4838.1	ug/L	4838.1	ppb	17:03:33
1	K 766.490 Radial†	29286.1	24142.5	4830.7	ug/L	4830.7	ppb	17:03:13
1	Mg 279.077 IEC†	153.7	139.9	4909.8	ug/L	4909.8	ppb	17:03:33
1	Na 589.592 Radial†	30090.7	29236.7	9472.8	ug/L	9472.8	ppb	17:03:13
1	Sr 421.552†	74178.7	68193.5	486.04	ug/L	486.04	ppb	17:03:13
1	Sc 361.383	863186.9	863186.9	106.06	%			17:04:30
1	Y 371.029	716352.1	716352.1	104.43	%			17:04:30
1	Ag 328.068†	105650.3	99332.0	491.10	ug/L	491.10	ppb	17:04:35
1	As 188.979†	1136.3	1090.2	494.92	ug/L	494.92	ppb	17:04:55
1	B 249.677†	21404.2	20699.7	501.58	ug/L	501.58	ppb	17:04:35
1	Ba 233.527†	64025.4	60365.6	501.80	ug/L	501.80	ppb	17:04:35
1	Be 313.107†	1311167.7	1240561.8	493.85	ug/L	493.85	ppb	17:04:30
1	Cd 226.502†	45211.3	42825.6	501.86	ug/L	501.86	ppb	17:04:35
1	Co 228.616†	24534.3	23205.1	504.00	ug/L	504.00	ppb	17:04:35
1	Cr 267.716†	44829.8	42172.6	498.13	ug/L	498.13	ppb	17:04:35
1	Cu 324.752†	172907.8	156730.1	500.29	ug/L	500.29	ppb	17:04:35
1	Mn 257.610†	445099.9	419263.3	491.92	ug/L	491.92	ppb	17:04:30
1	Mo 202.031†	7040.2	6618.6	491.74	ug/L	491.74	ppb	17:04:55
1	Ni 231.604†	20293.1	19058.4	501.40	ug/L	501.40	ppb	17:04:35
1	P 214.914†	4302.9	3829.2	2346.3	ug/L	2346.3	ppb	17:04:55
1	Pb 220.353†	3982.8	3819.8	490.85	ug/L	490.85	ppb	17:04:55
1	S 181.975 Axial†	749.4	660.1	984.21	ug/L	984.21	ppb	17:04:55
1	Sb 206.836†	1459.5	1343.4	508.80	ug/L	508.80	ppb	17:04:55
1	Se 196.026†	784.6	770.1	532.62	ug/L	532.62	ppb	17:04:55
1	Si 251.611†	80354.8	75317.6	2533.4	ug/L	2533.4	ppb	17:04:35
1	Sn 189.927†	2827.0	2659.3	492.61	ug/L	492.61	ppb	17:04:55
1	Ti 334.940†	306556.7	290427.5	498.07	ug/L	498.07	ppb	17:04:35
1	Tl 190.801†	1568.2	1522.5	490.37	ug/L	490.37	ppb	17:04:55
1	U 409.014†	15300.1	16466.9	524.25	ug/L	524.25	ppb	17:04:35
1	V 292.402†	72085.3	69373.6	507.09	ug/L	507.09	ppb	17:04:35
1	Zn 213.857†	54651.9	50668.8	501.00	ug/L	501.00	ppb	17:04:35
1	SiO2†	79267.8	74282.4	5312.1	ug/L	5312.1	ppb	17:06:03
2	Sc Radial	5329.7	5329.7	111	%			17:03:38
2	Y RADIAL	5727.5	5727.5	111.7	%			17:03:38
2	Al 396.153Radial†	6423.0	5777.5	4611.3	ug/L	4611.3	ppb	17:03:38
2	Ca 317.933Radial†	3033.4	2711.8	4566.6	ug/L	4566.6	ppb	17:03:58
2	Fe 238.204 Radial†	558.9	492.6	4645.6	ug/L	4645.6	ppb	17:03:58
2	K 766.490 Radial†	29412.1	23653.7	4732.9	ug/L	4732.9	ppb	17:03:38
2	Mg 279.077 IEC†	151.8	134.9	4737.4	ug/L	4737.4	ppb	17:03:58
2	Na 589.592 Radial†	30314.8	28819.5	9337.7	ug/L	9337.7	ppb	17:03:38
2	Sr 421.552†	74656.1	67097.6	478.23	ug/L	478.23	ppb	17:03:38
2	Sc 361.383	862358.1	862358.1	105.96	%			17:05:01
2	Y 371.029	714611.9	714611.9	104.18	%			17:05:01
2	Ag 328.068†	104039.6	97907.6	484.02	ug/L	484.02	ppb	17:05:06
2	As 188.979†	1128.0	1083.5	491.78	ug/L	491.78	ppb	17:05:26
2	B 249.677†	21027.9	20364.0	493.46	ug/L	493.46	ppb	17:05:06
2	Ba 233.527†	62788.0	59255.8	492.57	ug/L	492.57	ppb	17:05:06
2	Be 313.107†	1304703.2	1235648.9	491.88	ug/L	491.88	ppb	17:05:01
2	Cd 226.502†	44458.8	42156.3	494.02	ug/L	494.02	ppb	17:05:06
2	Co 228.616†	24131.3	22847.1	496.24	ug/L	496.24	ppb	17:05:06
2	Cr 267.716†	43932.3	41366.2	488.61	ug/L	488.61	ppb	17:05:06
2	Cu 324.752†	169255.3	153439.6	489.78	ug/L	489.78	ppb	17:05:06
2	Mn 257.610†	444607.9	419202.3	491.84	ug/L	491.84	ppb	17:05:01
2	Mo 202.031†	7020.1	6606.0	490.79	ug/L	490.79	ppb	17:05:26
2	Ni 231.604†	19936.4	18740.2	493.02	ug/L	493.02	ppb	17:05:06

2	P 214.914†	4270.3	3802.3	2331.4 ug/L	2331.4 ppb	17:05:26
2	Pb 220.353†	3957.8	3799.8	488.27 ug/L	488.27 ppb	17:05:26
2	S 181.975 Axial†	760.2	671.0	1000.6 ug/L	1000.6 ppb	17:05:26
2	Sb 206.836†	1451.4	1337.0	506.45 ug/L	506.45 ppb	17:05:26
2	Se 196.026†	752.5	740.5	512.18 ug/L	512.18 ppb	17:05:26
2	Si 251.611†	78888.5	74006.5	2489.2 ug/L	2489.2 ppb	17:05:06
2	Sn 189.927†	2828.0	2662.9	493.23 ug/L	493.23 ppb	17:05:26
2	Ti 334.940†	300878.0	285346.0	489.35 ug/L	489.35 ppb	17:05:06
2	Tl 190.801†	1576.9	1532.2	493.43 ug/L	493.43 ppb	17:05:26
2	U 409.014†	14883.9	16087.9	512.19 ug/L	512.19 ppb	17:05:06
2	V 292.402†	70748.8	68177.6	498.46 ug/L	498.46 ppb	17:05:06
2	Zn 213.857†	53625.7	49749.9	491.92 ug/L	491.92 ppb	17:05:06
2	SiO2†	78450.4	73582.7	5261.9 ug/L	5261.9 ppb	17:06:08
3	Sc Radial	5234.3	5234.3	109 %		17:04:03
3	Y RADIAL	5582.3	5582.3	108.8 %		17:04:03
3	Al 396.153Radial†	6348.8	5814.7	4641.4 ug/L	4641.4 ppb	17:04:03
3	Ca 317.933Radial†	3112.5	2833.9	4772.2 ug/L	4772.2 ppb	17:04:23
3	Fe 238.204 Radial†	573.8	515.4	4859.7 ug/L	4859.7 ppb	17:04:23
3	K 766.490 Radial†	29151.9	23897.0	4781.6 ug/L	4781.6 ppb	17:04:03
3	Mg 279.077 IEC†	159.0	144.0	5056.9 ug/L	5056.9 ppb	17:04:23
3	Na 589.592 Radial†	29562.5	28627.2	9275.4 ug/L	9275.4 ppb	17:04:03
3	Sr 421.552†	73455.8	67221.2	479.11 ug/L	479.11 ppb	17:04:03
3	Sc 361.383	870366.0	870366.0	106.94 %		17:05:32
3	Y 371.029	720440.4	720440.4	105.03 %		17:05:32
3	Ag 328.068†	102646.8	95701.8	473.22 ug/L	473.22 ppb	17:05:37
3	As 188.979†	1115.7	1062.1	482.16 ug/L	482.16 ppb	17:05:57
3	B 249.677†	20849.1	20014.2	484.94 ug/L	484.94 ppb	17:05:37
3	Ba 233.527†	62547.3	58485.5	486.17 ug/L	486.17 ppb	17:05:37
3	Be 313.107†	1311841.7	1230995.0	490.01 ug/L	490.01 ppb	17:05:32
3	Cd 226.502†	44165.8	41496.3	486.26 ug/L	486.26 ppb	17:05:37
3	Co 228.616†	23962.7	22479.8	488.27 ug/L	488.27 ppb	17:05:37
3	Cr 267.716†	43786.4	40848.2	482.49 ug/L	482.49 ppb	17:05:37
3	Cu 324.752†	168056.1	150848.6	481.52 ug/L	481.52 ppb	17:05:37
3	Mn 257.610†	446514.2	417124.2	489.41 ug/L	489.41 ppb	17:05:32
3	Mo 202.031†	7005.8	6531.7	485.29 ug/L	485.29 ppb	17:05:57
3	Ni 231.604†	19852.5	18488.6	486.41 ug/L	486.41 ppb	17:05:37
3	P 214.914†	4253.4	3749.4	2299.1 ug/L	2299.1 ppb	17:05:57
3	Pb 220.353†	3970.7	3777.5	485.41 ug/L	485.41 ppb	17:05:57
3	S 181.975 Axial†	753.7	658.3	981.58 ug/L	981.58 ppb	17:05:57
3	Sb 206.836†	1460.0	1332.5	504.60 ug/L	504.60 ppb	17:05:57
3	Se 196.026†	759.9	740.9	513.11 ug/L	513.11 ppb	17:05:57
3	Si 251.611†	78320.8	72790.7	2448.3 ug/L	2448.3 ppb	17:05:37
3	Sn 189.927†	2824.3	2634.8	488.08 ug/L	488.08 ppb	17:05:57
3	Ti 334.940†	299153.6	281120.9	482.11 ug/L	482.11 ppb	17:05:37
3	Tl 190.801†	1577.4	1518.9	489.17 ug/L	489.17 ppb	17:05:57
3	U 409.014†	14944.2	16015.0	509.85 ug/L	509.85 ppb	17:05:37
3	V 292.402†	70402.1	67239.1	491.59 ug/L	491.59 ppb	17:05:37
3	Zn 213.857†	53355.1	49031.2	484.78 ug/L	484.78 ppb	17:05:37
3	SiO2†	79182.0	73585.6	5262.3 ug/L	5262.3 ppb	17:06:13

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	865303.7	106.32	%	0.541				0.51%
Sc Radial	5258.2	110	%	1.3				1.20%
Y 371.029	717134.8	104.54	%	0.436				0.42%
Y RADIAL	5611.0	109.4	%	2.05				1.87%
Ag 328.068†	97647.1	482.78	ug/L	9.003	482.78	ppb	9.003	1.86%
QC value within limits for Ag 328.068 Recovery = 96.56%								
Al 396.153Radial†	5842.5	4663.5	ug/L	66.15	4663.5	ppb	66.15	1.42%
QC value within limits for Al 396.153Radial Recovery = 93.27%								
As 188.979†	1078.6	489.62	ug/L	6.648	489.62	ppb	6.648	1.36%
QC value within limits for As 188.979 Recovery = 97.92%								
B 249.677†	20359.3	493.33	ug/L	8.322	493.33	ppb	8.322	1.69%
QC value within limits for B 249.677 Recovery = 98.67%								
Ba 233.527†	59369.0	493.51	ug/L	7.854	493.51	ppb	7.854	1.59%
QC value within limits for Ba 233.527 Recovery = 98.70%								
Be 313.107†	1235735.2	491.91	ug/L	1.918	491.91	ppb	1.918	0.39%
QC value within limits for Be 313.107 Recovery = 98.38%								
Ca 317.933Radial†	2791.1	4700.0	ug/L	115.65	4700.0	ppb	115.65	2.46%

QC value within limits for Ca 317.933Radial Recovery = 94.00%						
Cd 226.502†	42159.4	494.05 ug/L	7.797	494.05 ppb	7.797	1.58%
QC value within limits for Cd 226.502 Recovery = 98.81%						
Co 228.616†	22844.0	496.17 ug/L	7.867	496.17 ppb	7.867	1.59%
QC value within limits for Co 228.616 Recovery = 99.23%						
Cr 267.716†	41462.3	489.75 ug/L	7.882	489.75 ppb	7.882	1.61%
QC value within limits for Cr 267.716 Recovery = 97.95%						
Cu 324.752†	153672.8	490.53 ug/L	9.406	490.53 ppb	9.406	1.92%
QC value within limits for Cu 324.752 Recovery = 98.11%						
Fe 238.204 Radial†	507.0	4781.1 ug/L	117.86	4781.1 ppb	117.86	2.47%
QC value within limits for Fe 238.204 Radial Recovery = 95.62%						
K 766.490 Radial†	23897.7	4781.8 ug/L	48.90	4781.8 ppb	48.90	1.02%
QC value within limits for K 766.490 Radial Recovery = 95.64%						
Mg 279.077 IEC†	139.6	4901.4 ug/L	159.93	4901.4 ppb	159.93	3.26%
QC value within limits for Mg 279.077 IEC Recovery = 98.03%						
Mn 257.610†	418529.9	491.05 ug/L	1.427	491.05 ppb	1.427	0.29%
QC value within limits for Mn 257.610 Recovery = 98.21%						
Mo 202.031†	6585.4	489.27 ug/L	3.482	489.27 ppb	3.482	0.71%
QC value within limits for Mo 202.031 Recovery = 97.85%						
Na 589.592 Radial†	28894.5	9362.0 ug/L	100.95	9362.0 ppb	100.95	1.08%
QC value within limits for Na 589.592 Radial Recovery = 93.62%						
Ni 231.604†	18762.4	493.61 ug/L	7.512	493.61 ppb	7.512	1.52%
QC value within limits for Ni 231.604 Recovery = 98.72%						
P 214.914†	3793.6	2325.6 ug/L	24.17	2325.6 ppb	24.17	1.04%
QC value within limits for P 214.914 Recovery = 93.02%						
Pb 220.353†	3799.0	488.18 ug/L	2.722	488.18 ppb	2.722	0.56%
QC value within limits for Pb 220.353 Recovery = 97.64%						
S 181.975 Axial†	663.1	988.79 ug/L	10.299	988.79 ppb	10.299	1.04%
QC value within limits for S 181.975 Axial Recovery = 98.88%						
Sb 206.836†	1337.6	506.62 ug/L	2.104	506.62 ppb	2.104	0.42%
QC value within limits for Sb 206.836 Recovery = 101.32%						
Se 196.026†	750.5	519.30 ug/L	11.541	519.30 ppb	11.541	2.22%
QC value within limits for Se 196.026 Recovery = 103.86%						
Si 251.611†	74038.3	2490.3 ug/L	42.57	2490.3 ppb	42.57	1.71%
QC value within limits for Si 251.611 Recovery = 99.61%						
Sn 189.927†	2652.3	491.31 ug/L	2.810	491.31 ppb	2.810	0.57%
QC value within limits for Sn 189.927 Recovery = 98.26%						
Sr 421.552†	67504.1	481.13 ug/L	4.278	481.13 ppb	4.278	0.89%
QC value within limits for Sr 421.552 Recovery = 96.23%						
Ti 334.940†	285631.4	489.84 ug/L	7.994	489.84 ppb	7.994	1.63%
QC value within limits for Ti 334.940 Recovery = 97.97%						
Tl 190.801†	1524.5	490.99 ug/L	2.197	490.99 ppb	2.197	0.45%
QC value within limits for Tl 190.801 Recovery = 98.20%						
U 409.014†	16189.9	515.43 ug/L	7.726	515.43 ppb	7.726	1.50%
QC value within limits for U 409.014 Recovery = 103.09%						
V 292.402†	68263.4	499.05 ug/L	7.764	499.05 ppb	7.764	1.56%
QC value within limits for V 292.402 Recovery = 99.81%						
Zn 213.857†	49816.6	492.56 ug/L	8.126	492.56 ppb	8.126	1.65%
QC value within limits for Zn 213.857 Recovery = 98.51%						
SiO2†	73816.9	5278.8 ug/L	28.84	5278.8 ppb	28.84	0.55%
QC value within limits for SiO2 Recovery = 98.71%						

All analyte(s) passed QC.

Sequence No.: 19
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/14/2010 17:08:23
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5205.9	5205.9	109	%			17:10:16
1	Y RADIAL	5551.4	5551.4	108.2	%			17:10:16
1	Al 396.153Radial†	244.4	228.1	182.53	ug/L	182.53	ppb	17:10:16
1	Ca 317.933Radial†	144.8	118.1	198.88	ug/L	198.88	ppb	17:10:36
1	Fe 238.204 Radial†	21.4	9.8	92.655	ug/L	92.655	ppb	17:10:36
1	K 766.490 Radial†	3578.2	505.8	101.09	ug/L	101.09	ppb	17:10:16
1	Mg 279.077 IEC†	12.6	10.1	354.07	ug/L	354.07	ppb	17:10:36
1	Na 589.592 Radial†	-309.7	1281.9	415.35	ug/L	415.35	ppb	17:10:16
1	Sr 421.552†	756.1	678.7	4.8361	ug/L	4.8361	ppb	17:10:16
1	Sc 361.383	864686.2	864686.2	106.24	%			17:11:33
1	Y 371.029	727912.6	727912.6	106.12	%			17:11:33
1	Ag 328.068†	1500.8	1131.0	5.5575	ug/L	5.5575	ppb	17:11:33
1	As 188.979†	46.5	62.6	28.239	ug/L	28.239	ppb	17:11:53
1	B 249.677†	1792.6	2205.8	53.656	ug/L	53.656	ppb	17:11:33
1	Ba 233.527†	622.8	584.7	4.8638	ug/L	4.8638	ppb	17:11:53
1	Be 313.107†	8726.9	12526.3	4.9869	ug/L	4.9869	ppb	17:11:33
1	Cd 226.502†	262.8	444.9	5.2201	ug/L	5.2201	ppb	17:11:53
1	Co 228.616†	165.0	228.0	4.9640	ug/L	4.9640	ppb	17:11:53
1	Cr 267.716†	517.9	391.7	4.6072	ug/L	4.6072	ppb	17:11:53
1	Cu 324.752†	9883.1	3004.1	9.5614	ug/L	9.5614	ppb	17:11:33
1	Mn 257.610†	9666.9	8694.4	10.190	ug/L	10.190	ppb	17:11:33
1	Mo 202.031†	166.7	137.6	10.222	ug/L	10.222	ppb	17:11:53
1	Ni 231.604†	283.1	191.4	5.0345	ug/L	5.0345	ppb	17:11:53
1	P 214.914†	456.6	201.9	126.99	ug/L	126.99	ppb	17:11:53
1	Pb 220.353†	14.1	77.8	10.022	ug/L	10.022	ppb	17:11:53
1	S 181.975 Axial†	120.5	66.9	99.862	ug/L	99.862	ppb	17:11:53
1	Sb 206.836†	66.4	29.8	11.223	ug/L	11.223	ppb	17:11:53
1	Se 196.026†	19.5	48.7	32.934	ug/L	32.934	ppb	17:11:53
1	Si 251.611†	3541.5	2887.5	97.231	ug/L	97.231	ppb	17:11:33
1	Sn 189.927†	53.9	44.6	8.2756	ug/L	8.2756	ppb	17:11:53
1	Ti 334.940†	1749.2	3033.5	5.1735	ug/L	5.1735	ppb	17:11:33
1	Tl 190.801†	38.2	79.9	25.608	ug/L	25.608	ppb	17:11:53
1	U 409.014†	-149.7	1900.0	60.661	ug/L	60.661	ppb	17:11:33
1	V 292.402†	-644.3	800.7	6.0232	ug/L	6.0232	ppb	17:11:33
1	Zn 213.857†	1740.1	777.5	7.7002	ug/L	7.7002	ppb	17:11:53
1	SiO2†	3553.7	2888.7	206.82	ug/L	206.82	ppb	17:12:49
2	Sc Radial	5301.1	5301.1	111	%			17:10:41
2	Y RADIAL	5651.3	5651.3	110.2	%			17:10:41
2	Al 396.153Radial†	274.6	251.4	201.20	ug/L	201.20	ppb	17:10:41
2	Ca 317.933Radial†	145.6	116.4	196.02	ug/L	196.02	ppb	17:11:01
2	Fe 238.204 Radial†	22.6	10.6	99.458	ug/L	99.458	ppb	17:11:01
2	K 766.490 Radial†	3616.5	481.3	96.185	ug/L	96.185	ppb	17:10:41
2	Mg 279.077 IEC†	15.5	12.5	437.73	ug/L	437.73	ppb	17:11:01
2	Na 589.592 Radial†	-340.9	1258.8	407.86	ug/L	407.86	ppb	17:10:41
2	Sr 421.552†	769.5	678.3	4.8335	ug/L	4.8335	ppb	17:10:41
2	Sc 361.383	866616.2	866616.2	106.48	%			17:11:58
2	Y 371.029	729585.0	729585.0	106.36	%			17:11:58
2	Ag 328.068†	1506.6	1133.3	5.5700	ug/L	5.5700	ppb	17:11:58
2	As 188.979†	41.6	57.9	26.107	ug/L	26.107	ppb	17:12:18
2	B 249.677†	1782.9	2192.9	53.344	ug/L	53.344	ppb	17:11:58
2	Ba 233.527†	636.2	596.0	4.9568	ug/L	4.9568	ppb	17:12:18
2	Be 313.107†	8730.1	12511.0	4.9809	ug/L	4.9809	ppb	17:11:58
2	Cd 226.502†	279.8	460.4	5.4003	ug/L	5.4003	ppb	17:12:18
2	Co 228.616†	145.5	209.3	4.5570	ug/L	4.5570	ppb	17:12:18
2	Cr 267.716†	507.6	380.9	4.4799	ug/L	4.4799	ppb	17:12:18
2	Cu 324.752†	9752.8	2861.1	9.1050	ug/L	9.1050	ppb	17:11:58
2	Mn 257.610†	9682.0	8688.4	10.180	ug/L	10.180	ppb	17:11:58
2	Mo 202.031†	166.6	137.2	10.191	ug/L	10.191	ppb	17:12:18
2	Ni 231.604†	282.7	190.4	5.0081	ug/L	5.0081	ppb	17:12:18

2	P 214.914†	460.1	204.2	128.58 ug/L	128.58 ppb	17:12:18
2	Pb 220.353†	14.8	78.5	10.109 ug/L	10.109 ppb	17:12:18
2	S 181.975 Axial†	122.5	68.6	102.29 ug/L	102.29 ppb	17:12:18
2	Sb 206.836†	65.1	28.4	10.737 ug/L	10.737 ppb	17:12:18
2	Se 196.026†	14.9	44.4	30.039 ug/L	30.039 ppb	17:12:18
2	Si 251.611†	3569.0	2905.9	97.852 ug/L	97.852 ppb	17:11:58
2	Sn 189.927†	65.0	54.9	10.191 ug/L	10.191 ppb	17:12:18
2	Ti 334.940†	1774.1	3053.1	5.2001 ug/L	5.2001 ppb	17:11:58
2	Tl 190.801†	36.5	78.1	25.057 ug/L	25.057 ppb	17:12:18
2	U 409.014†	-151.1	1899.1	60.629 ug/L	60.629 ppb	17:11:58
2	V 292.402†	-689.6	759.5	5.7257 ug/L	5.7257 ppb	17:11:58
2	Zn 213.857†	1740.0	773.8	7.6631 ug/L	7.6631 ppb	17:12:18
2	SiO2†	3596.2	2921.0	209.14 ug/L	209.14 ppb	17:12:54
3	Sc Radial	5246.6	5246.6	110 %		17:11:06
3	Y RADIAL	5626.2	5626.2	109.7 %		17:11:06
3	Al 396.153Radial†	246.0	227.9	182.35 ug/L	182.35 ppb	17:11:06
3	Ca 317.933Radial†	140.6	113.2	190.71 ug/L	190.71 ppb	17:11:26
3	Fe 238.204 Radial†	22.1	10.3	96.788 ug/L	96.788 ppb	17:11:26
3	K 766.490 Radial†	3554.9	458.9	91.713 ug/L	91.713 ppb	17:11:06
3	Mg 279.077 IEC†	9.2	6.9	241.60 ug/L	241.60 ppb	17:11:26
3	Na 589.592 Radial†	-394.7	1206.5	390.90 ug/L	390.90 ppb	17:11:06
3	Sr 421.552†	723.7	643.7	4.5866 ug/L	4.5866 ppb	17:11:06
3	Sc 361.383	875140.8	875140.8	107.53 %		17:12:24
3	Y 371.029	734809.4	734809.4	107.12 %		17:12:24
3	Ag 328.068†	1517.2	1129.4	5.5490 ug/L	5.5490 ppb	17:12:24
3	As 188.979†	50.0	65.3	29.450 ug/L	29.450 ppb	17:12:44
3	B 249.677†	1753.5	2149.2	52.280 ug/L	52.280 ppb	17:12:24
3	Ba 233.527†	632.5	586.8	4.8822 ug/L	4.8822 ppb	17:12:44
3	Be 313.107†	8655.0	12361.3	4.9213 ug/L	4.9213 ppb	17:12:24
3	Cd 226.502†	266.0	445.0	5.2211 ug/L	5.2211 ppb	17:12:44
3	Co 228.616†	157.5	219.2	4.7713 ug/L	4.7713 ppb	17:12:44
3	Cr 267.716†	508.2	376.9	4.4311 ug/L	4.4311 ppb	17:12:44
3	Cu 324.752†	9855.5	2867.4	9.1225 ug/L	9.1225 ppb	17:12:24
3	Mn 257.610†	9715.9	8631.4	10.121 ug/L	10.121 ppb	17:12:24
3	Mo 202.031†	168.0	136.9	10.172 ug/L	10.172 ppb	17:12:44
3	Ni 231.604†	293.1	197.4	5.1938 ug/L	5.1938 ppb	17:12:44
3	P 214.914†	452.8	193.2	121.55 ug/L	121.55 ppb	17:12:44
3	Pb 220.353†	17.5	80.9	10.411 ug/L	10.411 ppb	17:12:44
3	S 181.975 Axial†	114.7	60.2	89.840 ug/L	89.840 ppb	17:12:44
3	Sb 206.836†	59.6	22.7	8.6320 ug/L	8.6320 ppb	17:12:44
3	Se 196.026†	24.1	52.8	35.643 ug/L	35.643 ppb	17:12:44
3	Si 251.611†	3610.4	2911.7	98.049 ug/L	98.049 ppb	17:12:24
3	Sn 189.927†	58.5	48.3	8.9633 ug/L	8.9633 ppb	17:12:44
3	Ti 334.940†	1747.3	3012.0	5.1427 ug/L	5.1427 ppb	17:12:24
3	Tl 190.801†	23.3	65.5	21.018 ug/L	21.018 ppb	17:12:44
3	U 409.014†	10.2	2050.4	65.465 ug/L	65.465 ppb	17:12:24
3	V 292.402†	-577.3	870.3	6.5304 ug/L	6.5304 ppb	17:12:24
3	Zn 213.857†	1732.2	750.6	7.4313 ug/L	7.4313 ppb	17:12:44
3	SiO2†	3511.2	2809.1	201.12 ug/L	201.12 ppb	17:12:59

Mean Data: PQL

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	868814.4	106.75	%	0.684				0.64%
Sc Radial	5251.2	110	%	1.0				0.91%
Y 371.029	730769.0	106.53	%	0.524				0.49%
Y RADIAL	5609.7	109.4	%	1.01				0.93%
Ag 328.068†	1131.2	5.5589	ug/L	0.01055	5.5589	ppb	0.01055	0.19%
QC value within limits for Ag 328.068 Recovery = 111.18%								
Al 396.153Radial†	235.8	188.70	ug/L	10.831	188.70	ppb	10.831	5.74%
QC value within limits for Al 396.153Radial Recovery = 94.35%								
As 188.979†	62.0	27.932	ug/L	1.6925	27.932	ppb	1.6925	6.06%
QC value within limits for As 188.979 Recovery = 93.11%								
B 249.677†	2182.6	53.093	ug/L	0.7216	53.093	ppb	0.7216	1.36%
QC value within limits for B 249.677 Recovery = 106.19%								
Ba 233.527†	589.1	4.9009	ug/L	0.04927	4.9009	ppb	0.04927	1.01%
QC value within limits for Ba 233.527 Recovery = 98.02%								
Be 313.107†	12466.2	4.9630	ug/L	0.03627	4.9630	ppb	0.03627	0.73%
QC value within limits for Be 313.107 Recovery = 99.26%								
Ca 317.933Radial†	115.9	195.20	ug/L	4.149	195.20	ppb	4.149	2.13%

QC value within limits for Ca 317.933Radial Recovery = 97.60%

Cd 226.502†	450.1	5.2805 ug/L	0.10375	5.2805 ppb	0.10375	1.96%
QC value within limits for Cd 226.502 Recovery = 105.61%						
Co 228.616†	218.8	4.7641 ug/L	0.20355	4.7641 ppb	0.20355	4.27%
QC value within limits for Co 228.616 Recovery = 95.28%						
Cr 267.716†	383.2	4.5061 ug/L	0.09090	4.5061 ppb	0.09090	2.02%
QC value within limits for Cr 267.716 Recovery = 90.12%						
Cu 324.752†	2910.9	9.2630 ug/L	0.25857	9.2630 ppb	0.25857	2.79%
QC value within limits for Cu 324.752 Recovery = 92.63%						
Fe 238.204 Radial†	10.2	96.300 ug/L	3.4275	96.300 ppb	3.4275	3.56%
QC value within limits for Fe 238.204 Radial Recovery = 96.30%						
K 766.490 Radial†	482.0	96.329 ug/L	4.6887	96.329 ppb	4.6887	4.87%
QC value less than the lower limit for K 766.490 Radial Recovery = 64.22%						
Mg 279.077 IEC†	9.8	344.47 ug/L	98.414	344.47 ppb	98.414	28.57%
QC value within limits for Mg 279.077 IEC Recovery = 114.82%						
Mn 257.610†	8671.4	10.164 ug/L	0.0373	10.164 ppb	0.0373	0.37%
QC value within limits for Mn 257.610 Recovery = 101.64%						
Mo 202.031†	137.2	10.195 ug/L	0.0251	10.195 ppb	0.0251	0.25%
QC value within limits for Mo 202.031 Recovery = 101.95%						
Na 589.592 Radial†	1249.1	404.70 ug/L	12.526	404.70 ppb	12.526	3.10%
QC value greater than the upper limit for Na 589.592 Radial Recovery = 134.90%						
Ni 231.604†	193.0	5.0788 ug/L	0.10046	5.0788 ppb	0.10046	1.98%
QC value within limits for Ni 231.604 Recovery = 101.58%						
P 214.914†	199.8	125.71 ug/L	3.690	125.71 ppb	3.690	2.94%
QC value within limits for P 214.914 Recovery = 83.80%						
Pb 220.353†	79.1	10.181 ug/L	0.2039	10.181 ppb	0.2039	2.00%
QC value within limits for Pb 220.353 Recovery = 101.81%						
S 181.975 Axial†	65.2	97.330 ug/L	6.5993	97.330 ppb	6.5993	6.78%
QC value within limits for S 181.975 Axial Recovery = 97.33%						
Sb 206.836†	26.9	10.197 ug/L	1.3773	10.197 ppb	1.3773	13.51%
QC value within limits for Sb 206.836 Recovery = 101.97%						
Se 196.026†	48.6	32.872 ug/L	2.8025	32.872 ppb	2.8025	8.53%
QC value within limits for Se 196.026 Recovery = 109.57%						
Si 251.611†	2901.7	97.711 ug/L	0.4269	97.711 ppb	0.4269	0.44%
QC value within limits for Si 251.611 Recovery = 97.71%						
Sn 189.927†	49.3	9.1435 ug/L	0.97052	9.1435 ppb	0.97052	10.61%
QC value within limits for Sn 189.927 Recovery = 91.43%						
Sr 421.552†	666.9	4.7521 ug/L	0.14333	4.7521 ppb	0.14333	3.02%
QC value within limits for Sr 421.552 Recovery = 95.04%						
Ti 334.940†	3032.9	5.1721 ug/L	0.02872	5.1721 ppb	0.02872	0.56%
QC value within limits for Ti 334.940 Recovery = 103.44%						
Tl 190.801†	74.5	23.894 ug/L	2.5065	23.894 ppb	2.5065	10.49%
QC value within limits for Tl 190.801 Recovery = 119.47%						
U 409.014†	1949.8	62.252 ug/L	2.7827	62.252 ppb	2.7827	4.47%
QC value within limits for U 409.014 Recovery = 124.50%						
V 292.402†	810.2	6.0931 ug/L	0.40685	6.0931 ppb	0.40685	6.68%
QC value within limits for V 292.402 Recovery = 121.86%						
Zn 213.857†	767.3	7.5982 ug/L	0.14572	7.5982 ppb	0.14572	1.92%
QC value within limits for Zn 213.857 Recovery = 75.98%						
SiO2†	2872.9	205.69 ug/L	4.128	205.69 ppb	4.128	2.01%
QC value within limits for SiO2 Recovery = 96.57%						

QC Failed. Continue with analysis.

Sequence No.: 20
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 17:15:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5426.6	5426.6	113	%			17:17:02
1	Y RADIAL	5825.5	5825.5	113.6	%			17:17:02
1	Al 396.153Radial†	9.2	11.3	9.0757	ug/L	9.0757	ppb	17:17:02
1	Ca 317.933Radial†	24.7	6.7	11.231	ug/L	11.231	ppb	17:17:22
1	Fe 238.204 Radial†	9.1	-1.8	-16.993	ug/L	-16.993	ppb	17:17:22
1	K 766.490 Radial†	2777.4	-335.2	-67.204	ug/L	-67.204	ppb	17:17:02
1	Mg 279.077 IEC†	3.4	1.5	52.155	ug/L	52.155	ppb	17:17:22
1	Na 589.592 Radial†	-1346.9	377.7	122.39	ug/L	122.39	ppb	17:17:02
1	Sr 421.552†	-33.6	-46.9	-0.3342	ug/L	-0.3342	ppb	17:17:02
1	Sc 361.383	863368.4	863368.4	106.08	%			17:18:19
1	Y 371.029	726742.2	726742.2	105.95	%			17:18:19
1	Ag 328.068†	426.4	120.4	0.5834	ug/L	0.5834	ppb	17:18:19
1	As 188.979†	-22.5	-2.3	-1.0546	ug/L	-1.0546	ppb	17:18:39
1	B 249.677†	-378.4	161.8	3.9412	ug/L	3.9412	ppb	17:18:39
1	Ba 233.527†	-13.9	-14.6	-0.1189	ug/L	-0.1189	ppb	17:18:39
1	Be 313.107†	-4316.1	243.6	0.0974	ug/L	0.0974	ppb	17:18:19
1	Cd 226.502†	-171.5	35.9	0.4239	ug/L	0.4239	ppb	17:18:39
1	Co 228.616†	-75.3	1.7	0.0373	ug/L	0.0373	ppb	17:18:39
1	Cr 267.716†	72.4	-27.5	-0.3268	ug/L	-0.3268	ppb	17:18:39
1	Cu 324.752†	6507.0	-164.2	-0.5296	ug/L	-0.5296	ppb	17:18:19
1	Mn 257.610†	421.3	-7.2	-0.0122	ug/L	-0.0122	ppb	17:18:39
1	Mo 202.031†	27.4	6.5	0.4841	ug/L	0.4841	ppb	17:18:39
1	Ni 231.604†	83.3	3.4	0.0882	ug/L	0.0882	ppb	17:18:39
1	P 214.914†	225.8	-15.0	-9.4595	ug/L	-9.4595	ppb	17:18:39
1	Pb 220.353†	-72.3	-3.5	-0.4474	ug/L	-0.4474	ppb	17:18:39
1	S 181.975 Axial†	51.2	1.9	2.7657	ug/L	2.7657	ppb	17:18:39
1	Sb 206.836†	38.8	3.8	1.4300	ug/L	1.4300	ppb	17:18:39
1	Se 196.026†	-28.3	3.7	2.3912	ug/L	2.3912	ppb	17:18:39
1	Si 251.611†	493.3	19.1	0.6381	ug/L	0.6381	ppb	17:18:39
1	Sn 189.927†	11.3	4.5	0.8328	ug/L	0.8328	ppb	17:18:39
1	Ti 334.940†	-1294.2	167.0	0.2801	ug/L	0.2801	ppb	17:18:19
1	Tl 190.801†	-35.2	10.7	3.4250	ug/L	3.4250	ppb	17:18:39
1	U 409.014†	-1885.9	263.1	8.4070	ug/L	8.4070	ppb	17:18:19
1	V 292.402†	-1325.6	157.5	1.1628	ug/L	1.1628	ppb	17:18:19
1	Zn 213.857†	791.4	-114.3	-1.1379	ug/L	-1.1379	ppb	17:18:39
1	SiO2†	492.9	8.5	0.5927	ug/L	0.5927	ppb	17:19:35
2	Sc Radial	5116.3	5116.3	107	%			17:17:27
2	Y RADIAL	5514.6	5514.6	107.5	%			17:17:27
2	Al 396.153Radial†	12.7	15.1	12.133	ug/L	12.133	ppb	17:17:27
2	Ca 317.933Radial†	16.8	0.6	1.0399	ug/L	1.0399	ppb	17:17:47
2	Fe 238.204 Radial†	12.8	2.1	19.640	ug/L	19.640	ppb	17:17:47
2	K 766.490 Radial†	2769.7	-193.7	-38.835	ug/L	-38.835	ppb	17:17:27
2	Mg 279.077 IEC†	5.0	3.2	111.73	ug/L	111.73	ppb	17:17:47
2	Na 589.592 Radial†	-1369.3	284.6	92.206	ug/L	92.206	ppb	17:17:27
2	Sr 421.552†	9.4	-8.4	-0.0597	ug/L	-0.0597	ppb	17:17:27
2	Sc 361.383	859149.6	859149.6	105.56	%			17:18:44
2	Y 371.029	723438.0	723438.0	105.46	%			17:18:44
2	Ag 328.068†	308.9	11.0	0.0602	ug/L	0.0602	ppb	17:18:44
2	As 188.979†	-23.8	-3.7	-1.6442	ug/L	-1.6442	ppb	17:19:04
2	B 249.677†	-404.9	135.0	3.2825	ug/L	3.2825	ppb	17:19:04
2	Ba 233.527†	12.0	9.9	0.0845	ug/L	0.0845	ppb	17:19:04
2	Be 313.107†	-4374.3	168.5	0.0671	ug/L	0.0671	ppb	17:18:44
2	Cd 226.502†	-189.5	18.0	0.2101	ug/L	0.2101	ppb	17:19:04
2	Co 228.616†	-74.9	1.7	0.0360	ug/L	0.0360	ppb	17:19:04
2	Cr 267.716†	80.2	-19.8	-0.2334	ug/L	-0.2334	ppb	17:19:04
2	Cu 324.752†	6455.2	-183.1	-0.5859	ug/L	-0.5859	ppb	17:18:44
2	Mn 257.610†	445.1	17.4	0.0177	ug/L	0.0177	ppb	17:19:04
2	Mo 202.031†	16.2	-3.9	-0.2906	ug/L	-0.2906	ppb	17:19:04
2	Ni 231.604†	83.6	4.0	0.1063	ug/L	0.1063	ppb	17:19:04

2	P 214.914†	222.0	-17.6	-11.135 ug/L	-11.135 ppb	17:19:04
2	Pb 220.353†	-64.8	3.2	0.4077 ug/L	0.4077 ppb	17:19:04
2	S 181.975 Axial†	42.0	-6.7	-9.9916 ug/L	-9.9916 ppb	17:19:04
2	Sb 206.836†	45.8	10.6	3.8791 ug/L	3.8791 ppb	17:19:04
2	Se 196.026†	-28.6	3.3	2.2567 ug/L	2.2567 ppb	17:19:04
2	Si 251.611†	470.1	-0.5	-0.0149 ug/L	-0.0149 ppb	17:19:04
2	Sn 189.927†	7.8	1.3	0.2349 ug/L	0.2349 ppb	17:19:04
2	Ti 334.940†	-1415.4	46.2	0.0685 ug/L	0.0685 ppb	17:18:44
2	Tl 190.801†	-38.7	7.2	2.3153 ug/L	2.3153 ppb	17:19:04
2	U 409.014†	-2015.3	131.9	4.2112 ug/L	4.2112 ppb	17:18:44
2	V 292.402†	-1370.8	108.6	0.7869 ug/L	0.7869 ppb	17:18:44
2	Zn 213.857†	807.3	-95.6	-0.9554 ug/L	-0.9554 ppb	17:19:04
2	SiO2†	502.5	19.8	1.4304 ug/L	1.4304 ppb	17:19:40
3	Sc Radial	5117.3	5117.3	107 %		17:17:52
3	Y RADIAL	5495.2	5495.2	107.1 %		17:17:52
3	Al 396.153Radial†	-4.8	-1.2	-0.9730 ug/L	-0.9730 ppb	17:17:52
3	Ca 317.933Radial†	23.0	6.3	10.679 ug/L	10.679 ppb	17:18:12
3	Fe 238.204 Radial†	11.6	1.0	9.1162 ug/L	9.1162 ppb	17:18:12
3	K 766.490 Radial†	2796.4	-169.2	-33.929 ug/L	-33.929 ppb	17:17:52
3	Mg 279.077 IEC†	4.4	2.7	93.131 ug/L	93.131 ppb	17:18:12
3	Na 589.592 Radial†	-1416.5	240.7	77.984 ug/L	77.984 ppb	17:17:52
3	Sr 421.552†	-13.0	-29.3	-0.2092 ug/L	-0.2092 ppb	17:17:52
3	Sc 361.383	851964.8	851964.8	104.68 %		17:19:09
3	Y 371.029	716804.3	716804.3	104.50 %		17:19:09
3	Ag 328.068†	318.6	22.7	0.1140 ug/L	0.1140 ppb	17:19:09
3	As 188.979†	-25.2	-5.3	-2.3686 ug/L	-2.3686 ppb	17:19:29
3	B 249.677†	-378.1	157.4	3.8273 ug/L	3.8273 ppb	17:19:29
3	Ba 233.527†	-4.1	-5.4	-0.0423 ug/L	-0.0423 ppb	17:19:29
3	Be 313.107†	-4376.5	131.4	0.0528 ug/L	0.0528 ppb	17:19:09
3	Cd 226.502†	-158.2	46.4	0.5439 ug/L	0.5439 ppb	17:19:29
3	Co 228.616†	-60.7	14.7	0.3183 ug/L	0.3183 ppb	17:19:29
3	Cr 267.716†	74.3	-24.8	-0.2931 ug/L	-0.2931 ppb	17:19:29
3	Cu 324.752†	6346.7	-235.2	-0.7531 ug/L	-0.7531 ppb	17:19:09
3	Mn 257.610†	423.6	0.3	-0.0025 ug/L	-0.0025 ppb	17:19:29
3	Mo 202.031†	20.7	0.5	0.0370 ug/L	0.0370 ppb	17:19:29
3	Ni 231.604†	76.4	-2.1	-0.0556 ug/L	-0.0556 ppb	17:19:29
3	P 214.914†	229.8	-8.3	-5.1628 ug/L	-5.1628 ppb	17:19:29
3	Pb 220.353†	-70.1	-2.4	-0.3094 ug/L	-0.3094 ppb	17:19:29
3	S 181.975 Axial†	45.4	-3.1	-4.6162 ug/L	-4.6162 ppb	17:19:29
3	Sb 206.836†	26.4	-7.5	-2.7281 ug/L	-2.7281 ppb	17:19:29
3	Se 196.026†	-31.2	0.5	0.3892 ug/L	0.3892 ppb	17:19:29
3	Si 251.611†	474.5	7.4	0.2506 ug/L	0.2506 ppb	17:19:29
3	Sn 189.927†	9.0	2.5	0.4627 ug/L	0.4627 ppb	17:19:29
3	Ti 334.940†	-1301.8	143.4	0.2377 ug/L	0.2377 ppb	17:19:09
3	Tl 190.801†	-36.2	9.3	2.9842 ug/L	2.9842 ppb	17:19:29
3	U 409.014†	-1967.4	161.5	5.1577 ug/L	5.1577 ppb	17:19:09
3	V 292.402†	-1342.8	124.4	0.9079 ug/L	0.9079 ppb	17:19:09
3	Zn 213.857†	791.5	-104.2	-1.0390 ug/L	-1.0390 ppb	17:19:29
3	SiO2†	523.4	43.8	3.1362 ug/L	3.1362 ppb	17:19:45

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	858161.0	105.44	%	0.708				0.67%
Sc Radial	5220.1	109	%	3.7				3.43%
Y 371.029	722328.2	105.30	%	0.738				0.70%
Y RADIAL	5611.7	109.4	%	3.61				3.30%
Ag 328.068†	51.4	0.2525	ug/L	0.28785	0.2525	ppb	0.28785	113.99%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	8.4	6.7452	ug/L	6.85671	6.7452	ppb	6.85671	101.65%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-3.8	-1.6891	ug/L	0.65811	-1.6891	ppb	0.65811	38.96%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	151.4	3.6837	ug/L	0.35208	3.6837	ppb	0.35208	9.56%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-3.3	-0.0256	ug/L	0.10272	-0.0256	ppb	0.10272	401.49%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	181.2	0.0724	ug/L	0.02280	0.0724	ppb	0.02280	31.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	4.5	7.6500	ug/L	5.73121	7.6500	ppb	5.73121	74.92%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	33.4	0.3926 ug/L	0.16907	0.3926 ppb	0.16907	43.06%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	6.0	0.1305 ug/L	0.16264	0.1305 ppb	0.16264	124.60%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-24.0	-0.2845 ug/L	0.04731	-0.2845 ppb	0.04731	16.63%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-194.2	-0.6229 ug/L	0.11624	-0.6229 ppb	0.11624	18.66%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	0.4	3.9211 ug/L	18.86072	3.9211 ppb	18.86072	481.00%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	-232.7	-46.656 ug/L	17.9634	-46.656 ppb	17.9634	38.50%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	2.4	85.674 ug/L	30.4816	85.674 ppb	30.4816	35.58%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	3.5	0.0010 ug/L	0.01527	0.0010 ppb	0.01527	>999.9%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	1.0	0.0768 ug/L	0.38885	0.0768 ppb	0.38885	506.15%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	301.0	97.526 ug/L	22.6760	97.526 ppb	22.6760	23.25%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	1.8	0.0463 ug/L	0.08872	0.0463 ppb	0.08872	191.55%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-13.7	-8.5859 ug/L	3.08061	-8.5859 ppb	3.08061	35.88%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-0.9	-0.1164 ug/L	0.45907	-0.1164 ppb	0.45907	394.46%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-2.6	-3.9474 ug/L	6.40491	-3.9474 ppb	6.40491	162.26%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	2.3	0.8603 ug/L	3.34021	0.8603 ppb	3.34021	388.24%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	2.5	1.6790 ug/L	1.11901	1.6790 ppb	1.11901	66.65%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	8.7	0.2912 ug/L	0.32839	0.2912 ppb	0.32839	112.76%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	2.8	0.5101 ug/L	0.30174	0.5101 ppb	0.30174	59.15%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-28.2	-0.2010 ug/L	0.13741	-0.2010 ppb	0.13741	68.35%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	118.9	0.1954 ug/L	0.11196	0.1954 ppb	0.11196	57.29%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	9.1	2.9082 ug/L	0.55875	2.9082 ppb	0.55875	19.21%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	185.5	5.9253 ug/L	2.20071	5.9253 ppb	2.20071	37.14%
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	130.2	0.9525 ug/L	0.19186	0.9525 ppb	0.19186	20.14%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-104.7	-1.0441 ug/L	0.09132	-1.0441 ppb	0.09132	8.75%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	24.0	1.7198 ug/L	1.29619	1.7198 ppb	1.29619	75.37%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 30
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/14/2010 18:23:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5122.8	5122.8	107	%			18:24:54
1	Y RADIAL	5442.9	5442.9	106.1	%			18:24:54
1	Al 396.153Radial†	6220.4	5821.2	4646.6	ug/L	4646.6	ppb	18:24:54
1	Ca 317.933Radial†	3149.3	2930.3	4934.5	ug/L	4934.5	ppb	18:25:14
1	Fe 238.204 Radial†	585.1	537.4	5066.5	ug/L	5066.5	ppb	18:25:14
1	K 766.490 Radial†	28535.2	23901.2	4782.3	ug/L	4782.3	ppb	18:24:54
1	Mg 279.077 IEC†	162.5	150.5	5282.3	ug/L	5282.3	ppb	18:25:14
1	Na 589.592 Radial†	29547.8	29202.6	9461.8	ug/L	9461.8	ppb	18:24:54
1	Sr 421.552†	72128.9	67444.1	480.70	ug/L	480.70	ppb	18:24:54
1	Sc 361.383	874426.5	874426.5	107.44	%			18:26:11
1	Y 371.029	725162.4	725162.4	105.71	%			18:26:11
1	Ag 328.068†	103788.6	96318.9	476.33	ug/L	476.33	ppb	18:26:16
1	As 188.979†	1136.1	1076.3	488.62	ug/L	488.62	ppb	18:26:36
1	B 249.677†	21126.1	20181.5	488.96	ug/L	488.96	ppb	18:26:16
1	Ba 233.527†	63441.8	59046.5	490.84	ug/L	490.84	ppb	18:26:16
1	Be 313.107†	1326970.9	1239380.0	493.35	ug/L	493.35	ppb	18:26:11
1	Cd 226.502†	44978.5	42060.9	492.86	ug/L	492.86	ppb	18:26:16
1	Co 228.616†	24276.3	22667.7	492.34	ug/L	492.34	ppb	18:26:16
1	Cr 267.716†	44415.0	41243.2	487.16	ug/L	487.16	ppb	18:26:16
1	Cu 324.752†	170304.9	152211.9	485.89	ug/L	485.89	ppb	18:26:16
1	Mn 257.610†	450103.7	418526.2	491.06	ug/L	491.06	ppb	18:26:11
1	Mo 202.031†	7043.7	6536.6	485.67	ug/L	485.67	ppb	18:26:36
1	Ni 231.604†	20093.6	18626.9	490.04	ug/L	490.04	ppb	18:26:16
1	P 214.914†	4309.0	3782.7	2319.3	ug/L	2319.3	ppb	18:26:36
1	Pb 220.353†	3967.8	3757.6	482.83	ug/L	482.83	ppb	18:26:36
1	S 181.975 Axial†	753.5	654.9	976.47	ug/L	976.47	ppb	18:26:36
1	Sb 206.836†	1457.9	1324.2	501.59	ug/L	501.59	ppb	18:26:36
1	Se 196.026†	773.0	749.9	519.77	ug/L	519.77	ppb	18:26:36
1	Si 251.611†	79497.0	73545.3	2473.7	ug/L	2473.7	ppb	18:26:16
1	Sn 189.927†	2836.8	2634.2	488.00	ug/L	488.00	ppb	18:26:36
1	Ti 334.940†	303027.9	283427.9	486.07	ug/L	486.07	ppb	18:26:16
1	Tl 190.801†	1584.3	1518.5	489.04	ug/L	489.04	ppb	18:26:36
1	U 409.014†	14884.7	15894.8	505.97	ug/L	505.97	ppb	18:26:16
1	V 292.402†	71330.9	67797.8	495.59	ug/L	495.59	ppb	18:26:16
1	Zn 213.857†	54153.2	49542.3	489.83	ug/L	489.83	ppb	18:26:16
1	SiO2†	78300.0	72420.9	5178.8	ug/L	5178.8	ppb	18:27:44
2	Sc Radial	5125.9	5125.9	107	%			18:25:19
2	Y RADIAL	5478.7	5478.7	106.8	%			18:25:19
2	Al 396.153Radial†	6458.8	6040.4	4822.0	ug/L	4822.0	ppb	18:25:19
2	Ca 317.933Radial†	3072.4	2856.7	4810.5	ug/L	4810.5	ppb	18:25:39
2	Fe 238.204 Radial†	572.6	525.3	4953.3	ug/L	4953.3	ppb	18:25:39
2	K 766.490 Radial†	29406.6	24699.4	4942.2	ug/L	4942.2	ppb	18:25:19
2	Mg 279.077 IEC†	153.5	142.0	4984.0	ug/L	4984.0	ppb	18:25:39
2	Na 589.592 Radial†	30667.9	30232.7	9795.6	ug/L	9795.6	ppb	18:25:19
2	Sr 421.552†	74897.8	69990.9	498.85	ug/L	498.85	ppb	18:25:19
2	Sc 361.383	862187.1	862187.1	105.94	%			18:26:42
2	Y 371.029	714944.2	714944.2	104.23	%			18:26:42
2	Ag 328.068†	106755.4	100490.7	496.83	ug/L	496.83	ppb	18:26:47
2	As 188.979†	1149.0	1103.4	500.92	ug/L	500.92	ppb	18:27:07
2	B 249.677†	21515.9	20828.6	504.69	ug/L	504.69	ppb	18:26:47
2	Ba 233.527†	64166.5	60568.8	503.49	ug/L	503.49	ppb	18:26:47
2	Be 313.107†	1306570.2	1237655.5	492.70	ug/L	492.70	ppb	18:26:42
2	Cd 226.502†	45517.2	43163.8	505.81	ug/L	505.81	ppb	18:26:47
2	Co 228.616†	24623.0	23315.7	506.40	ug/L	506.40	ppb	18:26:47
2	Cr 267.716†	44905.7	42293.2	499.56	ug/L	499.56	ppb	18:26:47
2	Cu 324.752†	173056.2	157059.2	501.35	ug/L	501.35	ppb	18:26:47
2	Mn 257.610†	444509.0	419192.2	491.85	ug/L	491.85	ppb	18:26:42
2	Mo 202.031†	7057.4	6642.5	493.52	ug/L	493.52	ppb	18:27:07
2	Ni 231.604†	20386.1	19168.4	504.29	ug/L	504.29	ppb	18:26:47

2	P 214.914†	4283.6	3815.6	2337.5 ug/L	2337.5 ppb	18:27:07
2	Pb 220.353†	3985.3	3826.5	491.72 ug/L	491.72 ppb	18:27:07
2	S 181.975 Axial†	759.5	670.5	999.77 ug/L	999.77 ppb	18:27:07
2	Sb 206.836†	1467.1	1352.2	512.12 ug/L	512.12 ppb	18:27:07
2	Se 196.026†	766.9	754.3	522.39 ug/L	522.39 ppb	18:27:07
2	Si 251.611†	80552.6	75592.1	2542.6 ug/L	2542.6 ppb	18:26:47
2	Sn 189.927†	2852.6	2686.6	497.66 ug/L	497.66 ppb	18:27:07
2	Ti 334.940†	307131.5	291305.3	499.58 ug/L	499.58 ppb	18:26:47
2	Tl 190.801†	1593.0	1547.6	498.39 ug/L	498.39 ppb	18:27:07
2	U 409.014†	15198.8	16387.9	521.71 ug/L	521.71 ppb	18:26:47
2	V 292.402†	72138.9	69503.0	508.02 ug/L	508.02 ppb	18:26:47
2	Zn 213.857†	54912.4	50974.5	504.01 ug/L	504.01 ppb	18:26:47
2	SiO2†	78752.0	73882.1	5283.3 ug/L	5283.3 ppb	18:27:49
3	Sc Radial	5017.1	5017.1	105 %		18:25:44
3	Y RADIAL	5313.9	5313.9	103.6 %		18:25:44
3	Al 396.153Radial†	6276.0	5996.7	4787.2 ug/L	4787.2 ppb	18:25:44
3	Ca 317.933Radial†	3084.4	2930.4	4934.6 ug/L	4934.6 ppb	18:26:04
3	Fe 238.204 Radial†	572.5	536.9	5062.1 ug/L	5062.1 ppb	18:26:04
3	K 766.490 Radial†	28753.5	24671.7	4936.6 ug/L	4936.6 ppb	18:25:44
3	Mg 279.077 IEC†	161.0	152.3	5346.2 ug/L	5346.2 ppb	18:26:04
3	Na 589.592 Radial†	29698.4	29928.5	9697.0 ug/L	9697.0 ppb	18:25:44
3	Sr 421.552†	72956.4	69655.1	496.46 ug/L	496.46 ppb	18:25:44
3	Sc 361.383	865484.7	865484.7	106.34 %		18:27:13
3	Y 371.029	717838.0	717838.0	104.65 %		18:27:13
3	Ag 328.068†	104635.4	98113.2	485.17 ug/L	485.17 ppb	18:27:18
3	As 188.979†	1126.7	1078.4	489.64 ug/L	489.64 ppb	18:27:38
3	B 249.677†	21378.1	20621.6	499.66 ug/L	499.66 ppb	18:27:18
3	Ba 233.527†	63663.2	59864.8	497.64 ug/L	497.64 ppb	18:27:18
3	Be 313.107†	1308976.4	1235219.1	491.72 ug/L	491.72 ppb	18:27:13
3	Cd 226.502†	45072.6	42581.9	498.97 ug/L	498.97 ppb	18:27:18
3	Co 228.616†	24380.1	22998.7	499.52 ug/L	499.52 ppb	18:27:18
3	Cr 267.716†	44641.0	41882.8	494.72 ug/L	494.72 ppb	18:27:18
3	Cu 324.752†	171861.3	155313.1	495.78 ug/L	495.78 ppb	18:27:18
3	Mn 257.610†	445285.0	418323.1	490.82 ug/L	490.82 ppb	18:27:13
3	Mo 202.031†	7038.4	6599.3	490.33 ug/L	490.33 ppb	18:27:38
3	Ni 231.604†	20265.0	18981.3	499.37 ug/L	499.37 ppb	18:27:18
3	P 214.914†	4305.8	3821.2	2341.9 ug/L	2341.9 ppb	18:27:38
3	Pb 220.353†	3964.9	3793.0	487.40 ug/L	487.40 ppb	18:27:38
3	S 181.975 Axial†	763.7	671.7	1001.6 ug/L	1001.6 ppb	18:27:38
3	Sb 206.836†	1470.7	1350.3	511.28 ug/L	511.28 ppb	18:27:38
3	Se 196.026†	757.5	742.7	514.97 ug/L	514.97 ppb	18:27:38
3	Si 251.611†	79948.4	74734.2	2513.8 ug/L	2513.8 ppb	18:27:18
3	Sn 189.927†	2831.2	2656.2	492.07 ug/L	492.07 ppb	18:27:38
3	Ti 334.940†	305279.9	288459.5	494.68 ug/L	494.68 ppb	18:27:18
3	Tl 190.801†	1581.8	1531.3	493.19 ug/L	493.19 ppb	18:27:38
3	U 409.014†	15203.6	16337.8	520.10 ug/L	520.10 ppb	18:27:18
3	V 292.402†	71689.1	68820.6	503.05 ug/L	503.05 ppb	18:27:18
3	Zn 213.857†	54416.5	50310.7	497.42 ug/L	497.42 ppb	18:27:18
3	SiO2†	77978.3	72871.4	5211.0 ug/L	5211.0 ppb	18:27:54

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	867366.1	106.57	%	0.778				0.73%
Sc Radial	5088.6	106	%	1.3				1.22%
Y 371.029	719314.8	104.86	%	0.768				0.73%
Y RADIAL	5411.8	105.5	%	1.69				1.60%
Ag 328.068†	98307.6	486.11	ug/L	10.281	486.11	ppb	10.281	2.12%
QC value within limits for Ag 328.068 Recovery = 97.22%								
Al 396.153Radial†	5952.7	4751.9	ug/L	92.90	4751.9	ppb	92.90	1.96%
QC value within limits for Al 396.153Radial Recovery = 95.04%								
As 188.979†	1086.0	493.06	ug/L	6.828	493.06	ppb	6.828	1.38%
QC value within limits for As 188.979 Recovery = 98.61%								
B 249.677†	20543.9	497.77	ug/L	8.031	497.77	ppb	8.031	1.61%
QC value within limits for B 249.677 Recovery = 99.55%								
Ba 233.527†	59826.7	497.32	ug/L	6.329	497.32	ppb	6.329	1.27%
QC value within limits for Ba 233.527 Recovery = 99.46%								
Be 313.107†	1237418.2	492.59	ug/L	0.822	492.59	ppb	0.822	0.17%
QC value within limits for Be 313.107 Recovery = 98.52%								
Ca 317.933Radial†	2905.8	4893.2	ug/L	71.63	4893.2	ppb	71.63	1.46%

QC value within limits for Ca 317.933Radial Recovery = 97.86%

Cd 226.502†	42602.2	499.21 ug/L	6.478	499.21 ppb	6.478	1.30%
QC value within limits for Cd 226.502 Recovery = 99.84%						
Co 228.616†	22994.0	499.42 ug/L	7.033	499.42 ppb	7.033	1.41%
QC value within limits for Co 228.616 Recovery = 99.88%						
Cr 267.716†	41806.4	493.81 ug/L	6.247	493.81 ppb	6.247	1.27%
QC value within limits for Cr 267.716 Recovery = 98.76%						
Cu 324.752†	154861.4	494.34 ug/L	7.830	494.34 ppb	7.830	1.58%
QC value within limits for Cu 324.752 Recovery = 98.87%						
Fe 238.204 Radial†	533.2	5027.3 ug/L	64.11	5027.3 ppb	64.11	1.28%
QC value within limits for Fe 238.204 Radial Recovery = 100.55%						
K 766.490 Radial†	24424.1	4887.0 ug/L	90.71	4887.0 ppb	90.71	1.86%
QC value within limits for K 766.490 Radial Recovery = 97.74%						
Mg 279.077 IEC†	148.2	5204.2 ug/L	193.36	5204.2 ppb	193.36	3.72%
QC value within limits for Mg 279.077 IEC Recovery = 104.08%						
Mn 257.610†	418680.5	491.24 ug/L	0.535	491.24 ppb	0.535	0.11%
QC value within limits for Mn 257.610 Recovery = 98.25%						
Mo 202.031†	6592.8	489.84 ug/L	3.950	489.84 ppb	3.950	0.81%
QC value within limits for Mo 202.031 Recovery = 97.97%						
Na 589.592 Radial†	29787.9	9651.4 ug/L	171.47	9651.4 ppb	171.47	1.78%
QC value within limits for Na 589.592 Radial Recovery = 96.51%						
Ni 231.604†	18925.5	497.90 ug/L	7.236	497.90 ppb	7.236	1.45%
QC value within limits for Ni 231.604 Recovery = 99.58%						
P 214.914†	3806.5	2332.9 ug/L	12.00	2332.9 ppb	12.00	0.51%
QC value within limits for P 214.914 Recovery = 93.32%						
Pb 220.353†	3792.4	487.32 ug/L	4.446	487.32 ppb	4.446	0.91%
QC value within limits for Pb 220.353 Recovery = 97.46%						
S 181.975 Axial†	665.7	992.61 ug/L	14.000	992.61 ppb	14.000	1.41%
QC value within limits for S 181.975 Axial Recovery = 99.26%						
Sb 206.836†	1342.2	508.33 ug/L	5.851	508.33 ppb	5.851	1.15%
QC value within limits for Sb 206.836 Recovery = 101.67%						
Se 196.026†	748.9	519.04 ug/L	3.767	519.04 ppb	3.767	0.73%
QC value within limits for Se 196.026 Recovery = 103.81%						
Si 251.611†	74623.9	2510.0 ug/L	34.61	2510.0 ppb	34.61	1.38%
QC value within limits for Si 251.611 Recovery = 100.40%						
Sn 189.927†	2659.0	492.57 ug/L	4.851	492.57 ppb	4.851	0.98%
QC value within limits for Sn 189.927 Recovery = 98.51%						
Sr 421.552†	69030.0	492.00 ug/L	9.863	492.00 ppb	9.863	2.00%
QC value within limits for Sr 421.552 Recovery = 98.40%						
Ti 334.940†	287730.9	493.44 ug/L	6.840	493.44 ppb	6.840	1.39%
QC value within limits for Ti 334.940 Recovery = 98.69%						
Tl 190.801†	1532.5	493.54 ug/L	4.686	493.54 ppb	4.686	0.95%
QC value within limits for Tl 190.801 Recovery = 98.71%						
U 409.014†	16206.8	515.93 ug/L	8.658	515.93 ppb	8.658	1.68%
QC value within limits for U 409.014 Recovery = 103.19%						
V 292.402†	68707.1	502.22 ug/L	6.258	502.22 ppb	6.258	1.25%
QC value within limits for V 292.402 Recovery = 100.44%						
Zn 213.857†	50275.8	497.09 ug/L	7.097	497.09 ppb	7.097	1.43%
QC value within limits for Zn 213.857 Recovery = 99.42%						
SiO2†	73058.1	5224.4 ug/L	53.54	5224.4 ppb	53.54	1.02%
QC value within limits for SiO2 Recovery = 97.70%						

All analyte(s) passed QC.

Sequence No.: 31
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 18:30:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5180.7	5180.7	108	%			18:31:56
1	Y RADIAL	5555.6	5555.6	108.3	%			18:31:56
1	Al 396.153Radial†	-2.6	0.8	0.6239	ug/L	0.6239	ppb	18:31:56
1	Ca 317.933Radial†	19.4	2.8	4.7177	ug/L	4.7177	ppb	18:32:16
1	Fe 238.204 Radial†	9.3	-1.3	-12.106	ug/L	-12.106	ppb	18:32:16
1	K 766.490 Radial†	2881.1	-122.9	-24.677	ug/L	-24.677	ppb	18:31:56
1	Mg 279.077 IEC†	0.2	-1.3	-45.550	ug/L	-45.550	ppb	18:32:16
1	Na 589.592 Radial†	-1277.6	385.4	124.87	ug/L	124.87	ppb	18:31:56
1	Sr 421.552†	23.3	4.3	0.0310	ug/L	0.0310	ppb	18:31:56
1	Sc 361.383	859008.3	859008.3	105.55	%			18:33:13
1	Y 371.029	724046.7	724046.7	105.55	%			18:33:13
1	Ag 328.068†	374.9	73.6	0.3547	ug/L	0.3547	ppb	18:33:13
1	As 188.979†	-18.9	1.0	0.4375	ug/L	0.4375	ppb	18:33:33
1	B 249.677†	-310.3	224.6	5.4667	ug/L	5.4667	ppb	18:33:33
1	Ba 233.527†	-13.2	-14.0	-0.1147	ug/L	-0.1147	ppb	18:33:33
1	Be 313.107†	-4302.2	236.2	0.0942	ug/L	0.0942	ppb	18:33:13
1	Cd 226.502†	-186.1	21.3	0.2518	ug/L	0.2518	ppb	18:33:33
1	Co 228.616†	-65.7	10.4	0.2278	ug/L	0.2278	ppb	18:33:33
1	Cr 267.716†	93.7	-6.9	-0.0839	ug/L	-0.0839	ppb	18:33:33
1	Cu 324.752†	6499.0	-140.6	-0.4540	ug/L	-0.4540	ppb	18:33:13
1	Mn 257.610†	420.9	-5.5	-0.0058	ug/L	-0.0058	ppb	18:33:33
1	Mo 202.031†	28.7	7.9	0.5855	ug/L	0.5855	ppb	18:33:33
1	Ni 231.604†	70.4	-8.4	-0.2212	ug/L	-0.2212	ppb	18:33:33
1	P 214.914†	215.7	-23.5	-14.886	ug/L	-14.886	ppb	18:33:33
1	Pb 220.353†	-79.1	-10.4	-1.3265	ug/L	-1.3265	ppb	18:33:33
1	S 181.975 Axial†	48.6	-0.4	-0.6586	ug/L	-0.6586	ppb	18:33:33
1	Sb 206.836†	47.5	12.3	4.5082	ug/L	4.5082	ppb	18:33:33
1	Se 196.026†	-26.8	5.0	3.2904	ug/L	3.2904	ppb	18:33:33
1	Si 251.611†	476.9	5.9	0.1923	ug/L	0.1923	ppb	18:33:33
1	Sn 189.927†	12.5	5.8	1.0647	ug/L	1.0647	ppb	18:33:33
1	Ti 334.940†	-1351.6	106.4	0.1834	ug/L	0.1834	ppb	18:33:13
1	Tl 190.801†	-26.1	19.1	6.1170	ug/L	6.1170	ppb	18:33:33
1	U 409.014†	-1887.1	253.1	8.0834	ug/L	8.0834	ppb	18:33:13
1	V 292.402†	-1354.1	124.2	0.9203	ug/L	0.9203	ppb	18:33:13
1	Zn 213.857†	832.9	-71.2	-0.7072	ug/L	-0.7072	ppb	18:33:33
1	SiO2†	492.5	10.4	0.7296	ug/L	0.7296	ppb	18:34:29
2	Sc Radial	4960.7	4960.7	104	%			18:32:21
2	Y RADIAL	5331.3	5331.3	103.9	%			18:32:21
2	Al 396.153Radial†	15.0	17.7	14.197	ug/L	14.197	ppb	18:32:21
2	Ca 317.933Radial†	27.0	10.9	18.384	ug/L	18.384	ppb	18:32:41
2	Fe 238.204 Radial†	8.1	-2.0	-19.001	ug/L	-19.001	ppb	18:32:41
2	K 766.490 Radial†	2885.8	-0.2	-0.0788	ug/L	-0.0788	ppb	18:32:21
2	Mg 279.077 IEC†	2.8	1.2	42.014	ug/L	42.014	ppb	18:32:41
2	Na 589.592 Radial†	-1289.7	321.3	104.09	ug/L	104.09	ppb	18:32:21
2	Sr 421.552†	4.2	-13.1	-0.0937	ug/L	-0.0937	ppb	18:32:21
2	Sc 361.383	858682.7	858682.7	105.51	%			18:33:38
2	Y 371.029	722636.1	722636.1	105.35	%			18:33:38
2	Ag 328.068†	399.3	96.9	0.4678	ug/L	0.4678	ppb	18:33:38
2	As 188.979†	-27.7	-7.4	-3.3175	ug/L	-3.3175	ppb	18:33:58
2	B 249.677†	-320.9	214.4	5.2217	ug/L	5.2217	ppb	18:33:58
2	Ba 233.527†	-5.1	-6.3	-0.0507	ug/L	-0.0507	ppb	18:33:58
2	Be 313.107†	-4351.1	188.2	0.0752	ug/L	0.0752	ppb	18:33:38
2	Cd 226.502†	-174.3	32.4	0.3829	ug/L	0.3829	ppb	18:33:58
2	Co 228.616†	-72.4	4.1	0.0900	ug/L	0.0900	ppb	18:33:58
2	Cr 267.716†	98.5	-2.4	-0.0295	ug/L	-0.0295	ppb	18:33:58
2	Cu 324.752†	6443.8	-190.6	-0.6129	ug/L	-0.6129	ppb	18:33:38
2	Mn 257.610†	437.2	10.1	0.0082	ug/L	0.0082	ppb	18:33:58
2	Mo 202.031†	27.7	7.0	0.5169	ug/L	0.5169	ppb	18:33:58
2	Ni 231.604†	84.8	5.2	0.1372	ug/L	0.1372	ppb	18:33:58

2	P 214.914†	213.2	-25.8	-16.304 ug/L	-16.304 ppb	18:33:58
2	Pb 220.353†	-68.7	-0.6	-0.0646 ug/L	-0.0646 ppb	18:33:58
2	S 181.975 Axial†	51.0	1.9	2.8228 ug/L	2.8228 ppb	18:33:58
2	Sb 206.836†	44.5	9.5	3.4732 ug/L	3.4732 ppb	18:33:58
2	Se 196.026†	-25.9	5.9	3.8569 ug/L	3.8569 ppb	18:33:58
2	Si 251.611†	483.7	12.6	0.4180 ug/L	0.4180 ppb	18:33:58
2	Sn 189.927†	5.7	-0.7	-0.1221 ug/L	-0.1221 ppb	18:33:58
2	Ti 334.940†	-1337.1	119.7	0.2015 ug/L	0.2015 ppb	18:33:38
2	Tl 190.801†	-27.2	18.1	5.7938 ug/L	5.7938 ppb	18:33:58
2	U 409.014†	-1942.8	199.6	6.3757 ug/L	6.3757 ppb	18:33:38
2	V 292.402†	-1360.8	117.4	0.8698 ug/L	0.8698 ppb	18:33:38
2	Zn 213.857†	833.3	-70.5	-0.7015 ug/L	-0.7015 ppb	18:33:58
2	SiO2†	493.8	11.9	0.8356 ug/L	0.8356 ppb	18:34:34
3	Sc Radial	5139.3	5139.3	107 %		18:32:46
3	Y RADIAL	5523.7	5523.7	107.7 %		18:32:46
3	Al 396.153Radial†	-3.8	-0.3	-0.2771 ug/L	-0.2771 ppb	18:32:46
3	Ca 317.933Radial†	19.8	3.3	5.6098 ug/L	5.6098 ppb	18:33:06
3	Fe 238.204 Radial†	9.1	-1.4	-13.220 ug/L	-13.220 ppb	18:33:06
3	K 766.490 Radial†	3015.8	24.2	4.8016 ug/L	4.8016 ppb	18:32:46
3	Mg 279.077 IEC†	2.3	0.7	23.752 ug/L	23.752 ppb	18:33:06
3	Na 589.592 Radial†	-1309.7	345.9	112.08 ug/L	112.08 ppb	18:32:46
3	Sr 421.552†	13.8	-4.4	-0.0314 ug/L	-0.0314 ppb	18:32:46
3	Sc 361.383	859526.1	859526.1	105.61 %		18:34:04
3	Y 371.029	723946.5	723946.5	105.54 %		18:34:04
3	Ag 328.068†	476.9	170.0	0.8295 ug/L	0.8295 ppb	18:34:04
3	As 188.979†	-33.4	-12.8	-5.7482 ug/L	-5.7482 ppb	18:34:24
3	B 249.677†	-354.2	183.1	4.4595 ug/L	4.4595 ppb	18:34:24
3	Ba 233.527†	-9.7	-10.7	-0.0864 ug/L	-0.0864 ppb	18:34:24
3	Be 313.107†	-4375.9	168.8	0.0676 ug/L	0.0676 ppb	18:34:04
3	Cd 226.502†	-164.3	42.0	0.4957 ug/L	0.4957 ppb	18:34:24
3	Co 228.616†	-74.1	2.5	0.0543 ug/L	0.0543 ppb	18:34:24
3	Cr 267.716†	80.8	-19.2	-0.2280 ug/L	-0.2280 ppb	18:34:24
3	Cu 324.752†	6429.6	-210.0	-0.6753 ug/L	-0.6753 ppb	18:34:04
3	Mn 257.610†	421.8	-4.9	-0.0080 ug/L	-0.0080 ppb	18:34:24
3	Mo 202.031†	24.3	3.7	0.2745 ug/L	0.2745 ppb	18:34:24
3	Ni 231.604†	89.8	9.9	0.2600 ug/L	0.2600 ppb	18:34:24
3	P 214.914†	221.0	-18.6	-11.716 ug/L	-11.716 ppb	18:34:24
3	Pb 220.353†	-66.4	1.7	0.2238 ug/L	0.2238 ppb	18:34:24
3	S 181.975 Axial†	45.8	-3.1	-4.5587 ug/L	-4.5587 ppb	18:34:24
3	Sb 206.836†	36.7	2.0	0.7688 ug/L	0.7688 ppb	18:34:24
3	Se 196.026†	-24.1	7.6	5.0223 ug/L	5.0223 ppb	18:34:24
3	Si 251.611†	465.7	-5.0	-0.1705 ug/L	-0.1705 ppb	18:34:24
3	Sn 189.927†	12.3	5.5	1.0191 ug/L	1.0191 ppb	18:34:24
3	Ti 334.940†	-1303.0	153.2	0.2583 ug/L	0.2583 ppb	18:34:04
3	Tl 190.801†	-36.6	9.3	2.9626 ug/L	2.9626 ppb	18:34:24
3	U 409.014†	-1901.3	240.7	7.6891 ug/L	7.6891 ppb	18:34:04
3	V 292.402†	-1312.5	164.4	1.2065 ug/L	1.2065 ppb	18:34:04
3	Zn 213.857†	811.4	-92.0	-0.9169 ug/L	-0.9169 ppb	18:34:24
3	SiO2†	506.8	23.6	1.6863 ug/L	1.6863 ppb	18:34:39

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	859072.4	105.55	%	0.052				0.05%
Sc Radial	5093.6	106	%	2.4				2.30%
Y 371.029	723543.1	105.48	%	0.115				0.11%
Y RADIAL	5470.2	106.6	%	2.37				2.22%
Ag 328.068†	113.5	0.5507	ug/L	0.24797	0.5507	ppb	0.24797	45.03%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	6.1	4.8478	ug/L	8.10883	4.8478	ppb	8.10883	167.27%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-6.4	-2.8761	ug/L	3.11637	-2.8761	ppb	3.11637	108.36%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	207.4	5.0493	ug/L	0.52530	5.0493	ppb	0.52530	10.40%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-10.3	-0.0839	ug/L	0.03204	-0.0839	ppb	0.03204	38.18%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	197.7	0.0790	ug/L	0.01369	0.0790	ppb	0.01369	17.32%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	5.7	9.5704	ug/L	7.64551	9.5704	ppb	7.64551	79.89%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              31.9      0.3768 ug/L       0.12205      0.3768 ppb       0.12205  32.39%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               5.7      0.1240 ug/L       0.09161      0.1240 ppb       0.09161  73.85%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -9.5     -0.1138 ug/L       0.10261     -0.1138 ppb       0.10261  90.16%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -180.4     -0.5807 ug/L       0.11415     -0.5807 ppb       0.11415  19.66%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†       -1.6     -14.776 ug/L        3.7011     -14.776 ppb        3.7011  25.05%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -33.0      -6.6514 ug/L      15.80024      -6.6514 ppb      15.80024 237.55%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†           0.2      6.7388 ug/L      46.19459      6.7388 ppb      46.19459 685.50%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -0.1     -0.0019 ug/L       0.00880     -0.0019 ppb       0.00880 472.96%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               6.2      0.4590 ug/L       0.16340      0.4590 ppb       0.16340  35.60%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      350.9      113.68 ug/L        10.481      113.68 ppb        10.481   9.22%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               2.2      0.0587 ug/L       0.25003      0.0587 ppb       0.25003 425.96%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -22.6     -14.302 ug/L        2.3495     -14.302 ppb        2.3495  16.43%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -3.1     -0.3891 ug/L       0.82454     -0.3891 ppb       0.82454 211.90%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -0.5     -0.7982 ug/L       3.69270     -0.7982 ppb       3.69270 462.63%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.9      2.9167 ug/L       1.93083      2.9167 ppb       1.93083  66.20%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               6.1      4.0565 ug/L       0.88305      4.0565 ppb       0.88305  21.77%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               4.5      0.1466 ug/L       0.29691      0.1466 ppb       0.29691 202.54%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               3.5      0.6539 ug/L       0.67244      0.6539 ppb       0.67244 102.83%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -4.4     -0.0314 ug/L       0.06235     -0.0314 ppb       0.06235 198.62%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             126.4      0.2144 ug/L       0.03910      0.2144 ppb       0.03910  18.23%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              15.5      4.9578 ug/L       1.73541      4.9578 ppb       1.73541  35.00%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              231.1      7.3827 ug/L       0.89411      7.3827 ppb       0.89411  12.11%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              135.3      0.9989 ug/L       0.18156      0.9989 ppb       0.18156  18.18%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -77.9     -0.7752 ug/L       0.12275     -0.7752 ppb       0.12275  15.83%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    15.3      1.0838 ug/L       0.52444      1.0838 ppb       0.52444  48.39%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 41
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/14/2010 19:40:44
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5325.3	5325.3	111	%			19:42:36
1	Y RADIAL	5682.8	5682.8	110.8	%			19:42:36
1	Al 396.153Radial†	6403.7	5764.8	4601.4	ug/L	4601.4	ppb	19:42:36
1	Ca 317.933Radial†	3136.9	2807.2	4727.2	ug/L	4727.2	ppb	19:42:56
1	Fe 238.204 Radial†	584.2	515.8	4863.3	ug/L	4863.3	ppb	19:42:56
1	K 766.490 Radial†	29044.0	23344.2	4670.8	ug/L	4670.8	ppb	19:42:36
1	Mg 279.077 IEC†	155.8	138.7	4868.4	ug/L	4868.4	ppb	19:42:56
1	Na 589.592 Radial†	30595.6	29094.6	9426.8	ug/L	9426.8	ppb	19:42:36
1	Sr 421.552†	74527.5	67037.1	477.80	ug/L	477.80	ppb	19:42:36
1	Sc 361.383	884922.0	884922.0	108.73	%			19:43:54
1	Y 371.029	733826.4	733826.4	106.98	%			19:43:54
1	Ag 328.068†	107120.2	98237.2	485.71	ug/L	485.71	ppb	19:43:59
1	As 188.979†	1128.6	1056.9	479.90	ug/L	479.90	ppb	19:44:19
1	B 249.677†	21367.2	20170.0	488.70	ug/L	488.70	ppb	19:43:59
1	Ba 233.527†	64870.7	59660.3	495.94	ug/L	495.94	ppb	19:43:59
1	Be 313.107†	1331984.8	1229343.1	489.38	ug/L	489.38	ppb	19:43:54
1	Cd 226.502†	45805.4	42325.0	495.98	ug/L	495.98	ppb	19:43:59
1	Co 228.616†	24806.5	22887.3	497.09	ug/L	497.09	ppb	19:43:59
1	Cr 267.716†	45480.4	41732.8	492.94	ug/L	492.94	ppb	19:43:59
1	Cu 324.752†	175093.5	154736.0	493.93	ug/L	493.93	ppb	19:43:59
1	Mn 257.610†	451225.1	414588.9	486.44	ug/L	486.44	ppb	19:43:54
1	Mo 202.031†	7101.1	6511.6	483.80	ug/L	483.80	ppb	19:44:19
1	Ni 231.604†	20544.7	18819.9	495.12	ug/L	495.12	ppb	19:43:59
1	P 214.914†	4317.7	3743.1	2292.6	ug/L	2292.6	ppb	19:44:19
1	Pb 220.353†	3992.7	3736.7	480.15	ug/L	480.15	ppb	19:44:19
1	S 181.975 Axial†	764.5	656.6	979.10	ug/L	979.10	ppb	19:44:19
1	Sb 206.836†	1459.0	1309.2	495.98	ug/L	495.98	ppb	19:44:19
1	Se 196.026†	762.2	731.4	506.75	ug/L	506.75	ppb	19:44:19
1	Si 251.611†	81499.0	74509.0	2506.2	ug/L	2506.2	ppb	19:43:59
1	Sn 189.927†	2840.9	2606.7	482.87	ug/L	482.87	ppb	19:44:19
1	Ti 334.940†	311116.9	287522.2	493.09	ug/L	493.09	ppb	19:43:59
1	Tl 190.801†	1583.3	1500.0	483.15	ug/L	483.15	ppb	19:44:19
1	U 409.014†	15585.7	16375.2	521.33	ug/L	521.33	ppb	19:43:59
1	V 292.402†	73269.9	68793.7	502.79	ug/L	502.79	ppb	19:43:59
1	Zn 213.857†	55477.7	50162.7	495.99	ug/L	495.99	ppb	19:43:59
1	SiO2†	79319.4	72494.1	5184.1	ug/L	5184.1	ppb	19:45:26
2	Sc Radial	5097.2	5097.2	106	%			19:43:01
2	Y RADIAL	5456.3	5456.3	106.4	%			19:43:01
2	Al 396.153Radial†	6382.9	6003.1	4791.2	ug/L	4791.2	ppb	19:43:01
2	Ca 317.933Radial†	3125.1	2922.4	4921.2	ug/L	4921.2	ppb	19:43:21
2	Fe 238.204 Radial†	585.4	540.4	5095.6	ug/L	5095.6	ppb	19:43:21
2	K 766.490 Radial†	28938.3	24414.2	4884.9	ug/L	4884.9	ppb	19:43:01
2	Mg 279.077 IEC†	159.4	148.3	5206.1	ug/L	5206.1	ppb	19:43:21
2	Na 589.592 Radial†	30649.6	30377.2	9842.4	ug/L	9842.4	ppb	19:43:01
2	Sr 421.552†	74180.9	69712.0	496.86	ug/L	496.86	ppb	19:43:01
2	Sc 361.383	833860.0	833860.0	102.46	%			19:44:25
2	Y 371.029	692653.7	692653.7	100.98	%			19:44:25
2	Ag 328.068†	105357.2	102549.3	507.04	ug/L	507.04	ppb	19:44:30
2	As 188.979†	1140.8	1132.3	513.99	ug/L	513.99	ppb	19:44:50
2	B 249.677†	20989.0	21004.2	508.91	ug/L	508.91	ppb	19:44:30
2	Ba 233.527†	63713.7	62184.5	516.92	ug/L	516.92	ppb	19:44:30
2	Be 313.107†	1339709.7	1311898.3	522.21	ug/L	522.21	ppb	19:44:25
2	Cd 226.502†	44989.5	44108.3	516.87	ug/L	516.87	ppb	19:44:30
2	Co 228.616†	24408.7	23896.1	519.02	ug/L	519.02	ppb	19:44:30
2	Cr 267.716†	44826.7	43656.1	515.66	ug/L	515.66	ppb	19:44:30
2	Cu 324.752†	171028.1	160629.1	512.75	ug/L	512.75	ppb	19:44:30
2	Mn 257.610†	452904.7	441640.7	518.17	ug/L	518.17	ppb	19:44:25
2	Mo 202.031†	7096.6	6907.1	513.17	ug/L	513.17	ppb	19:44:50
2	Ni 231.604†	20193.9	19634.6	516.55	ug/L	516.55	ppb	19:44:30

2	P 214.914†	4317.3	3985.9	2443.9 ug/L	2443.9 ppb	19:44:50
2	Pb 220.353†	4014.9	3983.2	511.82 ug/L	511.82 ppb	19:44:50
2	S 181.975 Axial†	758.7	694.1	1035.0 ug/L	1035.0 ppb	19:44:50
2	Sb 206.836†	1456.7	1389.1	526.26 ug/L	526.26 ppb	19:44:50
2	Se 196.026†	764.5	776.5	537.81 ug/L	537.81 ppb	19:44:50
2	Si 251.611†	79775.4	77416.7	2603.9 ug/L	2603.9 ppb	19:44:30
2	Sn 189.927†	2844.6	2770.2	513.15 ug/L	513.15 ppb	19:44:50
2	Ti 334.940†	304307.6	298397.9	511.73 ug/L	511.73 ppb	19:44:30
2	Tl 190.801†	1597.1	1602.7	516.16 ug/L	516.16 ppb	19:44:50
2	U 409.014†	14953.5	16635.9	529.57 ug/L	529.57 ppb	19:44:30
2	V 292.402†	71712.9	71400.5	521.97 ug/L	521.97 ppb	19:44:30
2	Zn 213.857†	54462.1	52295.9	517.08 ug/L	517.08 ppb	19:44:30
2	SiO2†	79715.8	77348.2	5531.3 ug/L	5531.3 ppb	19:45:31
3	Sc Radial	4784.1	4784.1	99.8 %		19:43:26
3	Y RADIAL	5092.0	5092.0	99.27 %		19:43:26
3	Al 396.153Radial†	6504.9	6518.0	5205.2 ug/L	5205.2 ppb	19:43:26
3	Ca 317.933Radial†	3112.5	3102.1	5223.7 ug/L	5223.7 ppb	19:43:46
3	Fe 238.204 Radial†	578.9	569.9	5372.4 ug/L	5372.4 ppb	19:43:46
3	K 766.490 Radial†	29304.3	26561.1	5314.7 ug/L	5314.7 ppb	19:43:26
3	Mg 279.077 IEC†	157.2	155.9	5472.9 ug/L	5472.9 ppb	19:43:46
3	Na 589.592 Radial†	31229.5	32843.5	10641 ug/L	10641 ppb	19:43:26
3	Sr 421.552†	75847.4	75944.6	541.29 ug/L	541.29 ppb	19:43:26
3	Sc 361.383	866538.3	866538.3	106.47 %		19:44:55
3	Y 371.029	719364.3	719364.3	104.87 %		19:44:55
3	Ag 328.068†	104626.1	97984.9	484.64 ug/L	484.64 ppb	19:45:01
3	As 188.979†	1152.9	1101.6	500.17 ug/L	500.17 ppb	19:45:21
3	B 249.677†	21134.6	20368.4	493.44 ug/L	493.44 ppb	19:45:01
3	Ba 233.527†	63912.3	60025.9	498.99 ug/L	498.99 ppb	19:45:01
3	Be 313.107†	1345815.8	1268322.5	504.87 ug/L	504.87 ppb	19:44:55
3	Cd 226.502†	45244.4	42691.8	500.23 ug/L	500.23 ppb	19:45:01
3	Co 228.616†	24486.1	23070.4	501.08 ug/L	501.08 ppb	19:45:01
3	Cr 267.716†	44865.9	42043.0	496.61 ug/L	496.61 ppb	19:45:01
3	Cu 324.752†	172213.2	155447.1	496.23 ug/L	496.23 ppb	19:45:01
3	Mn 257.610†	455480.8	427390.1	501.48 ug/L	501.48 ppb	19:44:55
3	Mo 202.031†	7098.0	6647.2	493.91 ug/L	493.91 ppb	19:45:21
3	Ni 231.604†	20289.9	18981.5	499.37 ug/L	499.37 ppb	19:45:01
3	P 214.914†	4319.7	3829.2	2346.9 ug/L	2346.9 ppb	19:45:21
3	Pb 220.353†	4016.9	3837.3	493.15 ug/L	493.15 ppb	19:45:21
3	S 181.975 Axial†	761.3	668.6	996.86 ug/L	996.86 ppb	19:45:21
3	Sb 206.836†	1470.3	1348.2	510.66 ug/L	510.66 ppb	19:45:21
3	Se 196.026†	765.8	749.6	520.66 ug/L	520.66 ppb	19:45:21
3	Si 251.611†	80336.4	75007.3	2522.9 ug/L	2522.9 ppb	19:45:01
3	Sn 189.927†	2857.2	2677.4	496.03 ug/L	496.03 ppb	19:45:21
3	Ti 334.940†	306200.8	288975.4	495.60 ug/L	495.60 ppb	19:45:01
3	Tl 190.801†	1591.0	1538.2	495.42 ug/L	495.42 ppb	19:45:21
3	U 409.014†	15156.8	16276.5	518.11 ug/L	518.11 ppb	19:45:01
3	V 292.402†	72059.2	69086.2	504.97 ug/L	504.97 ppb	19:45:01
3	Zn 213.857†	54727.7	50540.7	499.68 ug/L	499.68 ppb	19:45:01
3	SiO2†	78655.1	73417.8	5250.0 ug/L	5250.0 ppb	19:45:36

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	861773.4	105.89	%	3.178				3.00%
Sc Radial	5068.9	106	%	5.7				5.36%
Y 371.029	715281.5	104.27	%	3.045				2.92%
Y RADIAL	5410.4	105.5	%	5.81				5.51%
Ag 328.068†	99590.5	492.47	ug/L	12.633	492.47	ppb	12.633	2.57%
QC value within limits for Ag 328.068 Recovery = 98.49%								
Al 396.153Radial†	6095.3	4865.9	ug/L	308.73	4865.9	ppb	308.73	6.34%
QC value within limits for Al 396.153Radial Recovery = 97.32%								
As 188.979†	1096.9	498.02	ug/L	17.143	498.02	ppb	17.143	3.44%
QC value within limits for As 188.979 Recovery = 99.60%								
B 249.677†	20514.2	497.02	ug/L	10.566	497.02	ppb	10.566	2.13%
QC value within limits for B 249.677 Recovery = 99.40%								
Ba 233.527†	60623.6	503.95	ug/L	11.334	503.95	ppb	11.334	2.25%
QC value within limits for Ba 233.527 Recovery = 100.79%								
Be 313.107†	1269854.6	505.49	ug/L	16.424	505.49	ppb	16.424	3.25%
QC value within limits for Be 313.107 Recovery = 101.10%								
Ca 317.933Radial†	2943.9	4957.4	ug/L	250.22	4957.4	ppb	250.22	5.05%

QC value within limits for Ca 317.933Radial Recovery = 99.15%

Cd 226.502†	43041.7	504.36 ug/L	11.042	504.36 ppb	11.042	2.19%
QC value within limits for Cd 226.502 Recovery = 100.87%						
Co 228.616†	23284.6	505.73 ug/L	11.684	505.73 ppb	11.684	2.31%
QC value within limits for Co 228.616 Recovery = 101.15%						
Cr 267.716†	42477.3	501.74 ug/L	12.195	501.74 ppb	12.195	2.43%
QC value within limits for Cr 267.716 Recovery = 100.35%						
Cu 324.752†	156937.4	500.97 ug/L	10.267	500.97 ppb	10.267	2.05%
QC value within limits for Cu 324.752 Recovery = 100.19%						
Fe 238.204 Radial†	542.0	5110.5 ug/L	254.88	5110.5 ppb	254.88	4.99%
QC value within limits for Fe 238.204 Radial Recovery = 102.21%						
K 766.490 Radial†	24773.2	4956.8 ug/L	327.87	4956.8 ppb	327.87	6.61%
QC value within limits for K 766.490 Radial Recovery = 99.14%						
Mg 279.077 IEC†	147.6	5182.5 ug/L	302.97	5182.5 ppb	302.97	5.85%
QC value within limits for Mg 279.077 IEC Recovery = 103.65%						
Mn 257.610†	427873.2	502.03 ug/L	15.873	502.03 ppb	15.873	3.16%
QC value within limits for Mn 257.610 Recovery = 100.41%						
Mo 202.031†	6688.7	496.96 ug/L	14.925	496.96 ppb	14.925	3.00%
QC value within limits for Mo 202.031 Recovery = 99.39%						
Na 589.592 Radial†	30771.8	9970.2 ug/L	617.34	9970.2 ppb	617.34	6.19%
QC value within limits for Na 589.592 Radial Recovery = 99.70%						
Ni 231.604†	19145.3	503.68 ug/L	11.348	503.68 ppb	11.348	2.25%
QC value within limits for Ni 231.604 Recovery = 100.74%						
P 214.914†	3852.8	2361.1 ug/L	76.68	2361.1 ppb	76.68	3.25%
QC value within limits for P 214.914 Recovery = 94.44%						
Pb 220.353†	3852.4	495.04 ug/L	15.918	495.04 ppb	15.918	3.22%
QC value within limits for Pb 220.353 Recovery = 99.01%						
S 181.975 Axial†	673.1	1003.6 ug/L	28.55	1003.6 ppb	28.55	2.84%
QC value within limits for S 181.975 Axial Recovery = 100.36%						
Sb 206.836†	1348.8	510.97 ug/L	15.143	510.97 ppb	15.143	2.96%
QC value within limits for Sb 206.836 Recovery = 102.19%						
Se 196.026†	752.5	521.74 ug/L	15.559	521.74 ppb	15.559	2.98%
QC value within limits for Se 196.026 Recovery = 104.35%						
Si 251.611†	75644.3	2544.4 ug/L	52.25	2544.4 ppb	52.25	2.05%
QC value within limits for Si 251.611 Recovery = 101.77%						
Sn 189.927†	2684.8	497.35 ug/L	15.183	497.35 ppb	15.183	3.05%
QC value within limits for Sn 189.927 Recovery = 99.47%						
Sr 421.552†	70897.9	505.32 ug/L	32.577	505.32 ppb	32.577	6.45%
QC value within limits for Sr 421.552 Recovery = 101.06%						
Ti 334.940†	291631.8	500.14 ug/L	10.118	500.14 ppb	10.118	2.02%
QC value within limits for Ti 334.940 Recovery = 100.03%						
Tl 190.801†	1547.0	498.24 ug/L	16.688	498.24 ppb	16.688	3.35%
QC value within limits for Tl 190.801 Recovery = 99.65%						
U 409.014†	16429.2	523.00 ug/L	5.915	523.00 ppb	5.915	1.13%
QC value within limits for U 409.014 Recovery = 104.60%						
V 292.402†	69760.1	509.91 ug/L	10.502	509.91 ppb	10.502	2.06%
QC value within limits for V 292.402 Recovery = 101.98%						
Zn 213.857†	50999.8	504.25 ug/L	11.264	504.25 ppb	11.264	2.23%
QC value within limits for Zn 213.857 Recovery = 100.85%						
SiO2†	74420.0	5321.8 ug/L	184.39	5321.8 ppb	184.39	3.46%
QC value within limits for SiO2 Recovery = 99.52%						

All analyte(s) passed QC.

Sequence No.: 42
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/14/2010 19:47:47
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5077.1	5077.1	106	%			19:49:39
1	Y RADIAL	5453.2	5453.2	106.3	%			19:49:39
1	Al 396.153Radial†	-11.7	-7.8	-6.2491	ug/L	-6.2491	ppb	19:49:39
1	Ca 317.933Radial†	22.0	5.6	9.4228	ug/L	9.4228	ppb	19:50:00
1	Fe 238.204 Radial†	11.3	0.7	6.9516	ug/L	6.9516	ppb	19:50:00
1	K 766.490 Radial†	2811.1	-134.6	-26.994	ug/L	-26.994	ppb	19:49:39
1	Mg 279.077 IEC†	2.3	0.6	22.347	ug/L	22.347	ppb	19:50:00
1	Na 589.592 Radial†	-1437.5	210.3	68.154	ug/L	68.154	ppb	19:49:39
1	Sr 421.552†	-7.2	-24.0	-0.1711	ug/L	-0.1711	ppb	19:49:39
1	Sc 361.383	852089.0	852089.0	104.70	%			19:50:56
1	Y 371.029	722835.8	722835.8	105.38	%			19:50:56
1	Ag 328.068†	407.3	107.4	0.5246	ug/L	0.5246	ppb	19:50:56
1	As 188.979†	-24.0	-4.1	-1.8492	ug/L	-1.8492	ppb	19:51:16
1	B 249.677†	-458.6	80.5	1.9581	ug/L	1.9581	ppb	19:51:16
1	Ba 233.527†	6.2	4.4	0.0382	ug/L	0.0382	ppb	19:51:16
1	Be 313.107†	-4343.2	163.9	0.0657	ug/L	0.0657	ppb	19:50:56
1	Cd 226.502†	-191.2	15.0	0.1767	ug/L	0.1767	ppb	19:51:16
1	Co 228.616†	-88.3	-11.6	-0.2515	ug/L	-0.2515	ppb	19:51:16
1	Cr 267.716†	80.0	-19.3	-0.2308	ug/L	-0.2308	ppb	19:51:16
1	Cu 324.752†	6464.0	-124.0	-0.4011	ug/L	-0.4011	ppb	19:50:56
1	Mn 257.610†	469.9	44.5	0.0520	ug/L	0.0520	ppb	19:51:16
1	Mo 202.031†	28.0	7.4	0.5506	ug/L	0.5506	ppb	19:51:16
1	Ni 231.604†	93.5	14.2	0.3732	ug/L	0.3732	ppb	19:51:16
1	P 214.914†	217.3	-20.3	-12.899	ug/L	-12.899	ppb	19:51:16
1	Pb 220.353†	-73.0	-5.1	-0.6594	ug/L	-0.6594	ppb	19:51:16
1	S 181.975 Axial†	46.4	-2.2	-3.2184	ug/L	-3.2184	ppb	19:51:16
1	Sb 206.836†	35.8	1.4	0.5329	ug/L	0.5329	ppb	19:51:16
1	Se 196.026†	-24.2	7.2	4.8630	ug/L	4.8630	ppb	19:51:16
1	Si 251.611†	496.2	28.1	0.9403	ug/L	0.9403	ppb	19:51:16
1	Sn 189.927†	5.6	-0.8	-0.1491	ug/L	-0.1491	ppb	19:51:16
1	Ti 334.940†	-1285.3	159.3	0.2685	ug/L	0.2685	ppb	19:50:56
1	Tl 190.801†	-36.3	9.2	2.9503	ug/L	2.9503	ppb	19:51:16
1	U 409.014†	-1807.0	315.0	10.061	ug/L	10.061	ppb	19:50:56
1	V 292.402†	-1373.1	95.6	0.7159	ug/L	0.7159	ppb	19:50:56
1	Zn 213.857†	834.8	-62.9	-0.6302	ug/L	-0.6302	ppb	19:51:16
1	SiO2†	514.6	35.3	2.5180	ug/L	2.5180	ppb	19:52:12
2	Sc Radial	5109.3	5109.3	107	%			19:50:05
2	Y RADIAL	5477.6	5477.6	106.8	%			19:50:05
2	Al 396.153Radial†	-25.5	-20.7	-16.654	ug/L	-16.654	ppb	19:50:05
2	Ca 317.933Radial†	22.6	6.0	10.178	ug/L	10.178	ppb	19:50:25
2	Fe 238.204 Radial†	8.6	-1.8	-17.138	ug/L	-17.138	ppb	19:50:25
2	K 766.490 Radial†	2971.0	-1.4	-0.3101	ug/L	-0.3101	ppb	19:50:05
2	Mg 279.077 IEC†	3.6	1.9	66.641	ug/L	66.641	ppb	19:50:25
2	Na 589.592 Radial†	-1432.8	223.3	72.343	ug/L	72.343	ppb	19:50:05
2	Sr 421.552†	-12.4	-28.8	-0.2057	ug/L	-0.2057	ppb	19:50:05
2	Sc 361.383	854522.3	854522.3	105.00	%			19:51:22
2	Y 371.029	725851.8	725851.8	105.82	%			19:51:22
2	Ag 328.068†	423.0	121.3	0.5901	ug/L	0.5901	ppb	19:51:22
2	As 188.979†	-20.9	-1.0	-0.4669	ug/L	-0.4669	ppb	19:51:42
2	B 249.677†	-468.4	72.4	1.7655	ug/L	1.7655	ppb	19:51:42
2	Ba 233.527†	-11.4	-12.3	-0.1011	ug/L	-0.1011	ppb	19:51:42
2	Be 313.107†	-4353.4	165.9	0.0668	ug/L	0.0668	ppb	19:51:22
2	Cd 226.502†	-190.8	15.8	0.1880	ug/L	0.1880	ppb	19:51:42
2	Co 228.616†	-81.1	-4.5	-0.0966	ug/L	-0.0966	ppb	19:51:42
2	Cr 267.716†	89.4	-10.6	-0.1261	ug/L	-0.1261	ppb	19:51:42
2	Cu 324.752†	6509.1	-98.6	-0.3178	ug/L	-0.3178	ppb	19:51:22
2	Mn 257.610†	454.8	28.8	0.0294	ug/L	0.0294	ppb	19:51:42
2	Mo 202.031†	34.5	13.6	1.0074	ug/L	1.0074	ppb	19:51:42
2	Ni 231.604†	103.4	23.4	0.6148	ug/L	0.6148	ppb	19:51:42

2	P 214.914†	217.8	-20.4	-12.978 ug/L	-12.978 ppb	19:51:42
2	Pb 220.353†	-56.5	10.8	1.3797 ug/L	1.3797 ppb	19:51:42
2	S 181.975 Axial†	45.5	-3.2	-4.7150 ug/L	-4.7150 ppb	19:51:42
2	Sb 206.836†	39.9	5.2	1.9270 ug/L	1.9270 ppb	19:51:42
2	Se 196.026†	-25.1	6.4	4.2389 ug/L	4.2389 ppb	19:51:42
2	Si 251.611†	501.7	31.9	1.0635 ug/L	1.0635 ppb	19:51:42
2	Sn 189.927†	1.9	-4.3	-0.7913 ug/L	-0.7913 ppb	19:51:42
2	Ti 334.940†	-1208.7	235.8	0.3990 ug/L	0.3990 ppb	19:51:22
2	Tl 190.801†	-33.9	11.6	3.7009 ug/L	3.7009 ppb	19:51:42
2	U 409.014†	-2022.2	115.0	3.6739 ug/L	3.6739 ppb	19:51:22
2	V 292.402†	-1368.7	103.5	0.7716 ug/L	0.7716 ppb	19:51:22
2	Zn 213.857†	815.9	-83.2	-0.8317 ug/L	-0.8317 ppb	19:51:42
2	SiO2†	566.3	83.2	5.9364 ug/L	5.9364 ppb	19:52:17
3	Sc Radial	5086.3	5086.3	106 %		19:50:30
3	Y RADIAL	5471.4	5471.4	106.7 %		19:50:30
3	Al 396.153Radial†	20.6	22.6	18.154 ug/L	18.154 ppb	19:50:30
3	Ca 317.933Radial†	23.5	7.0	11.748 ug/L	11.748 ppb	19:50:50
3	Fe 238.204 Radial†	10.3	-0.2	-1.5915 ug/L	-1.5915 ppb	19:50:50
3	K 766.490 Radial†	2863.1	-90.4	-18.142 ug/L	-18.142 ppb	19:50:30
3	Mg 279.077 IEC†	3.3	1.6	56.683 ug/L	56.683 ppb	19:50:50
3	Na 589.592 Radial†	-1473.6	178.8	57.926 ug/L	57.926 ppb	19:50:30
3	Sr 421.552†	0.2	-17.0	-0.1216 ug/L	-0.1216 ppb	19:50:30
3	Sc 361.383	855272.4	855272.4	105.09 %		19:51:47
3	Y 371.029	725851.5	725851.5	105.82 %		19:51:47
3	Ag 328.068†	377.5	77.7	0.3801 ug/L	0.3801 ppb	19:51:47
3	As 188.979†	-28.4	-8.2	-3.6858 ug/L	-3.6858 ppb	19:52:07
3	B 249.677†	-467.1	74.0	1.8026 ug/L	1.8026 ppb	19:52:07
3	Ba 233.527†	-4.1	-5.3	-0.0430 ug/L	-0.0430 ppb	19:52:07
3	Be 313.107†	-4339.0	183.3	0.0737 ug/L	0.0737 ppb	19:51:47
3	Cd 226.502†	-180.8	25.5	0.3001 ug/L	0.3001 ppb	19:52:07
3	Co 228.616†	-92.1	-14.9	-0.3239 ug/L	-0.3239 ppb	19:52:07
3	Cr 267.716†	74.3	-25.0	-0.2963 ug/L	-0.2963 ppb	19:52:07
3	Cu 324.752†	6493.9	-118.6	-0.3809 ug/L	-0.3809 ppb	19:51:47
3	Mn 257.610†	463.2	36.5	0.0403 ug/L	0.0403 ppb	19:52:07
3	Mo 202.031†	25.3	4.7	0.3516 ug/L	0.3516 ppb	19:52:07
3	Ni 231.604†	83.1	3.9	0.1040 ug/L	0.1040 ppb	19:52:07
3	P 214.914†	214.2	-24.1	-15.281 ug/L	-15.281 ppb	19:52:07
3	Pb 220.353†	-69.1	-1.2	-0.1421 ug/L	-0.1421 ppb	19:52:07
3	S 181.975 Axial†	43.5	-5.1	-7.6003 ug/L	-7.6003 ppb	19:52:07
3	Sb 206.836†	32.8	-1.6	-0.5613 ug/L	-0.5613 ppb	19:52:07
3	Se 196.026†	-25.1	6.5	4.3567 ug/L	4.3567 ppb	19:52:07
3	Si 251.611†	505.4	35.0	1.1765 ug/L	1.1765 ppb	19:52:07
3	Sn 189.927†	7.7	1.2	0.2328 ug/L	0.2328 ppb	19:52:07
3	Ti 334.940†	-1216.4	229.5	0.3889 ug/L	0.3889 ppb	19:51:47
3	Tl 190.801†	-30.8	14.6	4.6700 ug/L	4.6700 ppb	19:52:07
3	U 409.014†	-2004.1	133.9	4.2774 ug/L	4.2774 ppb	19:51:47
3	V 292.402†	-1385.6	88.7	0.6538 ug/L	0.6538 ppb	19:51:47
3	Zn 213.857†	821.2	-78.9	-0.7870 ug/L	-0.7870 ppb	19:52:07
3	SiO2†	512.0	31.0	2.2102 ug/L	2.2102 ppb	19:52:22

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	853961.2	104.93	%	0.204				0.19%
Sc Radial	5090.9	106	%	0.3				0.33%
Y 371.029	724846.4	105.67	%	0.254				0.24%
Y RADIAL	5467.4	106.6	%	0.25				0.23%
Ag 328.068†	102.1	0.4983	ug/L	0.10744	0.4983	ppb	0.10744	21.56%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-1.9	-1.5832	ug/L	17.86686	-1.5832	ppb	17.86686	>999.9%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.4	-2.0006	ug/L	1.61474	-2.0006	ppb	1.61474	80.71%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	75.6	1.8420	ug/L	0.10218	1.8420	ppb	0.10218	5.55%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-4.4	-0.0353	ug/L	0.07000	-0.0353	ppb	0.07000	198.33%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	171.1	0.0688	ug/L	0.00433	0.0688	ppb	0.00433	6.29%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	6.2	10.450	ug/L	1.1864	10.450	ppb	1.1864	11.35%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	18.8	0.2216 ug/L	0.06819	0.2216 ppb	0.06819	30.77%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-10.4	-0.2240 ug/L	0.11615	-0.2240 ppb	0.11615	51.86%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-18.3	-0.2177 ug/L	0.08584	-0.2177 ppb	0.08584	39.43%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-113.7	-0.3666 ug/L	0.04344	-0.3666 ppb	0.04344	11.85%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-0.4	-3.9258 ug/L	12.21303	-3.9258 ppb	12.21303	311.10%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-75.5	-15.149 ug/L	13.5916	-15.149 ppb	13.5916	89.72%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	1.4	48.557 ug/L	23.2378	48.557 ppb	23.2378	47.86%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	36.6	0.0406 ug/L	0.01127	0.0406 ppb	0.01127	27.79%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	8.6	0.6365 ug/L	0.33621	0.6365 ppb	0.33621	52.82%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	204.1	66.141 ug/L	7.4165	66.141 ppb	7.4165	11.21%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	13.8	0.3640 ug/L	0.25554	0.3640 ppb	0.25554	70.21%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-21.6	-13.719 ug/L	1.3529	-13.719 ppb	1.3529	9.86%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	1.5	0.1927 ug/L	1.05998	0.1927 ppb	1.05998	549.98%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-3.5	-5.1779 ug/L	2.22732	-5.1779 ppb	2.22732	43.02%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	1.7	0.6329 ug/L	1.24716	0.6329 ppb	1.24716	197.07%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	6.7	4.4862 ug/L	0.33159	4.4862 ppb	0.33159	7.39%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	31.7	1.0601 ug/L	0.11813	1.0601 ppb	0.11813	11.14%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	-1.3	-0.2359 ug/L	0.51753	-0.2359 ppb	0.51753	219.40%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-23.3	-0.1661 ug/L	0.04228	-0.1661 ppb	0.04228	25.46%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	208.2	0.3521 ug/L	0.07261	0.3521 ppb	0.07261	20.62%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	11.8	3.7737 ug/L	0.86217	3.7737 ppb	0.86217	22.85%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	188.0	6.0040 ug/L	3.52617	6.0040 ppb	3.52617	58.73%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	95.9	0.7138 ug/L	0.05894	0.7138 ppb	0.05894	8.26%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-75.0	-0.7496 ug/L	0.10579	-0.7496 ppb	0.10579	14.11%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	49.8	3.5549 ug/L	2.06818	3.5549 ppb	2.06818	58.18%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 51
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/14/2010 20:50:52
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4980.6	4980.6	104	%			20:52:44
1	Y RADIAL	5319.8	5319.8	103.7	%			20:52:44
1	Al 396.153Radial†	6541.7	6296.2	5026.2	ug/L	5026.2	ppb	20:52:44
1	Ca 317.933Radial†	3177.7	3041.7	5122.1	ug/L	5122.1	ppb	20:53:04
1	Fe 238.204 Radial†	593.8	561.4	5292.9	ug/L	5292.9	ppb	20:53:04
1	K 766.490 Radial†	29562.9	25651.6	5132.6	ug/L	5132.6	ppb	20:52:44
1	Mg 279.077 IEC†	159.8	152.2	5344.2	ug/L	5344.2	ppb	20:53:04
1	Na 589.592 Radial†	31339.9	31715.4	10276	ug/L	10276	ppb	20:52:44
1	Sr 421.552†	76457.3	73533.4	524.10	ug/L	524.10	ppb	20:52:44
1	Sc 361.383	846924.0	846924.0	104.06	%			20:54:02
1	Y 371.029	703196.0	703196.0	102.51	%			20:54:02
1	Ag 328.068†	104645.2	100278.9	495.96	ug/L	495.96	ppb	20:54:07
1	As 188.979†	1160.4	1134.0	514.86	ug/L	514.86	ppb	20:54:27
1	B 249.677†	21417.1	21099.7	511.19	ug/L	511.19	ppb	20:54:07
1	Ba 233.527†	65082.9	62541.0	519.89	ug/L	519.89	ppb	20:54:07
1	Be 313.107†	1349422.3	1301061.9	517.92	ug/L	517.92	ppb	20:54:02
1	Cd 226.502†	46112.0	44509.7	521.56	ug/L	521.56	ppb	20:54:07
1	Co 228.616†	24926.0	24025.7	521.83	ug/L	521.83	ppb	20:54:07
1	Cr 267.716†	45729.5	43848.8	517.94	ug/L	517.94	ppb	20:54:07
1	Cu 324.752†	174383.4	161278.6	514.83	ug/L	514.83	ppb	20:54:07
1	Mn 257.610†	455789.5	437594.2	513.44	ug/L	513.44	ppb	20:54:02
1	Mo 202.031†	7257.0	6954.4	516.70	ug/L	516.70	ppb	20:54:27
1	Ni 231.604†	20629.9	19749.5	519.58	ug/L	519.58	ppb	20:54:07
1	P 214.914†	4416.9	4016.6	2463.1	ug/L	2463.1	ppb	20:54:27
1	Pb 220.353†	4102.9	4007.3	514.94	ug/L	514.94	ppb	20:54:27
1	S 181.975 Axial†	780.9	703.9	1049.6	ug/L	1049.6	ppb	20:54:27
1	Sb 206.836†	1507.3	1415.7	536.13	ug/L	536.13	ppb	20:54:27
1	Se 196.026†	787.9	787.5	545.79	ug/L	545.79	ppb	20:54:27
1	Si 251.611†	81527.3	77899.1	2620.1	ug/L	2620.1	ppb	20:54:07
1	Sn 189.927†	2920.1	2800.0	518.69	ug/L	518.69	ppb	20:54:27
1	Ti 334.940†	314065.7	303193.7	519.97	ug/L	519.97	ppb	20:54:02
1	Tl 190.801†	1628.9	1609.2	518.28	ug/L	518.28	ppb	20:54:27
1	U 409.014†	15381.1	16821.7	535.48	ug/L	535.48	ppb	20:54:07
1	V 292.402†	73454.6	71994.6	526.28	ug/L	526.28	ppb	20:54:07
1	Zn 213.857†	55622.5	52591.0	519.99	ug/L	519.99	ppb	20:54:07
1	SiO2†	81812.6	78163.0	5589.6	ug/L	5589.6	ppb	20:55:35
2	Sc Radial	5033.0	5033.0	105	%			20:53:09
2	Y RADIAL	5346.0	5346.0	104.2	%			20:53:09
2	Al 396.153Radial†	6561.5	6249.7	4989.3	ug/L	4989.3	ppb	20:53:09
2	Ca 317.933Radial†	3173.4	3005.9	5061.7	ug/L	5061.7	ppb	20:53:29
2	Fe 238.204 Radial†	591.2	552.9	5212.8	ug/L	5212.8	ppb	20:53:29
2	K 766.490 Radial†	29821.9	25602.6	5122.8	ug/L	5122.8	ppb	20:53:09
2	Mg 279.077 IEC†	159.7	150.5	5284.2	ug/L	5284.2	ppb	20:53:29
2	Na 589.592 Radial†	31459.4	31515.9	10211	ug/L	10211	ppb	20:53:09
2	Sr 421.552†	76746.4	73044.3	520.61	ug/L	520.61	ppb	20:53:09
2	Sc 361.383	857036.0	857036.0	105.30	%			20:54:33
2	Y 371.029	711389.6	711389.6	103.71	%			20:54:33
2	Ag 328.068†	103850.7	98337.9	486.35	ug/L	486.35	ppb	20:54:38
2	As 188.979†	1164.8	1124.9	510.79	ug/L	510.79	ppb	20:54:58
2	B 249.677†	20969.0	20431.3	494.99	ug/L	494.99	ppb	20:54:38
2	Ba 233.527†	63719.1	60508.0	502.99	ug/L	502.99	ppb	20:54:38
2	Be 313.107†	1361539.7	1297268.9	516.42	ug/L	516.42	ppb	20:54:33
2	Cd 226.502†	45161.9	43084.6	504.85	ug/L	504.85	ppb	20:54:38
2	Co 228.616†	24358.8	23204.5	503.97	ug/L	503.97	ppb	20:54:38
2	Cr 267.716†	44937.1	42577.8	502.93	ug/L	502.93	ppb	20:54:38
2	Cu 324.752†	171138.4	156219.8	498.69	ug/L	498.69	ppb	20:54:38
2	Mn 257.610†	459708.9	436148.3	511.74	ug/L	511.74	ppb	20:54:33
2	Mo 202.031†	7215.6	6832.8	507.67	ug/L	507.67	ppb	20:54:58
2	Ni 231.604†	20262.6	19166.8	504.25	ug/L	504.25	ppb	20:54:38

2	P 214.914†	4375.3	3927.0	2409.0 ug/L	2409.0 ppb	20:54:58
2	Pb 220.353†	4061.3	3921.3	503.91 ug/L	503.91 ppb	20:54:58
2	S 181.975 Axial†	766.3	681.2	1015.7 ug/L	1015.7 ppb	20:54:58
2	Sb 206.836†	1487.8	1380.2	522.70 ug/L	522.70 ppb	20:54:58
2	Se 196.026†	782.8	773.7	536.28 ug/L	536.28 ppb	20:54:58
2	Si 251.611†	79908.3	75437.3	2537.3 ug/L	2537.3 ppb	20:54:38
2	Sn 189.927†	2879.4	2728.3	505.41 ug/L	505.41 ppb	20:54:58
2	Ti 334.940†	317056.5	302472.9	518.75 ug/L	518.75 ppb	20:54:33
2	Tl 190.801†	1617.2	1579.6	508.90 ug/L	508.90 ppb	20:54:58
2	U 409.014†	14979.2	16265.7	517.77 ug/L	517.77 ppb	20:54:38
2	V 292.402†	71908.5	69693.5	509.54 ug/L	509.54 ppb	20:54:38
2	Zn 213.857†	54634.2	51021.9	504.46 ug/L	504.46 ppb	20:54:38
2	SiO2†	80185.5	75690.2	5412.6 ug/L	5412.6 ppb	20:55:40
3	Sc Radial	5008.4	5008.4	105 %		20:53:34
3	Y RADIAL	5353.9	5353.9	104.4 %		20:53:34
3	Al 396.153Radial†	6605.3	6322.2	5047.3 ug/L	5047.3 ppb	20:53:34
3	Ca 317.933Radial†	3184.2	3031.1	5104.2 ug/L	5104.2 ppb	20:53:54
3	Fe 238.204 Radial†	589.7	554.3	5225.9 ug/L	5225.9 ppb	20:53:54
3	K 766.490 Radial†	29638.1	25565.9	5115.5 ug/L	5115.5 ppb	20:53:34
3	Mg 279.077 IEC†	161.7	153.2	5378.0 ug/L	5378.0 ppb	20:53:54
3	Na 589.592 Radial†	31323.2	31532.3	10217 ug/L	10217 ppb	20:53:34
3	Sr 421.552†	76663.2	73322.6	522.60 ug/L	522.60 ppb	20:53:34
3	Sc 361.383	850254.0	850254.0	104.47 %		20:55:04
3	Y 371.029	705411.6	705411.6	102.84 %		20:55:04
3	Ag 328.068†	103502.0	98790.8	488.59 ug/L	488.59 ppb	20:55:09
3	As 188.979†	1145.1	1114.9	506.27 ug/L	506.27 ppb	20:55:29
3	B 249.677†	21045.8	20663.7	500.62 ug/L	500.62 ppb	20:55:09
3	Ba 233.527†	64084.3	61340.2	509.90 ug/L	509.90 ppb	20:55:09
3	Be 313.107†	1345388.5	1292122.1	514.37 ug/L	514.37 ppb	20:55:04
3	Cd 226.502†	45162.9	43427.6	508.88 ug/L	508.88 ppb	20:55:09
3	Co 228.616†	24455.8	23481.8	510.00 ug/L	510.00 ppb	20:55:09
3	Cr 267.716†	45068.5	43044.0	508.43 ug/L	508.43 ppb	20:55:09
3	Cu 324.752†	171419.4	157785.1	503.68 ug/L	503.68 ppb	20:55:09
3	Mn 257.610†	454861.0	434990.0	510.38 ug/L	510.38 ppb	20:55:04
3	Mo 202.031†	7190.2	6863.1	509.92 ug/L	509.92 ppb	20:55:29
3	Ni 231.604†	20316.5	19371.9	509.64 ug/L	509.64 ppb	20:55:09
3	P 214.914†	4360.2	3945.7	2420.0 ug/L	2420.0 ppb	20:55:29
3	Pb 220.353†	4065.0	3955.6	508.32 ug/L	508.32 ppb	20:55:29
3	S 181.975 Axial†	768.8	689.4	1027.9 ug/L	1027.9 ppb	20:55:29
3	Sb 206.836†	1474.6	1378.7	522.34 ug/L	522.34 ppb	20:55:29
3	Se 196.026†	778.3	775.4	537.45 ug/L	537.45 ppb	20:55:29
3	Si 251.611†	80109.5	76235.1	2564.1 ug/L	2564.1 ppb	20:55:09
3	Sn 189.927†	2887.0	2757.3	510.78 ug/L	510.78 ppb	20:55:29
3	Ti 334.940†	313861.7	301816.3	517.61 ug/L	517.61 ppb	20:55:04
3	Tl 190.801†	1603.7	1579.0	508.65 ug/L	508.65 ppb	20:55:29
3	U 409.014†	15019.7	16417.9	522.61 ug/L	522.61 ppb	20:55:09
3	V 292.402†	72107.1	70428.3	514.88 ug/L	514.88 ppb	20:55:09
3	Zn 213.857†	54625.3	51427.2	508.46 ug/L	508.46 ppb	20:55:09
3	SiO2†	81154.3	77224.9	5522.5 ug/L	5522.5 ppb	20:55:45

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	851404.7	104.61	%	0.633				0.61%
Sc Radial	5007.3	105	%	0.5				0.52%
Y 371.029	706665.7	103.02	%	0.618				0.60%
Y RADIAL	5339.9	104.1	%	0.35				0.33%
Ag 328.068†	99135.9	490.30	ug/L	5.029	490.30	ppb	5.029	1.03%
QC value within limits for Ag 328.068 Recovery = 98.06%								
Al 396.153Radial†	6289.4	5020.9	ug/L	29.38	5020.9	ppb	29.38	0.59%
QC value within limits for Al 396.153Radial Recovery = 100.42%								
As 188.979†	1124.6	510.64	ug/L	4.297	510.64	ppb	4.297	0.84%
QC value within limits for As 188.979 Recovery = 102.13%								
B 249.677†	20731.6	502.27	ug/L	8.226	502.27	ppb	8.226	1.64%
QC value within limits for B 249.677 Recovery = 100.45%								
Ba 233.527†	61463.1	510.93	ug/L	8.495	510.93	ppb	8.495	1.66%
QC value within limits for Ba 233.527 Recovery = 102.19%								
Be 313.107†	1296817.6	516.24	ug/L	1.785	516.24	ppb	1.785	0.35%
QC value within limits for Be 313.107 Recovery = 103.25%								
Ca 317.933Radial†	3026.2	5096.0	ug/L	30.99	5096.0	ppb	30.99	0.61%

QC value within limits for Ca 317.933Radial Recovery = 101.92%

Cd 226.502†	43674.0	511.76 ug/L	8.720	511.76 ppb	8.720	1.70%
QC value within limits for Cd 226.502 Recovery = 102.35%						
Co 228.616†	23570.7	511.93 ug/L	9.081	511.93 ppb	9.081	1.77%
QC value within limits for Co 228.616 Recovery = 102.39%						
Cr 267.716†	43156.9	509.77 ug/L	7.594	509.77 ppb	7.594	1.49%
QC value within limits for Cr 267.716 Recovery = 101.95%						
Cu 324.752†	158427.8	505.73 ug/L	8.265	505.73 ppb	8.265	1.63%
QC value within limits for Cu 324.752 Recovery = 101.15%						
Fe 238.204 Radial†	556.2	5243.9 ug/L	42.96	5243.9 ppb	42.96	0.82%
QC value within limits for Fe 238.204 Radial Recovery = 104.88%						
K 766.490 Radial†	25606.7	5123.6 ug/L	8.60	5123.6 ppb	8.60	0.17%
QC value within limits for K 766.490 Radial Recovery = 102.47%						
Mg 279.077 IEC†	152.0	5335.4 ug/L	47.51	5335.4 ppb	47.51	0.89%
QC value within limits for Mg 279.077 IEC Recovery = 106.71%						
Mn 257.610†	436244.1	511.86 ug/L	1.534	511.86 ppb	1.534	0.30%
QC value within limits for Mn 257.610 Recovery = 102.37%						
Mo 202.031†	6883.4	511.43 ug/L	4.701	511.43 ppb	4.701	0.92%
QC value within limits for Mo 202.031 Recovery = 102.29%						
Na 589.592 Radial†	31587.9	10235 ug/L	35.9	10235 ppb	35.9	0.35%
QC value within limits for Na 589.592 Radial Recovery = 102.35%						
Ni 231.604†	19429.4	511.16 ug/L	7.776	511.16 ppb	7.776	1.52%
QC value within limits for Ni 231.604 Recovery = 102.23%						
P 214.914†	3963.1	2430.7 ug/L	28.57	2430.7 ppb	28.57	1.18%
QC value within limits for P 214.914 Recovery = 97.23%						
Pb 220.353†	3961.4	509.06 ug/L	5.552	509.06 ppb	5.552	1.09%
QC value within limits for Pb 220.353 Recovery = 101.81%						
S 181.975 Axial†	691.5	1031.1 ug/L	17.16	1031.1 ppb	17.16	1.66%
QC value within limits for S 181.975 Axial Recovery = 103.11%						
Sb 206.836†	1391.5	527.06 ug/L	7.861	527.06 ppb	7.861	1.49%
QC value within limits for Sb 206.836 Recovery = 105.41%						
Se 196.026†	778.8	539.84 ug/L	5.184	539.84 ppb	5.184	0.96%
QC value within limits for Se 196.026 Recovery = 107.97%						
Si 251.611†	76523.9	2573.8 ug/L	42.29	2573.8 ppb	42.29	1.64%
QC value within limits for Si 251.611 Recovery = 102.95%						
Sn 189.927†	2761.9	511.63 ug/L	6.682	511.63 ppb	6.682	1.31%
QC value within limits for Sn 189.927 Recovery = 102.33%						
Sr 421.552†	73300.1	522.44 ug/L	1.749	522.44 ppb	1.749	0.33%
QC value within limits for Sr 421.552 Recovery = 104.49%						
Ti 334.940†	302494.3	518.78 ug/L	1.180	518.78 ppb	1.180	0.23%
QC value within limits for Ti 334.940 Recovery = 103.76%						
Tl 190.801†	1589.3	511.94 ug/L	5.489	511.94 ppb	5.489	1.07%
QC value within limits for Tl 190.801 Recovery = 102.39%						
U 409.014†	16501.8	525.29 ug/L	9.155	525.29 ppb	9.155	1.74%
QC value within limits for U 409.014 Recovery = 105.06%						
V 292.402†	70705.5	516.90 ug/L	8.553	516.90 ppb	8.553	1.65%
QC value within limits for V 292.402 Recovery = 103.38%						
Zn 213.857†	51680.0	510.97 ug/L	8.059	510.97 ppb	8.059	1.58%
QC value within limits for Zn 213.857 Recovery = 102.19%						
SiO2†	77026.0	5508.2 ug/L	89.38	5508.2 ppb	89.38	1.62%
QC value within limits for SiO2 Recovery = 103.01%						

All analyte(s) passed QC.

Sequence No.: 52
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/14/2010 20:57:54
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5110.9	5110.9	107	%			20:59:46
1	Y RADIAL	5467.2	5467.2	106.6	%			20:59:46
1	Al 396.153Radial†	-6.4	-2.7	-2.1821	ug/L	-2.1821	ppb	20:59:46
1	Ca 317.933Radial†	14.6	-1.5	-2.5042	ug/L	-2.5042	ppb	21:00:06
1	Fe 238.204 Radial†	12.6	1.9	17.784	ug/L	17.784	ppb	21:00:06
1	K 766.490 Radial†	2848.3	-117.2	-23.501	ug/L	-23.501	ppb	20:59:46
1	Mg 279.077 IEC†	1.5	-0.1	-4.8809	ug/L	-4.8809	ppb	21:00:06
1	Na 589.592 Radial†	-1544.9	118.6	38.443	ug/L	38.443	ppb	20:59:46
1	Sr 421.552†	-16.5	-32.7	-0.2331	ug/L	-0.2331	ppb	20:59:46
1	Sc 361.383	852111.4	852111.4	104.70	%			21:01:03
1	Y 371.029	717851.2	717851.2	104.65	%			21:01:03
1	Ag 328.068†	481.2	178.0	0.8822	ug/L	0.8822	ppb	21:01:03
1	As 188.979†	-23.5	-3.6	-1.6013	ug/L	-1.6013	ppb	21:01:23
1	B 249.677†	-447.9	90.7	2.2047	ug/L	2.2047	ppb	21:01:23
1	Ba 233.527†	8.5	6.7	0.0586	ug/L	0.0586	ppb	21:01:23
1	Be 313.107†	-4380.5	128.3	0.0514	ug/L	0.0514	ppb	21:01:03
1	Cd 226.502†	-181.6	24.1	0.2821	ug/L	0.2821	ppb	21:01:23
1	Co 228.616†	-80.1	-3.9	-0.0845	ug/L	-0.0845	ppb	21:01:23
1	Cr 267.716†	72.5	-26.5	-0.3117	ug/L	-0.3117	ppb	21:01:23
1	Cu 324.752†	6398.9	-186.4	-0.5964	ug/L	-0.5964	ppb	21:01:03
1	Mn 257.610†	423.0	-0.3	0.0016	ug/L	0.0016	ppb	21:01:23
1	Mo 202.031†	18.6	-1.5	-0.1113	ug/L	-0.1113	ppb	21:01:23
1	Ni 231.604†	90.1	11.0	0.2889	ug/L	0.2889	ppb	21:01:23
1	P 214.914†	221.7	-16.1	-10.179	ug/L	-10.179	ppb	21:01:23
1	Pb 220.353†	-73.0	-5.2	-0.6643	ug/L	-0.6643	ppb	21:01:23
1	S 181.975 Axial†	37.9	-10.3	-15.300	ug/L	-15.300	ppb	21:01:23
1	Sb 206.836†	44.0	9.3	3.3862	ug/L	3.3862	ppb	21:01:23
1	Se 196.026†	-23.3	8.1	5.4933	ug/L	5.4933	ppb	21:01:23
1	Si 251.611†	453.9	-12.4	-0.4154	ug/L	-0.4154	ppb	21:01:23
1	Sn 189.927†	6.4	-0.0	-0.0034	ug/L	-0.0034	ppb	21:01:23
1	Ti 334.940†	-1337.9	109.1	0.1856	ug/L	0.1856	ppb	21:01:03
1	Tl 190.801†	-29.0	16.2	5.1755	ug/L	5.1755	ppb	21:01:23
1	U 409.014†	-2000.0	130.7	4.1727	ug/L	4.1727	ppb	21:01:03
1	V 292.402†	-1281.3	183.4	1.3266	ug/L	1.3266	ppb	21:01:03
1	Zn 213.857†	853.8	-44.8	-0.4498	ug/L	-0.4498	ppb	21:01:23
1	SiO2†	486.0	8.0	0.5779	ug/L	0.5779	ppb	21:02:19
2	Sc Radial	5058.5	5058.5	106	%			21:00:11
2	Y RADIAL	5443.7	5443.7	106.1	%			21:00:11
2	Al 396.153Radial†	-10.3	-6.6	-5.3000	ug/L	-5.3000	ppb	21:00:11
2	Ca 317.933Radial†	19.3	3.2	5.3166	ug/L	5.3166	ppb	21:00:31
2	Fe 238.204 Radial†	9.3	-1.1	-10.389	ug/L	-10.389	ppb	21:00:31
2	K 766.490 Radial†	2857.1	-81.2	-16.300	ug/L	-16.300	ppb	21:00:11
2	Mg 279.077 IEC†	1.3	-0.3	-9.6980	ug/L	-9.6980	ppb	21:00:31
2	Na 589.592 Radial†	-1439.1	203.9	66.059	ug/L	66.059	ppb	21:00:11
2	Sr 421.552†	-5.2	-22.1	-0.1579	ug/L	-0.1579	ppb	21:00:11
2	Sc 361.383	847762.9	847762.9	104.16	%			21:01:28
2	Y 371.029	715284.0	715284.0	104.27	%			21:01:28
2	Ag 328.068†	443.2	143.9	0.7025	ug/L	0.7025	ppb	21:01:28
2	As 188.979†	-23.3	-3.6	-1.6086	ug/L	-1.6086	ppb	21:01:48
2	B 249.677†	-443.4	92.9	2.2623	ug/L	2.2623	ppb	21:01:48
2	Ba 233.527†	-8.4	-9.6	-0.0775	ug/L	-0.0775	ppb	21:01:48
2	Be 313.107†	-4319.1	165.9	0.0663	ug/L	0.0663	ppb	21:01:28
2	Cd 226.502†	-205.4	0.3	0.0067	ug/L	0.0067	ppb	21:01:48
2	Co 228.616†	-72.2	3.3	0.0746	ug/L	0.0746	ppb	21:01:48
2	Cr 267.716†	96.1	-3.5	-0.0422	ug/L	-0.0422	ppb	21:01:48
2	Cu 324.752†	6428.7	-126.4	-0.4075	ug/L	-0.4075	ppb	21:01:28
2	Mn 257.610†	418.9	-2.1	-0.0031	ug/L	-0.0031	ppb	21:01:48
2	Mo 202.031†	33.0	12.4	0.9191	ug/L	0.9191	ppb	21:01:48
2	Ni 231.604†	97.8	18.8	0.4946	ug/L	0.4946	ppb	21:01:48

2	P 214.914†	207.4	-28.8	-18.290 ug/L	-18.290 ppb	21:01:48
2	Pb 220.353†	-52.2	14.5	1.8548 ug/L	1.8548 ppb	21:01:48
2	S 181.975 Axial†	37.9	-10.1	-15.044 ug/L	-15.044 ppb	21:01:48
2	Sb 206.836†	41.6	7.2	2.6671 ug/L	2.6671 ppb	21:01:48
2	Se 196.026†	-26.3	5.1	3.4066 ug/L	3.4066 ppb	21:01:48
2	Si 251.611†	461.2	-3.1	-0.1154 ug/L	-0.1154 ppb	21:01:48
2	Sn 189.927†	5.9	-0.4	-0.0819 ug/L	-0.0819 ppb	21:01:48
2	Ti 334.940†	-1337.4	103.1	0.1756 ug/L	0.1756 ppb	21:01:28
2	Tl 190.801†	-38.3	7.1	2.2675 ug/L	2.2675 ppb	21:01:48
2	U 409.014†	-1916.5	201.1	6.4225 ug/L	6.4225 ppb	21:01:28
2	V 292.402†	-1320.5	139.4	1.0321 ug/L	1.0321 ppb	21:01:28
2	Zn 213.857†	853.0	-41.4	-0.4147 ug/L	-0.4147 ppb	21:01:48
2	SiO2†	496.9	20.8	1.4693 ug/L	1.4693 ppb	21:02:24
3	Sc Radial	5074.9	5074.9	106 %		21:00:36
3	Y RADIAL	5443.4	5443.4	106.1 %		21:00:36
3	Al 396.153Radial†	-15.2	-11.1	-8.9224 ug/L	-8.9224 ppb	21:00:36
3	Ca 317.933Radial†	15.1	-0.9	-1.4533 ug/L	-1.4533 ppb	21:00:56
3	Fe 238.204 Radial†	13.0	2.4	22.804 ug/L	22.804 ppb	21:00:56
3	K 766.490 Radial†	2940.9	-10.9	-2.1914 ug/L	-2.1914 ppb	21:00:36
3	Mg 279.077 IEC†	3.6	1.9	67.462 ug/L	67.462 ppb	21:00:56
3	Na 589.592 Radial†	-1588.0	67.7	21.923 ug/L	21.923 ppb	21:00:36
3	Sr 421.552†	35.5	16.3	0.1161 ug/L	0.1161 ppb	21:00:36
3	Sc 361.383	858263.2	858263.2	105.46 %		21:01:53
3	Y 371.029	724020.8	724020.8	105.55 %		21:01:53
3	Ag 328.068†	409.8	107.0	0.5337 ug/L	0.5337 ppb	21:01:53
3	As 188.979†	-26.4	-6.2	-2.8006 ug/L	-2.8006 ppb	21:02:14
3	B 249.677†	-454.3	87.7	2.1307 ug/L	2.1307 ppb	21:02:14
3	Ba 233.527†	-2.2	-3.5	-0.0259 ug/L	-0.0259 ppb	21:02:14
3	Be 313.107†	-4313.7	221.7	0.0885 ug/L	0.0885 ppb	21:01:53
3	Cd 226.502†	-191.2	16.3	0.1899 ug/L	0.1899 ppb	21:02:14
3	Co 228.616†	-79.3	-2.5	-0.0526 ug/L	-0.0526 ppb	21:02:14
3	Cr 267.716†	91.5	-9.0	-0.1057 ug/L	-0.1057 ppb	21:02:14
3	Cu 324.752†	6362.3	-264.9	-0.8473 ug/L	-0.8473 ppb	21:01:53
3	Mn 257.610†	411.5	-14.1	-0.0170 ug/L	-0.0170 ppb	21:02:14
3	Mo 202.031†	34.2	13.1	0.9738 ug/L	0.9738 ppb	21:02:14
3	Ni 231.604†	98.0	17.8	0.4697 ug/L	0.4697 ppb	21:02:14
3	P 214.914†	211.8	-27.1	-17.110 ug/L	-17.110 ppb	21:02:14
3	Pb 220.353†	-73.6	-5.2	-0.6723 ug/L	-0.6723 ppb	21:02:14
3	S 181.975 Axial†	41.4	-7.2	-10.744 ug/L	-10.744 ppb	21:02:14
3	Sb 206.836†	34.8	0.3	0.1390 ug/L	0.1390 ppb	21:02:14
3	Se 196.026†	-17.0	14.2	9.5829 ug/L	9.5829 ppb	21:02:14
3	Si 251.611†	460.0	-9.7	-0.3374 ug/L	-0.3374 ppb	21:02:14
3	Sn 189.927†	11.2	4.5	0.8322 ug/L	0.8322 ppb	21:02:14
3	Ti 334.940†	-1344.5	112.1	0.1843 ug/L	0.1843 ppb	21:01:53
3	Tl 190.801†	-40.3	5.6	1.8050 ug/L	1.8050 ppb	21:02:14
3	U 409.014†	-1980.9	162.5	5.1883 ug/L	5.1883 ppb	21:01:53
3	V 292.402†	-1311.7	163.3	1.1997 ug/L	1.1997 ppb	21:01:53
3	Zn 213.857†	849.0	-55.3	-0.5554 ug/L	-0.5554 ppb	21:02:14
3	SiO2†	438.0	-40.8	-2.9542 ug/L	-2.9542 ppb	21:02:29

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	852712.5	104.77	%	0.648				0.62%
Sc Radial	5081.4	106	%	0.6				0.53%
Y 371.029	719052.0	104.82	%	0.655				0.62%
Y RADIAL	5451.4	106.3	%	0.27				0.25%
Ag 328.068†	143.0	0.7061	ug/L	0.17428	0.7061	ppb	0.17428	24.68%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-6.8	-5.4682	ug/L	3.37329	-5.4682	ppb	3.37329	61.69%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.5	-2.0035	ug/L	0.69031	-2.0035	ppb	0.69031	34.46%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	90.4	2.1992	ug/L	0.06597	2.1992	ppb	0.06597	3.00%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-2.1	-0.0149	ug/L	0.06869	-0.0149	ppb	0.06869	460.16%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	172.0	0.0687	ug/L	0.01866	0.0687	ppb	0.01866	27.16%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	0.3	0.4530	ug/L	4.24461	0.4530	ppb	4.24461	937.00%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	13.6	0.1596 ug/L	0.14020	0.1596 ppb	0.14020	87.87%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-1.0	-0.0208 ug/L	0.08421	-0.0208 ppb	0.08421	404.29%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-13.0	-0.1532 ug/L	0.14090	-0.1532 ppb	0.14090	91.98%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-192.6	-0.6171 ug/L	0.22066	-0.6171 ppb	0.22066	35.76%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	1.1	10.066 ug/L	17.8916	10.066 ppb	17.8916	177.74%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-69.8	-13.997 ug/L	10.8397	-13.997 ppb	10.8397	77.44%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.5	17.628 ug/L	43.2247	17.628 ppb	43.2247	245.21%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	-5.5	-0.0062 ug/L	0.00969	-0.0062 ppb	0.00969	156.62%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	8.0	0.5939 ug/L	0.61130	0.5939 ppb	0.61130	102.94%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	130.1	42.142 ug/L	22.2996	42.142 ppb	22.2996	52.92%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	15.9	0.4177 ug/L	0.11229	0.4177 ppb	0.11229	26.88%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-24.0	-15.193 ug/L	4.3821	-15.193 ppb	4.3821	28.84%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	1.4	0.1727 ug/L	1.45671	0.1727 ppb	1.45671	843.44%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-9.2	-13.696 ug/L	2.5594	-13.696 ppb	2.5594	18.69%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	5.6	2.0641 ug/L	1.70553	2.0641 ppb	1.70553	82.63%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	9.2	6.1610 ug/L	3.14181	6.1610 ppb	3.14181	51.00%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	-8.4	-0.2894 ug/L	0.15567	-0.2894 ppb	0.15567	53.79%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	1.3	0.2490 ug/L	0.50663	0.2490 ppb	0.50663	203.48%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-12.9	-0.0916 ug/L	0.18381	-0.0916 ppb	0.18381	200.61%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	108.1	0.1818 ug/L	0.00543	0.1818 ppb	0.00543	2.99%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	9.6	3.0827 ug/L	1.82713	3.0827 ppb	1.82713	59.27%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	164.8	5.2612 ug/L	1.12667	5.2612 ppb	1.12667	21.41%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	162.0	1.1861 ug/L	0.14771	1.1861 ppb	0.14771	12.45%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-47.2	-0.4733 ug/L	0.07325	-0.4733 ppb	0.07325	15.47%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	-4.0	-0.3023 ug/L	2.33945	-0.3023 ppb	2.33945	773.86%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 53
Sample ID: 1202014118|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 64
Date Collected: 1/14/2010 21:04:38
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202014118|941050|1

Rep1#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5075.2	5075.2	106	%			21:06:31
1	Y RADIAL	5459.8	5459.8	106.4	%			21:06:31
1	Al 396.153Radial†	42.1	43.0	34.475	ug/L	34.475	ppb	21:06:31
1	Ca 317.933Radial†	24.3	7.8	13.093	ug/L	13.093	ppb	21:06:51
1	Fe 238.204 Radial†	14.0	3.3	31.327	ug/L	31.327	ppb	21:06:51
1	K 766.490 Radial†	2794.8	-148.9	-29.870	ug/L	-29.870	ppb	21:06:31
1	Mg 279.077 IEC†	2.9	1.3	44.436	ug/L	44.436	ppb	21:06:51
1	Na 589.592 Radial†	-1430.5	216.4	70.128	ug/L	70.128	ppb	21:06:31
1	Sr 421.552†	40.4	20.9	0.1488	ug/L	0.1488	ppb	21:06:31
1	Sc 361.383	854683.9	854683.9	105.02	%			21:07:48
1	Y 371.029	720814.5	720814.5	105.08	%			21:07:48
1	Ag 328.068†	352.8	54.3	0.2756	ug/L	0.2756	ppb	21:07:48
1	As 188.979†	-19.1	0.6	0.2976	ug/L	0.2976	ppb	21:08:08
1	B 249.677†	-504.1	38.5	0.9332	ug/L	0.9332	ppb	21:08:08
1	Ba 233.527†	-5.0	-6.2	-0.0488	ug/L	-0.0488	ppb	21:08:08
1	Be 313.107†	-4391.6	130.4	0.0528	ug/L	0.0528	ppb	21:07:48
1	Cd 226.502†	-201.0	6.2	0.0706	ug/L	0.0706	ppb	21:08:08
1	Co 228.616†	-78.1	-1.7	-0.0379	ug/L	-0.0379	ppb	21:08:08
1	Cr 267.716†	128.6	26.7	0.3150	ug/L	0.3150	ppb	21:08:08
1	Cu 324.752†	6549.6	-61.2	-0.1970	ug/L	-0.1970	ppb	21:07:48
1	Mn 257.610†	938.9	489.7	0.5756	ug/L	0.5756	ppb	21:08:08
1	Mo 202.031†	21.3	1.0	0.0756	ug/L	0.0756	ppb	21:08:08
1	Ni 231.604†	81.2	2.2	0.0582	ug/L	0.0582	ppb	21:08:08
1	P 214.914†	208.9	-28.9	-18.455	ug/L	-18.455	ppb	21:08:08
1	Pb 220.353†	-54.5	12.7	1.6277	ug/L	1.6277	ppb	21:08:08
1	S 181.975 Axial†	52.8	3.8	5.7236	ug/L	5.7236	ppb	21:08:08
1	Sb 206.836†	27.2	-6.8	-2.5081	ug/L	-2.5081	ppb	21:08:08
1	Se 196.026†	-29.9	1.9	1.3884	ug/L	1.3884	ppb	21:08:08
1	Si 251.611†	691.2	212.3	7.1578	ug/L	7.1578	ppb	21:08:08
1	Sn 189.927†	3.3	-3.0	-0.5565	ug/L	-0.5565	ppb	21:08:08
1	Ti 334.940†	-1179.5	263.8	0.4481	ug/L	0.4481	ppb	21:07:48
1	Tl 190.801†	-46.8	-0.7	-0.2056	ug/L	-0.2056	ppb	21:08:08
1	U 409.014†	-1952.6	181.6	5.7968	ug/L	5.7968	ppb	21:07:48
1	V 292.402†	-1355.5	116.4	0.8475	ug/L	0.8475	ppb	21:07:48
1	Zn 213.857†	785.7	-112.2	-1.1218	ug/L	-1.1218	ppb	21:08:08
1	SiO2†	677.7	189.1	13.553	ug/L	13.553	ppb	21:09:04
2	Sc Radial	5084.4	5084.4	106	%			21:06:56
2	Y RADIAL	5449.7	5449.7	106.2	%			21:06:56
2	Al 396.153Radial†	64.0	63.5	50.952	ug/L	50.952	ppb	21:06:56
2	Ca 317.933Radial†	22.8	6.4	10.733	ug/L	10.733	ppb	21:07:16
2	Fe 238.204 Radial†	13.2	2.6	24.172	ug/L	24.172	ppb	21:07:16
2	K 766.490 Radial†	2836.9	-114.1	-22.882	ug/L	-22.882	ppb	21:06:56
2	Mg 279.077 IEC†	3.4	1.7	60.509	ug/L	60.509	ppb	21:07:16
2	Na 589.592 Radial†	-1472.4	179.4	58.127	ug/L	58.127	ppb	21:06:56
2	Sr 421.552†	25.6	6.9	0.0489	ug/L	0.0489	ppb	21:06:56
2	Sc 361.383	857305.8	857305.8	105.34	%			21:08:13
2	Y 371.029	723608.8	723608.8	105.49	%			21:08:13
2	Ag 328.068†	316.8	19.2	0.0970	ug/L	0.0970	ppb	21:08:13
2	As 188.979†	-25.3	-5.1	-2.2990	ug/L	-2.2990	ppb	21:08:33
2	B 249.677†	-494.0	49.5	1.2021	ug/L	1.2021	ppb	21:08:33
2	Ba 233.527†	-1.1	-2.6	-0.0180	ug/L	-0.0180	ppb	21:08:33
2	Be 313.107†	-4344.4	187.9	0.0760	ug/L	0.0760	ppb	21:08:13
2	Cd 226.502†	-200.7	7.1	0.0829	ug/L	0.0829	ppb	21:08:33
2	Co 228.616†	-88.4	-11.2	-0.2453	ug/L	-0.2453	ppb	21:08:33
2	Cr 267.716†	138.4	35.7	0.4182	ug/L	0.4182	ppb	21:08:33
2	Cu 324.752†	6574.9	-56.3	-0.1849	ug/L	-0.1849	ppb	21:08:13
2	Mn 257.610†	945.1	493.0	0.5780	ug/L	0.5780	ppb	21:08:33
2	Mo 202.031†	20.1	-0.2	-0.0155	ug/L	-0.0155	ppb	21:08:33
2	Ni 231.604†	102.7	22.4	0.5892	ug/L	0.5892	ppb	21:08:33

2	P 214.914†	223.7	-15.5	-9.8725 ug/L	-9.8725 ppb	21:08:33
2	Pb 220.353†	-59.7	7.9	1.0234 ug/L	1.0234 ppb	21:08:33
2	S 181.975 Axial†	49.4	0.5	0.6781 ug/L	0.6781 ppb	21:08:33
2	Sb 206.836†	38.7	4.0	1.4597 ug/L	1.4597 ppb	21:08:33
2	Se 196.026†	-30.0	1.9	1.3618 ug/L	1.3618 ppb	21:08:33
2	Si 251.611†	663.0	183.5	6.1870 ug/L	6.1870 ppb	21:08:33
2	Sn 189.927†	7.1	0.7	0.1246 ug/L	0.1246 ppb	21:08:33
2	Ti 334.940†	-1094.8	347.7	0.5877 ug/L	0.5877 ppb	21:08:13
2	Tl 190.801†	-42.1	4.0	1.2762 ug/L	1.2762 ppb	21:08:33
2	U 409.014†	-1764.0	366.4	11.697 ug/L	11.697 ppb	21:08:13
2	V 292.402†	-1317.6	156.3	1.1464 ug/L	1.1464 ppb	21:08:13
2	Zn 213.857†	779.4	-120.4	-1.2070 ug/L	-1.2070 ppb	21:08:33
2	SiO2†	677.0	186.4	13.366 ug/L	13.366 ppb	21:09:09
3	Sc Radial	5078.9	5078.9	106 %		21:07:21
3	Y RADIAL	5409.6	5409.6	105.5 %		21:07:21
3	Al 396.153Radial†	45.2	45.8	36.770 ug/L	36.770 ppb	21:07:21
3	Ca 317.933Radial†	28.7	12.0	20.132 ug/L	20.132 ppb	21:07:41
3	Fe 238.204 Radial†	14.2	3.5	33.055 ug/L	33.055 ppb	21:07:41
3	K 766.490 Radial†	2772.7	-171.7	-34.434 ug/L	-34.434 ppb	21:07:21
3	Mg 279.077 IEC†	-2.1	-3.4	-121.14 ug/L	-121.14 ppb	21:07:41
3	Na 589.592 Radial†	-1449.0	199.9	64.777 ug/L	64.777 ppb	21:07:21
3	Sr 421.552†	-7.5	-24.3	-0.1733 ug/L	-0.1733 ppb	21:07:21
3	Sc 361.383	843421.8	843421.8	103.63 %		21:08:38
3	Y 371.029	711890.5	711890.5	103.78 %		21:08:38
3	Ag 328.068†	317.0	24.4	0.1288 ug/L	0.1288 ppb	21:08:38
3	As 188.979†	-13.2	6.1	2.7702 ug/L	2.7702 ppb	21:08:58
3	B 249.677†	-517.4	19.2	0.4628 ug/L	0.4628 ppb	21:08:58
3	Ba 233.527†	12.0	10.1	0.0861 ug/L	0.0861 ppb	21:08:58
3	Be 313.107†	-4283.1	179.3	0.0725 ug/L	0.0725 ppb	21:08:38
3	Cd 226.502†	-184.3	19.7	0.2282 ug/L	0.2282 ppb	21:08:58
3	Co 228.616†	-70.2	4.9	0.1050 ug/L	0.1050 ppb	21:08:58
3	Cr 267.716†	151.6	50.5	0.5960 ug/L	0.5960 ppb	21:08:58
3	Cu 324.752†	6392.1	-129.9	-0.4152 ug/L	-0.4152 ppb	21:08:38
3	Mn 257.610†	957.3	519.5	0.6174 ug/L	0.6174 ppb	21:08:58
3	Mo 202.031†	21.9	1.8	0.1388 ug/L	0.1388 ppb	21:08:58
3	Ni 231.604†	97.4	18.9	0.4973 ug/L	0.4973 ppb	21:08:58
3	P 214.914†	228.5	-7.4	-4.6653 ug/L	-4.6653 ppb	21:08:58
3	Pb 220.353†	-57.9	8.7	1.1158 ug/L	1.1158 ppb	21:08:58
3	S 181.975 Axial†	45.1	-2.9	-4.3397 ug/L	-4.3397 ppb	21:08:58
3	Sb 206.836†	39.1	5.0	1.8541 ug/L	1.8541 ppb	21:08:58
3	Se 196.026†	-39.0	-7.2	-4.7177 ug/L	-4.7177 ppb	21:08:58
3	Si 251.611†	670.0	200.6	6.7631 ug/L	6.7631 ppb	21:08:58
3	Sn 189.927†	12.4	5.9	1.0862 ug/L	1.0862 ppb	21:08:58
3	Ti 334.940†	-1102.7	322.9	0.5647 ug/L	0.5647 ppb	21:08:38
3	Tl 190.801†	-39.0	6.3	2.0118 ug/L	2.0118 ppb	21:08:58
3	U 409.014†	-1989.3	121.4	3.8713 ug/L	3.8713 ppb	21:08:38
3	V 292.402†	-1390.8	65.1	0.4707 ug/L	0.4707 ppb	21:08:38
3	Zn 213.857†	767.6	-119.6	-1.1987 ug/L	-1.1987 ppb	21:08:58
3	SiO2†	706.4	225.4	16.159 ug/L	16.159 ppb	21:09:14

Mean Data: 1202014118|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	851803.8	104.66	%	0.906				0.87%
Sc Radial	5079.5	106	%	0.1				0.09%
Y 371.029	718771.3	104.78	%	0.892				0.85%
Y RADIAL	5439.7	106.0	%	0.52				0.49%
Ag 328.068†	32.6	0.1671	ug/L	0.09527	0.1671	ppb	0.09527	57.00%
Al 396.153Radial†	50.8	40.732	ug/L	8.9244	40.732	ppb	8.9244	21.91%
As 188.979†	0.5	0.2563	ug/L	2.53485	0.2563	ppb	2.53485	989.05%
B 249.677†	35.8	0.8660	ug/L	0.37421	0.8660	ppb	0.37421	43.21%
Ba 233.527†	0.4	0.0064	ug/L	0.07070	0.0064	ppb	0.07070	>999.9%
Be 313.107†	165.9	0.0671	ug/L	0.01249	0.0671	ppb	0.01249	18.61%
Ca 317.933Radial†	8.7	14.652	ug/L	4.8897	14.652	ppb	4.8897	33.37%
Cd 226.502†	11.0	0.1273	ug/L	0.08766	0.1273	ppb	0.08766	68.88%
Co 228.616†	-2.7	-0.0594	ug/L	0.17612	-0.0594	ppb	0.17612	296.53%
Cr 267.716†	37.6	0.4431	ug/L	0.14216	0.4431	ppb	0.14216	32.08%
Cu 324.752†	-82.5	-0.2657	ug/L	0.12962	-0.2657	ppb	0.12962	48.79%
Fe 238.204 Radial†	3.1	29.518	ug/L	4.7098	29.518	ppb	4.7098	15.96%
K 766.490 Radial†	-144.9	-29.062	ug/L	5.8183	-29.062	ppb	5.8183	20.02%

Mg 279.077 IEC†	-0.2	-5.3974 ug/L	100.55483	-5.3974 ppb	100.55483	>999.9%
Mn 257.610†	500.7	0.5903 ug/L	0.02347	0.5903 ppb	0.02347	3.98%
Mo 202.031†	0.9	0.0663 ug/L	0.07756	0.0663 ppb	0.07756	116.97%
Na 589.592 Radial†	198.6	64.344 ug/L	6.0121	64.344 ppb	6.0121	9.34%
Ni 231.604†	14.5	0.3816 ug/L	0.28382	0.3816 ppb	0.28382	74.38%
P 214.914†	-17.3	-10.998 ug/L	6.9632	-10.998 ppb	6.9632	63.32%
Pb 220.353†	9.8	1.2557 ug/L	0.32551	1.2557 ppb	0.32551	25.92%
S 181.975 Axial†	0.5	0.6873 ug/L	5.03166	0.6873 ppb	5.03166	732.05%
Sb 206.836†	0.7	0.2686 ug/L	2.41278	0.2686 ppb	2.41278	898.41%
Se 196.026†	-1.1	-0.6558 ug/L	3.51768	-0.6558 ppb	3.51768	536.37%
Si 251.611†	198.8	6.7026 ug/L	0.48820	6.7026 ppb	0.48820	7.28%
Sn 189.927†	1.2	0.2181 ug/L	0.82531	0.2181 ppb	0.82531	378.36%
Sr 421.552†	1.2	0.0081 ug/L	0.16487	0.0081 ppb	0.16487	>999.9%
Ti 334.940†	311.5	0.5335 ug/L	0.07487	0.5335 ppb	0.07487	14.03%
Tl 190.801†	3.2	1.0275 ug/L	1.12943	1.0275 ppb	1.12943	109.92%
U 409.014†	223.1	7.1216 ug/L	4.07742	7.1216 ppb	4.07742	57.25%
V 292.402†	112.6	0.8215 ug/L	0.33861	0.8215 ppb	0.33861	41.22%
Zn 213.857†	-117.4	-1.1758 ug/L	0.04697	-1.1758 ppb	0.04697	3.99%
SiO2†	200.3	14.359 ug/L	1.5609	14.359 ppb	1.5609	10.87%

Sequence No.: 54
Sample ID: 1202014119|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 65
Date Collected: 1/14/2010 21:11:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202014119|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5237.7	5237.7	109	%			21:13:38
1	Y RADIAL	6136.5	6136.5	119.6	%			21:13:38
1	Al 396.153Radial†	111383.4	101894.1	81721	ug/L	81721	ppb	21:13:18
1	Ca 317.933Radial†	61963.0	56667.1	95425	ug/L	95425	ppb	21:13:18
1	Fe 238.204 Radial†	21270.0	19447.4	182850	ug/L	182850	ppb	21:13:18
1	K 766.490 Radial†	226924.7	204797.6	40992	ug/L	40992	ppb	21:13:18
1	Mg 279.077 IEC†	1164.1	1063.3	37144	ug/L	37144	ppb	21:13:38
1	Na 589.592 Radial†	31448.4	30335.2	9828.8	ug/L	9828.8	ppb	21:13:18
1	Sr 421.552†	348530.5	318809.8	2271.7	ug/L	2271.7	ppb	21:13:18
1	Sc 361.383	869683.0	869683.0	106.86	%			21:14:39
1	Y 371.029	788130.7	788130.7	114.89	%			21:14:39
1	Ag 328.068†	57235.6	53280.6	324.81	ug/L	324.81	ppb	21:14:39
1	As 188.979†	2382.2	2248.1	1102.6	ug/L	1102.6	ppb	21:14:44
1	B 249.677†	63788.6	60213.1	1433.2	ug/L	1433.2	ppb	21:14:39
1	Ba 233.527†	243251.6	227638.0	1895.8	ug/L	1895.8	ppb	21:14:39
1	Be 313.107†	2057959.6	1930189.5	779.49	ug/L	779.49	ppb	21:14:39
1	Cd 226.502†	52809.9	49618.0	563.43	ug/L	563.43	ppb	21:14:44
1	Co 228.616†	44681.1	41886.1	896.18	ug/L	896.18	ppb	21:14:44
1	Cr 267.716†	204463.7	191245.2	2261.6	ug/L	2261.6	ppb	21:14:39
1	Cu 324.752†	610809.2	565308.7	1814.4	ug/L	1814.4	ppb	21:14:39
1	Mn 257.610†	4821515.9	4511660.7	5307.1	ug/L	5307.1	ppb	21:14:39
1	Mo 202.031†	7155.9	6677.3	510.99	ug/L	510.99	ppb	21:14:44
1	Ni 231.604†	51171.0	47811.7	1258.1	ug/L	1258.1	ppb	21:14:44
1	P 214.914†	14431.2	13277.1	7998.1	ug/L	7998.1	ppb	21:14:44
1	Pb 220.353†	6860.3	6484.6	832.58	ug/L	832.58	ppb	21:14:44
1	S 181.975 Axial†	2788.7	2563.3	3810.1	ug/L	3810.1	ppb	21:14:44
1	Sb 206.836†	5198.7	4832.3	1780.6	ug/L	1780.6	ppb	21:14:44
1	Se 196.026†	3823.6	3608.5	3017.8	ug/L	3017.8	ppb	21:14:44
1	Si 251.611†	373545.4	349124.9	11765	ug/L	11765	ppb	21:14:39
1	Sn 189.927†	6090.2	5693.2	1070.5	ug/L	1070.5	ppb	21:14:44
1	Ti 334.940†	3530695.0	3305477.7	5679.7	ug/L	5679.7	ppb	21:14:39
1	Tl 190.801†	3747.2	3550.6	1201.8	ug/L	1201.8	ppb	21:14:44
1	U 409.014†	-7494.6	-4972.6	-184.70	ug/L	-184.70	ppb	21:14:39
1	V 292.402†	181986.3	171713.3	1212.7	ug/L	1212.7	ppb	21:14:39
1	Zn 213.857†	612102.3	571956.5	5676.1	ug/L	5676.1	ppb	21:14:39
1	SiO2†	375228.5	350689.6	25128	ug/L	25128	ppb	21:15:18
2	Sc Radial	5256.8	5256.8	110	%			21:14:03
2	Y RADIAL	6138.8	6138.8	119.7	%			21:14:03
2	Al 396.153Radial†	111063.7	101231.9	81191	ug/L	81191	ppb	21:13:43
2	Ca 317.933Radial†	61688.1	56210.3	94655	ug/L	94655	ppb	21:13:43
2	Fe 238.204 Radial†	21127.4	19246.7	180960	ug/L	180960	ppb	21:13:43
2	K 766.490 Radial†	226183.1	203366.6	40705	ug/L	40705	ppb	21:13:43
2	Mg 279.077 IEC†	1159.9	1055.7	36878	ug/L	36878	ppb	21:14:03
2	Na 589.592 Radial†	31149.4	29957.9	9706.5	ug/L	9706.5	ppb	21:13:43
2	Sr 421.552†	346069.6	315407.0	2247.5	ug/L	2247.5	ppb	21:13:43
2	Sc 361.383	875856.4	875856.4	107.62	%			21:14:53
2	Y 371.029	794170.2	794170.2	115.77	%			21:14:53
2	Ag 328.068†	57429.8	53083.5	323.22	ug/L	323.22	ppb	21:14:53
2	As 188.979†	2354.8	2207.0	1083.6	ug/L	1083.6	ppb	21:14:58
2	B 249.677†	64308.4	60275.4	1435.1	ug/L	1435.1	ppb	21:14:53
2	Ba 233.527†	244426.2	227124.9	1891.5	ug/L	1891.5	ppb	21:14:53
2	Be 313.107†	2070607.7	1928368.0	778.75	ug/L	778.75	ppb	21:14:53
2	Cd 226.502†	52250.6	48750.0	553.44	ug/L	553.44	ppb	21:14:58
2	Co 228.616†	44226.9	41169.3	880.64	ug/L	880.64	ppb	21:14:58
2	Cr 267.716†	205355.1	190724.9	2255.4	ug/L	2255.4	ppb	21:14:53
2	Cu 324.752†	614546.7	564752.7	1812.5	ug/L	1812.5	ppb	21:14:53
2	Mn 257.610†	4843439.9	4500230.2	5293.5	ug/L	5293.5	ppb	21:14:53
2	Mo 202.031†	7057.1	6538.3	500.52	ug/L	500.52	ppb	21:14:58
2	Ni 231.604†	50591.0	46935.2	1235.0	ug/L	1235.0	ppb	21:14:58

2	P 214.914†	14318.3	13077.1	7871.9 ug/L	7871.9 ppb	21:14:58
2	Pb 220.353†	6819.5	6401.4	821.96 ug/L	821.96 ppb	21:14:58
2	S 181.975 Axial†	2755.6	2514.1	3736.8 ug/L	3736.8 ppb	21:14:58
2	Sb 206.836†	5167.9	4769.4	1757.0 ug/L	1757.0 ppb	21:14:58
2	Se 196.026†	3792.4	3554.4	2975.4 ug/L	2975.4 ppb	21:14:58
2	Si 251.611†	374507.8	347555.3	11712 ug/L	11712 ppb	21:14:53
2	Sn 189.927†	5981.5	5552.0	1044.2 ug/L	1044.2 ppb	21:14:58
2	Ti 334.940†	3550846.0	3300913.9	5671.8 ug/L	5671.8 ppb	21:14:53
2	Tl 190.801†	3763.7	3541.2	1198.8 ug/L	1198.8 ppb	21:14:58
2	U 409.014†	-7339.2	-4778.8	-178.28 ug/L	-178.28 ppb	21:14:53
2	V 292.402†	182650.7	171130.3	1208.6 ug/L	1208.6 ppb	21:14:53
2	Zn 213.857†	614248.5	569913.4	5656.1 ug/L	5656.1 ppb	21:14:53
2	SiO2†	370819.6	344117.8	24657 ug/L	24657 ppb	21:15:24
3	Sc Radial	5269.7	5269.7	110 %		21:14:28
3	Y RADIAL	6155.7	6155.7	120.0 %		21:14:28
3	Al 396.153Radial†	110456.9	100432.9	80549 ug/L	80549 ppb	21:14:08
3	Ca 317.933Radial†	61418.5	55827.8	94011 ug/L	94011 ppb	21:14:08
3	Fe 238.204 Radial†	21112.6	19186.1	180390 ug/L	180390 ppb	21:14:08
3	K 766.490 Radial†	224571.2	201397.3	40311 ug/L	40311 ppb	21:14:08
3	Mg 279.077 IEC†	1170.1	1062.4	37114 ug/L	37114 ppb	21:14:28
3	Na 589.592 Radial†	31026.6	29777.0	9647.9 ug/L	9647.9 ppb	21:14:08
3	Sr 421.552†	344074.0	312821.9	2229.1 ug/L	2229.1 ppb	21:14:08
3	Sc 361.383	865899.0	865899.0	106.39 %		21:15:07
3	Y 371.029	787149.4	787149.4	114.75 %		21:15:07
3	Ag 328.068†	57081.6	53369.9	324.46 ug/L	324.46 ppb	21:15:07
3	As 188.979†	2367.7	2244.3	1100.3 ug/L	1100.3 ppb	21:15:12
3	B 249.677†	63504.8	60207.2	1433.5 ug/L	1433.5 ppb	21:15:07
3	Ba 233.527†	241800.5	227268.8	1892.7 ug/L	1892.7 ppb	21:15:07
3	Be 313.107†	2052866.2	1933818.3	780.93 ug/L	780.93 ppb	21:15:07
3	Cd 226.502†	52539.7	49580.0	563.24 ug/L	563.24 ppb	21:15:12
3	Co 228.616†	44357.7	41764.9	893.58 ug/L	893.58 ppb	21:15:12
3	Cr 267.716†	203591.2	191261.3	2261.8 ug/L	2261.8 ppb	21:15:07
3	Cu 324.752†	607980.4	565147.8	1813.7 ug/L	1813.7 ppb	21:15:07
3	Mn 257.610†	4794095.5	4505605.9	5299.7 ug/L	5299.7 ppb	21:15:07
3	Mo 202.031†	7073.2	6628.8	507.18 ug/L	507.18 ppb	21:15:12
3	Ni 231.604†	50979.4	47840.8	1258.8 ug/L	1258.8 ppb	21:15:12
3	P 214.914†	14337.2	13247.8	7981.2 ug/L	7981.2 ppb	21:15:12
3	Pb 220.353†	6869.1	6520.9	837.18 ug/L	837.18 ppb	21:15:12
3	S 181.975 Axial†	2757.1	2544.9	3782.9 ug/L	3782.9 ppb	21:15:12
3	Sb 206.836†	5167.1	4823.8	1777.4 ug/L	1777.4 ppb	21:15:12
3	Se 196.026†	3791.7	3594.2	3000.1 ug/L	3000.1 ppb	21:15:12
3	Si 251.611†	370785.0	348058.0	11729 ug/L	11729 ppb	21:15:07
3	Sn 189.927†	6052.8	5683.0	1068.3 ug/L	1068.3 ppb	21:15:12
3	Ti 334.940†	3514493.0	3304688.2	5678.2 ug/L	5678.2 ppb	21:15:07
3	Tl 190.801†	3740.1	3559.3	1204.6 ug/L	1204.6 ppb	21:15:12
3	U 409.014†	-7356.4	-4873.4	-181.25 ug/L	-181.25 ppb	21:15:07
3	V 292.402†	181032.5	171561.1	1211.9 ug/L	1211.9 ppb	21:15:07
3	Zn 213.857†	608490.3	571064.8	5667.4 ug/L	5667.4 ppb	21:15:07
3	SiO2†	374388.0	351434.2	25182 ug/L	25182 ppb	21:15:29

Mean Data: 1202014119|941050|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	870479.5	106.96	%	0.618				0.58%
Sc Radial	5254.7	110	%	0.3				0.31%
Y 371.029	789816.8	115.14	%	0.554				0.48%
Y RADIAL	6143.7	119.8	%	0.20				0.17%
Ag 328.068†	53244.7	324.16	ug/L	0.837	324.16	ppb	0.837	0.26%
Al 396.153Radial†	101186.3	81154	ug/L	586.9	81154	ppb	586.9	0.72%
As 188.979†	2233.1	1095.5	ug/L	10.37	1095.5	ppb	10.37	0.95%
B 249.677†	60231.9	1433.9	ug/L	1.01	1433.9	ppb	1.01	0.07%
Ba 233.527†	227343.9	1893.4	ug/L	2.23	1893.4	ppb	2.23	0.12%
Be 313.107†	1930791.9	779.72	ug/L	1.108	779.72	ppb	1.108	0.14%
Ca 317.933Radial†	56235.1	94697	ug/L	707.6	94697	ppb	707.6	0.75%
Cd 226.502†	49316.0	560.03	ug/L	5.715	560.03	ppb	5.715	1.02%
Co 228.616†	41606.8	890.13	ug/L	8.326	890.13	ppb	8.326	0.94%
Cr 267.716†	191077.1	2259.6	ug/L	3.61	2259.6	ppb	3.61	0.16%
Cu 324.752†	565069.7	1813.5	ug/L	0.95	1813.5	ppb	0.95	0.05%
Fe 238.204 Radial†	19293.4	181400	ug/L	1285.8	181400	ppb	1285.8	0.71%
K 766.490 Radial†	203187.2	40669	ug/L	341.8	40669	ppb	341.8	0.84%

Mg 279.077 IEC†	1060.5	37045 ug/L	145.7	37045 ppb	145.7	0.39%
Mn 257.610†	4505832.3	5300.1 ug/L	6.80	5300.1 ppb	6.80	0.13%
Mo 202.031†	6614.8	506.23 ug/L	5.300	506.23 ppb	5.300	1.05%
Na 589.592 Radial†	30023.4	9727.7 ug/L	92.28	9727.7 ppb	92.28	0.95%
Ni 231.604†	47529.2	1250.6 ug/L	13.54	1250.6 ppb	13.54	1.08%
P 214.914†	13200.7	7950.4 ug/L	68.49	7950.4 ppb	68.49	0.86%
Pb 220.353†	6469.0	830.57 ug/L	7.807	830.57 ppb	7.807	0.94%
S 181.975 Axial†	2540.8	3776.6 ug/L	37.08	3776.6 ppb	37.08	0.98%
Sb 206.836†	4808.5	1771.6 ug/L	12.82	1771.6 ppb	12.82	0.72%
Se 196.026†	3585.7	2997.8 ug/L	21.33	2997.8 ppb	21.33	0.71%
Si 251.611†	348246.1	11736 ug/L	27.0	11736 ppb	27.0	0.23%
Sn 189.927†	5642.7	1061.0 ug/L	14.58	1061.0 ppb	14.58	1.37%
Sr 421.552†	315679.6	2249.4 ug/L	21.40	2249.4 ppb	21.40	0.95%
Ti 334.940†	3303693.3	5676.6 ug/L	4.19	5676.6 ppb	4.19	0.07%
Tl 190.801†	3550.4	1201.7 ug/L	2.89	1201.7 ppb	2.89	0.24%
U 409.014†	-4874.9	-181.41 ug/L	3.213	-181.41 ppb	3.213	1.77%
V 292.402†	171468.2	1211.1 ug/L	2.15	1211.1 ppb	2.15	0.18%
Zn 213.857†	570978.2	5666.5 ug/L	10.05	5666.5 ppb	10.05	0.18%
SiO2†	348747.2	24989 ug/L	288.5	24989 ppb	288.5	1.15%

Sequence No.: 61
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/14/2010 22:00:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5011.8	5011.8	105	%			22:01:58
1	Y RADIAL	5315.2	5315.2	103.6	%			22:01:58
1	Al 396.153Radial†	6549.5	6264.6	5001.2	ug/L	5001.2	ppb	22:01:58
1	Ca 317.933Radial†	3178.6	3023.6	5091.6	ug/L	5091.6	ppb	22:02:18
1	Fe 238.204 Radial†	604.2	567.7	5352.5	ug/L	5352.5	ppb	22:02:18
1	K 766.490 Radial†	29719.9	25625.0	5127.0	ug/L	5127.0	ppb	22:01:58
1	Mg 279.077 IEC†	159.6	151.0	5301.9	ug/L	5301.9	ppb	22:02:18
1	Na 589.592 Radial†	33642.6	33729.6	10929	ug/L	10929	ppb	22:01:58
1	Sr 421.552†	78402.9	74936.7	534.10	ug/L	534.10	ppb	22:01:58
1	Sc 361.383	846375.7	846375.7	103.99	%			22:03:16
1	Y 371.029	702990.8	702990.8	102.48	%			22:03:16
1	Ag 328.068†	104725.2	100421.0	496.65	ug/L	496.65	ppb	22:03:21
1	As 188.979†	1151.0	1125.7	511.06	ug/L	511.06	ppb	22:03:41
1	B 249.677†	21206.0	20910.0	506.58	ug/L	506.58	ppb	22:03:21
1	Ba 233.527†	64286.9	61816.1	513.86	ug/L	513.86	ppb	22:03:21
1	Be 313.107†	1361620.9	1313632.0	522.89	ug/L	522.89	ppb	22:03:16
1	Cd 226.502†	45490.7	43940.9	514.88	ug/L	514.88	ppb	22:03:21
1	Co 228.616†	24626.5	23753.2	515.91	ug/L	515.91	ppb	22:03:21
1	Cr 267.716†	45144.2	43314.4	511.63	ug/L	511.63	ppb	22:03:21
1	Cu 324.752†	172541.3	159615.7	509.53	ug/L	509.53	ppb	22:03:21
1	Mn 257.610†	459954.1	441882.6	518.48	ug/L	518.48	ppb	22:03:16
1	Mo 202.031†	7139.2	6845.7	508.64	ug/L	508.64	ppb	22:03:41
1	Ni 231.604†	20390.5	19532.2	513.86	ug/L	513.86	ppb	22:03:21
1	P 214.914†	4368.4	3972.8	2436.0	ug/L	2436.0	ppb	22:03:41
1	Pb 220.353†	4044.9	3954.1	508.10	ug/L	508.10	ppb	22:03:41
1	S 181.975 Axial†	765.1	689.3	1027.7	ug/L	1027.7	ppb	22:03:41
1	Sb 206.836†	1464.8	1375.8	521.25	ug/L	521.25	ppb	22:03:41
1	Se 196.026†	776.2	776.8	538.81	ug/L	538.81	ppb	22:03:41
1	Si 251.611†	80580.1	77039.1	2591.2	ug/L	2591.2	ppb	22:03:21
1	Sn 189.927†	2859.3	2743.4	508.21	ug/L	508.21	ppb	22:03:41
1	Ti 334.940†	306829.2	296430.6	508.37	ug/L	508.37	ppb	22:03:21
1	Tl 190.801†	1608.9	1591.0	512.42	ug/L	512.42	ppb	22:03:41
1	U 409.014†	15113.0	16573.4	527.56	ug/L	527.56	ppb	22:03:21
1	V 292.402†	72394.1	71020.5	519.13	ug/L	519.13	ppb	22:03:21
1	Zn 213.857†	54988.8	52016.3	514.29	ug/L	514.29	ppb	22:03:21
1	SiO2†	80593.9	77042.0	5509.5	ug/L	5509.5	ppb	22:04:48
2	Sc Radial	5493.1	5493.1	115	%			22:02:23
2	Y RADIAL	5856.8	5856.8	114.2	%			22:02:23
2	Al 396.153Radial†	6445.5	5625.3	4487.8	ug/L	4487.8	ppb	22:02:23
2	Ca 317.933Radial†	3188.7	2766.2	4658.1	ug/L	4658.1	ppb	22:02:43
2	Fe 238.204 Radial†	605.3	518.1	4885.3	ug/L	4885.3	ppb	22:02:43
2	K 766.490 Radial†	29684.4	23104.6	4622.6	ug/L	4622.6	ppb	22:02:23
2	Mg 279.077 IEC†	164.0	141.5	4968.6	ug/L	4968.6	ppb	22:02:43
2	Na 589.592 Radial†	33565.0	30843.8	9993.6	ug/L	9993.6	ppb	22:02:23
2	Sr 421.552†	77885.4	67917.9	484.08	ug/L	484.08	ppb	22:02:23
2	Sc 361.383	843201.9	843201.9	103.60	%			22:03:47
2	Y 371.029	698608.9	698608.9	101.84	%			22:03:47
2	Ag 328.068†	102571.9	98721.7	488.13	ug/L	488.13	ppb	22:03:52
2	As 188.979†	1168.2	1146.4	520.17	ug/L	520.17	ppb	22:04:12
2	B 249.677†	20632.1	20432.8	495.07	ug/L	495.07	ppb	22:03:52
2	Ba 233.527†	62777.9	60592.3	503.68	ug/L	503.68	ppb	22:03:52
2	Be 313.107†	1358816.2	1315853.4	523.75	ug/L	523.75	ppb	22:03:47
2	Cd 226.502†	44659.7	43303.5	507.45	ug/L	507.45	ppb	22:03:52
2	Co 228.616†	24104.8	23338.9	506.96	ug/L	506.96	ppb	22:03:52
2	Cr 267.716†	44332.2	42694.0	504.29	ug/L	504.29	ppb	22:03:52
2	Cu 324.752†	167623.5	155493.6	496.35	ug/L	496.35	ppb	22:03:52
2	Mn 257.610†	460454.0	444029.9	520.96	ug/L	520.96	ppb	22:03:47
2	Mo 202.031†	7241.7	6970.4	517.85	ug/L	517.85	ppb	22:04:12
2	Ni 231.604†	20029.5	19257.5	506.63	ug/L	506.63	ppb	22:03:52

2	P 214.914†	4406.4	4025.2	2472.4 ug/L	2472.4 ppb	22:04:12
2	Pb 220.353†	4109.7	4031.3	517.95 ug/L	517.95 ppb	22:04:12
2	S 181.975 Axial†	758.6	685.8	1022.6 ug/L	1022.6 ppb	22:04:12
2	Sb 206.836†	1494.1	1409.4	533.89 ug/L	533.89 ppb	22:04:12
2	Se 196.026†	786.0	789.1	545.48 ug/L	545.48 ppb	22:04:12
2	Si 251.611†	78596.1	75415.8	2536.4 ug/L	2536.4 ppb	22:03:52
2	Sn 189.927†	2908.7	2801.4	518.87 ug/L	518.87 ppb	22:04:12
2	Ti 334.940†	299385.5	290356.5	497.93 ug/L	497.93 ppb	22:03:52
2	Tl 190.801†	1648.1	1634.6	526.36 ug/L	526.36 ppb	22:04:12
2	U 409.014†	14645.4	16176.8	514.96 ug/L	514.96 ppb	22:03:52
2	V 292.402†	70792.4	69736.5	510.05 ug/L	510.05 ppb	22:03:52
2	Zn 213.857†	53713.9	50984.8	504.11 ug/L	504.11 ppb	22:03:52
2	SiO2†	80853.1	77583.9	5548.1 ug/L	5548.1 ppb	22:04:53
3	Sc Radial	4958.4	4958.4	103 %		22:02:49
3	Y RADIAL	5273.9	5273.9	102.8 %		22:02:49
3	Al 396.153Radial†	6455.2	6240.9	4981.9 ug/L	4981.9 ppb	22:02:49
3	Ca 317.933Radial†	3182.2	3059.8	5152.6 ug/L	5152.6 ppb	22:03:09
3	Fe 238.204 Radial†	612.9	582.4	5490.7 ug/L	5490.7 ppb	22:03:09
3	K 766.490 Radial†	29324.1	25548.5	5111.7 ug/L	5111.7 ppb	22:02:49
3	Mg 279.077 IEC†	161.4	154.4	5420.9 ug/L	5420.9 ppb	22:03:09
3	Na 589.592 Radial†	32990.5	33445.8	10837 ug/L	10837 ppb	22:02:49
3	Sr 421.552†	77290.7	74669.0	532.20 ug/L	532.20 ppb	22:02:49
3	Sc 361.383	843191.6	843191.6	103.60 %		22:04:18
3	Y 371.029	700291.7	700291.7	102.09 %		22:04:18
3	Ag 328.068†	104923.2	100992.4	499.53 ug/L	499.53 ppb	22:04:23
3	As 188.979†	1155.9	1134.5	515.12 ug/L	515.12 ppb	22:04:43
3	B 249.677†	21567.6	21336.0	516.91 ug/L	516.91 ppb	22:04:23
3	Ba 233.527†	64889.9	62631.6	520.65 ug/L	520.65 ppb	22:04:23
3	Be 313.107†	1340082.2	1297786.8	516.61 ug/L	516.61 ppb	22:04:18
3	Cd 226.502†	45984.0	44582.2	522.39 ug/L	522.39 ppb	22:04:23
3	Co 228.616†	24866.3	24074.1	522.88 ug/L	522.88 ppb	22:04:23
3	Cr 267.716†	45718.9	44033.1	520.12 ug/L	520.12 ppb	22:04:23
3	Cu 324.752†	173978.8	161629.8	515.96 ug/L	515.96 ppb	22:04:23
3	Mn 257.610†	453135.1	436970.9	512.73 ug/L	512.73 ppb	22:04:18
3	Mo 202.031†	7179.6	6910.6	513.46 ug/L	513.46 ppb	22:04:43
3	Ni 231.604†	20612.4	19820.4	521.44 ug/L	521.44 ppb	22:04:23
3	P 214.914†	4348.0	3968.9	2432.1 ug/L	2432.1 ppb	22:04:43
3	Pb 220.353†	4088.7	4011.1	515.39 ug/L	515.39 ppb	22:04:43
3	S 181.975 Axial†	758.2	685.4	1021.9 ug/L	1021.9 ppb	22:04:43
3	Sb 206.836†	1473.1	1389.1	526.29 ug/L	526.29 ppb	22:04:43
3	Se 196.026†	783.4	786.5	545.77 ug/L	545.77 ppb	22:04:43
3	Si 251.611†	81480.9	78201.1	2630.4 ug/L	2630.4 ppb	22:04:23
3	Sn 189.927†	2872.3	2766.2	512.45 ug/L	512.45 ppb	22:04:43
3	Ti 334.940†	309809.3	300421.3	515.21 ug/L	515.21 ppb	22:04:23
3	Tl 190.801†	1611.2	1599.1	514.97 ug/L	514.97 ppb	22:04:43
3	U 409.014†	15413.7	16918.6	538.55 ug/L	538.55 ppb	22:04:23
3	V 292.402†	73247.5	72107.1	527.03 ug/L	527.03 ppb	22:04:23
3	Zn 213.857†	55464.2	52674.9	520.79 ug/L	520.79 ppb	22:04:23
3	SiO2†	81247.1	77965.1	5575.5 ug/L	5575.5 ppb	22:04:59

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	844256.4	103.73	%	0.226				0.22%
Sc Radial	5154.4	108	%	6.1				5.71%
Y 371.029	700630.5	102.14	%	0.322				0.32%
Y RADIAL	5482.0	106.9	%	6.34				5.93%
Ag 328.068†	100045.0	494.77	ug/L	5.926	494.77	ppb	5.926	1.20%
QC value within limits for Ag 328.068 Recovery = 98.95%								
Al 396.153Radial†	6043.6	4823.7	ug/L	290.99	4823.7	ppb	290.99	6.03%
QC value within limits for Al 396.153Radial Recovery = 96.47%								
As 188.979†	1135.5	515.45	ug/L	4.566	515.45	ppb	4.566	0.89%
QC value within limits for As 188.979 Recovery = 103.09%								
B 249.677†	20892.9	506.19	ug/L	10.924	506.19	ppb	10.924	2.16%
QC value within limits for B 249.677 Recovery = 101.24%								
Ba 233.527†	61680.0	512.73	ug/L	8.540	512.73	ppb	8.540	1.67%
QC value within limits for Ba 233.527 Recovery = 102.55%								
Be 313.107†	1309090.7	521.08	ug/L	3.896	521.08	ppb	3.896	0.75%
QC value within limits for Be 313.107 Recovery = 104.22%								
Ca 317.933Radial†	2949.9	4967.4	ug/L	269.60	4967.4	ppb	269.60	5.43%

QC value within limits for Ca 317.933Radial Recovery = 99.35%

Cd 226.502†	43942.2	514.91 ug/L	7.469	514.91 ppb	7.469	1.45%
QC value within limits for Cd 226.502 Recovery = 102.98%						
Co 228.616†	23722.1	515.25 ug/L	7.977	515.25 ppb	7.977	1.55%
QC value within limits for Co 228.616 Recovery = 103.05%						
Cr 267.716†	43347.2	512.01 ug/L	7.919	512.01 ppb	7.919	1.55%
QC value within limits for Cr 267.716 Recovery = 102.40%						
Cu 324.752†	158913.0	507.28 ug/L	9.995	507.28 ppb	9.995	1.97%
QC value within limits for Cu 324.752 Recovery = 101.46%						
Fe 238.204 Radial†	556.1	5242.8 ug/L	317.28	5242.8 ppb	317.28	6.05%
QC value within limits for Fe 238.204 Radial Recovery = 104.86%						
K 766.490 Radial†	24759.4	4953.8 ug/L	286.93	4953.8 ppb	286.93	5.79%
QC value within limits for K 766.490 Radial Recovery = 99.08%						
Mg 279.077 IEC†	149.0	5230.5 ug/L	234.47	5230.5 ppb	234.47	4.48%
QC value within limits for Mg 279.077 IEC Recovery = 104.61%						
Mn 257.610†	440961.1	517.39 ug/L	4.225	517.39 ppb	4.225	0.82%
QC value within limits for Mn 257.610 Recovery = 103.48%						
Mo 202.031†	6908.9	513.32 ug/L	4.610	513.32 ppb	4.610	0.90%
QC value within limits for Mo 202.031 Recovery = 102.66%						
Na 589.592 Radial†	32673.1	10586 ug/L	515.3	10586 ppb	515.3	4.87%
QC value within limits for Na 589.592 Radial Recovery = 105.86%						
Ni 231.604†	19536.7	513.98 ug/L	7.405	513.98 ppb	7.405	1.44%
QC value within limits for Ni 231.604 Recovery = 102.80%						
P 214.914†	3988.9	2446.8 ug/L	22.22	2446.8 ppb	22.22	0.91%
QC value within limits for P 214.914 Recovery = 97.87%						
Pb 220.353†	3998.8	513.81 ug/L	5.113	513.81 ppb	5.113	1.00%
QC value within limits for Pb 220.353 Recovery = 102.76%						
S 181.975 Axial†	686.8	1024.1 ug/L	3.20	1024.1 ppb	3.20	0.31%
QC value within limits for S 181.975 Axial Recovery = 102.41%						
Sb 206.836†	1391.5	527.14 ug/L	6.359	527.14 ppb	6.359	1.21%
QC value within limits for Sb 206.836 Recovery = 105.43%						
Se 196.026†	784.1	543.35 ug/L	3.939	543.35 ppb	3.939	0.73%
QC value within limits for Se 196.026 Recovery = 108.67%						
Si 251.611†	76885.3	2586.0 ug/L	47.20	2586.0 ppb	47.20	1.83%
QC value within limits for Si 251.611 Recovery = 103.44%						
Sn 189.927†	2770.3	513.18 ug/L	5.363	513.18 ppb	5.363	1.05%
QC value within limits for Sn 189.927 Recovery = 102.64%						
Sr 421.552†	72507.9	516.79 ug/L	28.348	516.79 ppb	28.348	5.49%
QC value within limits for Sr 421.552 Recovery = 103.36%						
Ti 334.940†	295736.1	507.17 ug/L	8.702	507.17 ppb	8.702	1.72%
QC value within limits for Ti 334.940 Recovery = 101.43%						
Tl 190.801†	1608.2	517.92 ug/L	7.419	517.92 ppb	7.419	1.43%
QC value within limits for Tl 190.801 Recovery = 103.58%						
U 409.014†	16556.3	527.02 ug/L	11.802	527.02 ppb	11.802	2.24%
QC value within limits for U 409.014 Recovery = 105.40%						
V 292.402†	70954.7	518.74 ug/L	8.497	518.74 ppb	8.497	1.64%
QC value within limits for V 292.402 Recovery = 103.75%						
Zn 213.857†	51892.0	513.07 ug/L	8.405	513.07 ppb	8.405	1.64%
QC value within limits for Zn 213.857 Recovery = 102.61%						
SiO2†	77530.3	5544.3 ug/L	33.18	5544.3 ppb	33.18	0.60%
QC value within limits for SiO2 Recovery = 103.68%						

All analyte(s) passed QC.

Sequence No.: 62
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/14/2010 22:07:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4710.9	4710.9	98.3	%			22:09:00
1	Y RADIAL	5083.1	5083.1	99.10	%			22:09:00
1	Al 396.153Radial†	-26.7	-23.9	-19.246	ug/L	-19.246	ppb	22:09:00
1	Ca 317.933Radial†	16.8	1.9	3.2821	ug/L	3.2821	ppb	22:09:20
1	Fe 238.204 Radial†	9.5	-0.2	-1.9292	ug/L	-1.9292	ppb	22:09:20
1	K 766.490 Radial†	2963.1	226.3	45.326	ug/L	45.326	ppb	22:09:00
1	Mg 279.077 IEC†	-0.0	-1.5	-54.203	ug/L	-54.203	ppb	22:09:20
1	Na 589.592 Radial†	-1492.0	49.5	16.024	ug/L	16.024	ppb	22:09:00
1	Sr 421.552†	18.0	1.1	0.0079	ug/L	0.0079	ppb	22:09:00
1	Sc 361.383	845770.8	845770.8	103.92	%			22:10:17
1	Y 371.029	713609.8	713609.8	104.03	%			22:10:17
1	Ag 328.068†	417.2	119.9	0.5877	ug/L	0.5877	ppb	22:10:17
1	As 188.979†	-25.3	-5.5	-2.4641	ug/L	-2.4641	ppb	22:10:37
1	B 249.677†	-425.6	109.0	2.6533	ug/L	2.6533	ppb	22:10:37
1	Ba 233.527†	3.6	2.0	0.0173	ug/L	0.0173	ppb	22:10:37
1	Be 313.107†	-4298.6	175.8	0.0701	ug/L	0.0701	ppb	22:10:17
1	Cd 226.502†	-194.7	10.2	0.1211	ug/L	0.1211	ppb	22:10:37
1	Co 228.616†	-72.1	3.3	0.0756	ug/L	0.0756	ppb	22:10:37
1	Cr 267.716†	68.1	-30.2	-0.3571	ug/L	-0.3571	ppb	22:10:37
1	Cu 324.752†	6308.8	-227.3	-0.7275	ug/L	-0.7275	ppb	22:10:17
1	Mn 257.610†	408.6	-11.1	-0.0110	ug/L	-0.0110	ppb	22:10:37
1	Mo 202.031†	37.4	16.7	1.2402	ug/L	1.2402	ppb	22:10:37
1	Ni 231.604†	96.2	17.5	0.4602	ug/L	0.4602	ppb	22:10:37
1	P 214.914†	206.4	-29.3	-18.543	ug/L	-18.543	ppb	22:10:37
1	Pb 220.353†	-72.2	-4.9	-0.6323	ug/L	-0.6323	ppb	22:10:37
1	S 181.975 Axial†	41.9	-6.2	-9.1888	ug/L	-9.1888	ppb	22:10:37
1	Sb 206.836†	50.4	15.7	5.7695	ug/L	5.7695	ppb	22:10:37
1	Se 196.026†	-25.7	5.6	3.7482	ug/L	3.7482	ppb	22:10:37
1	Si 251.611†	493.0	28.5	0.9464	ug/L	0.9464	ppb	22:10:37
1	Sn 189.927†	4.4	-1.9	-0.3477	ug/L	-0.3477	ppb	22:10:37
1	Ti 334.940†	-1372.7	66.1	0.1170	ug/L	0.1170	ppb	22:10:17
1	Tl 190.801†	-37.8	7.6	2.4173	ug/L	2.4173	ppb	22:10:37
1	U 409.014†	-2013.0	103.9	3.3197	ug/L	3.3197	ppb	22:10:17
1	V 292.402†	-1383.9	75.5	0.5677	ug/L	0.5677	ppb	22:10:17
1	Zn 213.857†	854.5	-38.0	-0.3810	ug/L	-0.3810	ppb	22:10:37
1	SiO2†	513.1	37.5	2.6557	ug/L	2.6557	ppb	22:11:33
2	Sc Radial	4868.0	4868.0	102	%			22:09:25
2	Y RADIAL	5211.9	5211.9	101.6	%			22:09:25
2	Al 396.153Radial†	7.9	11.0	8.7877	ug/L	8.7877	ppb	22:09:25
2	Ca 317.933Radial†	17.1	1.6	2.7493	ug/L	2.7493	ppb	22:09:45
2	Fe 238.204 Radial†	12.5	2.4	22.855	ug/L	22.855	ppb	22:09:45
2	K 766.490 Radial†	2913.0	79.6	15.939	ug/L	15.939	ppb	22:09:25
2	Mg 279.077 IEC†	1.5	-0.0	-0.3618	ug/L	-0.3618	ppb	22:09:45
2	Na 589.592 Radial†	-1498.2	92.3	29.912	ug/L	29.912	ppb	22:09:25
2	Sr 421.552†	-16.8	-33.8	-0.2410	ug/L	-0.2410	ppb	22:09:25
2	Sc 361.383	853964.1	853964.1	104.93	%			22:10:42
2	Y 371.029	720217.9	720217.9	104.99	%			22:10:42
2	Ag 328.068†	439.2	137.0	0.6820	ug/L	0.6820	ppb	22:10:42
2	As 188.979†	-24.4	-4.4	-1.9732	ug/L	-1.9732	ppb	22:11:02
2	B 249.677†	-411.1	126.7	3.0810	ug/L	3.0810	ppb	22:11:02
2	Ba 233.527†	-17.2	-17.9	-0.1467	ug/L	-0.1467	ppb	22:11:02
2	Be 313.107†	-4336.9	179.0	0.0717	ug/L	0.0717	ppb	22:10:42
2	Cd 226.502†	-195.6	11.1	0.1282	ug/L	0.1282	ppb	22:11:02
2	Co 228.616†	-76.2	0.0	0.0005	ug/L	0.0005	ppb	22:11:02
2	Cr 267.716†	89.6	-10.3	-0.1210	ug/L	-0.1210	ppb	22:11:02
2	Cu 324.752†	6274.6	-318.1	-1.0144	ug/L	-1.0144	ppb	22:10:42
2	Mn 257.610†	434.6	9.9	0.0139	ug/L	0.0139	ppb	22:11:02
2	Mo 202.031†	25.7	5.2	0.3865	ug/L	0.3865	ppb	22:11:02
2	Ni 231.604†	88.4	9.1	0.2404	ug/L	0.2404	ppb	22:11:02

2	P 214.914†	214.4	-23.5	-14.825 ug/L	-14.825 ppb	22:11:02
2	Pb 220.353†	-66.7	1.0	0.1252 ug/L	0.1252 ppb	22:11:02
2	S 181.975 Axial†	40.8	-7.5	-11.243 ug/L	-11.243 ppb	22:11:02
2	Sb 206.836†	41.3	6.6	2.4158 ug/L	2.4158 ppb	22:11:02
2	Se 196.026†	-24.9	6.7	4.5472 ug/L	4.5472 ppb	22:11:02
2	Si 251.611†	460.9	-6.6	-0.2272 ug/L	-0.2272 ppb	22:11:02
2	Sn 189.927†	4.5	-1.8	-0.3326 ug/L	-0.3326 ppb	22:11:02
2	Ti 334.940†	-1290.8	156.8	0.2693 ug/L	0.2693 ppb	22:10:42
2	Tl 190.801†	-26.6	18.5	5.9203 ug/L	5.9203 ppb	22:11:02
2	U 409.014†	-2127.4	13.4	0.4258 ug/L	0.4258 ppb	22:10:42
2	V 292.402†	-1413.8	59.7	0.4333 ug/L	0.4333 ppb	22:10:42
2	Zn 213.857†	865.5	-35.5	-0.3563 ug/L	-0.3563 ppb	22:11:02
2	SiO2†	482.2	3.3	0.2282 ug/L	0.2282 ppb	22:11:38
3	Sc Radial	5012.4	5012.4	105 %		22:09:50
3	Y RADIAL	5403.8	5403.8	105.3 %		22:09:50
3	Al 396.153Radial†	-11.9	-8.1	-6.5114 ug/L	-6.5114 ppb	22:09:50
3	Ca 317.933Radial†	16.6	0.7	1.2170 ug/L	1.2170 ppb	22:10:10
3	Fe 238.204 Radial†	11.6	1.2	11.179 ug/L	11.179 ppb	22:10:10
3	K 766.490 Radial†	2845.2	-67.7	-13.580 ug/L	-13.580 ppb	22:09:50
3	Mg 279.077 IEC†	2.7	1.1	38.420 ug/L	38.420 ppb	22:10:10
3	Na 589.592 Radial†	-1553.5	81.9	26.551 ug/L	26.551 ppb	22:09:50
3	Sr 421.552†	28.6	10.2	0.0723 ug/L	0.0723 ppb	22:09:50
3	Sc 361.383	871233.0	871233.0	107.05 %		22:11:08
3	Y 371.029	735842.2	735842.2	107.27 %		22:11:08
3	Ag 328.068†	369.7	63.8	0.3153 ug/L	0.3153 ppb	22:11:08
3	As 188.979†	-25.1	-4.6	-2.0669 ug/L	-2.0669 ppb	22:11:28
3	B 249.677†	-383.3	160.5	3.9040 ug/L	3.9040 ppb	22:11:28
3	Ba 233.527†	-11.1	-11.9	-0.0959 ug/L	-0.0959 ppb	22:11:28
3	Be 313.107†	-4314.1	282.2	0.1126 ug/L	0.1126 ppb	22:11:08
3	Cd 226.502†	-188.0	22.0	0.2577 ug/L	0.2577 ppb	22:11:28
3	Co 228.616†	-77.7	0.1	0.0032 ug/L	0.0032 ppb	22:11:28
3	Cr 267.716†	89.9	-11.8	-0.1398 ug/L	-0.1398 ppb	22:11:28
3	Cu 324.752†	6280.2	-431.3	-1.3804 ug/L	-1.3804 ppb	22:11:08
3	Mn 257.610†	435.0	2.1	0.0020 ug/L	0.0020 ppb	22:11:28
3	Mo 202.031†	27.2	6.1	0.4551 ug/L	0.4551 ppb	22:11:28
3	Ni 231.604†	78.1	-2.2	-0.0582 ug/L	-0.0582 ppb	22:11:28
3	P 214.914†	219.7	-22.6	-14.187 ug/L	-14.187 ppb	22:11:28
3	Pb 220.353†	-66.6	2.4	0.3059 ug/L	0.3059 ppb	22:11:28
3	S 181.975 Axial†	42.8	-6.5	-9.6372 ug/L	-9.6372 ppb	22:11:28
3	Sb 206.836†	29.9	-4.8	-1.7366 ug/L	-1.7366 ppb	22:11:28
3	Se 196.026†	-30.5	1.9	1.2903 ug/L	1.2903 ppb	22:11:28
3	Si 251.611†	466.0	-10.6	-0.3623 ug/L	-0.3623 ppb	22:11:28
3	Sn 189.927†	4.2	-2.2	-0.4057 ug/L	-0.4057 ppb	22:11:28
3	Ti 334.940†	-1334.5	140.4	0.2348 ug/L	0.2348 ppb	22:11:08
3	Tl 190.801†	-41.1	5.5	1.7465 ug/L	1.7465 ppb	22:11:28
3	U 409.014†	-1945.0	224.0	7.1540 ug/L	7.1540 ppb	22:11:08
3	V 292.402†	-1354.2	142.1	1.0445 ug/L	1.0445 ppb	22:11:08
3	Zn 213.857†	853.6	-63.0	-0.6268 ug/L	-0.6268 ppb	22:11:28
3	SiO2†	470.8	-16.4	-1.1862 ug/L	-1.1862 ppb	22:11:43

Mean Data: CCB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	856989.3	105.30	%	1.597				1.52%
Sc Radial	4863.8	102	%	3.1				3.10%
Y 371.029	723223.3	105.43	%	1.664				1.58%
Y RADIAL	5232.9	102.0	%	3.15				3.08%
Ag 328.068†	106.9	0.5283	ug/L	0.19045	0.5283	ppb	0.19045	36.05%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-7.0	-5.6566	ug/L	14.03647	-5.6566	ppb	14.03647	248.14%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-4.8	-2.1681	ug/L	0.26059	-2.1681	ppb	0.26059	12.02%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	132.1	3.2128	ug/L	0.63566	3.2128	ppb	0.63566	19.79%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-9.3	-0.0751	ug/L	0.08398	-0.0751	ppb	0.08398	111.83%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	212.3	0.0848	ug/L	0.02412	0.0848	ppb	0.02412	28.44%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.4	2.4161	ug/L	1.07209	2.4161	ppb	1.07209	44.37%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	14.4	0.1690 ug/L	0.07693	0.1690 ppb	0.07693	45.52%
QC value within limits for Cd 226.502 Recovery = Not calculated							
Co 228.616†	1.2	0.0264 ug/L	0.04261	0.0264 ppb	0.04261	161.33%
QC value within limits for Co 228.616 Recovery = Not calculated							
Cr 267.716†	-17.4	-0.2060 ug/L	0.13123	-0.2060 ppb	0.13123	63.71%
QC value within limits for Cr 267.716 Recovery = Not calculated							
Cu 324.752†	-325.6	-1.0407 ug/L	0.32724	-1.0407 ppb	0.32724	31.44%
QC value within limits for Cu 324.752 Recovery = Not calculated							
Fe 238.204 Radial†	1.1	10.702 ug/L	12.3989	10.702 ppb	12.3989	115.86%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated							
K 766.490 Radial†	79.4	15.895 ug/L	29.4530	15.895 ppb	29.4530	185.30%
QC value within limits for K 766.490 Radial Recovery = Not calculated							
Mg 279.077 IEC†	-0.2	-5.3815 ug/L	46.51529	-5.3815 ppb	46.51529	864.36%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated							
Mn 257.610†	0.3	0.0016 ug/L	0.01245	0.0016 ppb	0.01245	769.55%
QC value within limits for Mn 257.610 Recovery = Not calculated							
Mo 202.031†	9.3	0.6940 ug/L	0.47430	0.6940 ppb	0.47430	68.35%
QC value within limits for Mo 202.031 Recovery = Not calculated							
Na 589.592 Radial†	74.6	24.163 ug/L	7.2455	24.163 ppb	7.2455	29.99%
QC value within limits for Na 589.592 Radial Recovery = Not calculated							
Ni 231.604†	8.1	0.2142 ug/L	0.26022	0.2142 ppb	0.26022	121.51%
QC value within limits for Ni 231.604 Recovery = Not calculated							
P 214.914†	-25.1	-15.851 ug/L	2.3527	-15.851 ppb	2.3527	14.84%
QC value within limits for P 214.914 Recovery = Not calculated							
Pb 220.353†	-0.5	-0.0671 ug/L	0.49781	-0.0671 ppb	0.49781	742.29%
QC value within limits for Pb 220.353 Recovery = Not calculated							
S 181.975 Axial†	-6.7	-10.023 ug/L	1.0801	-10.023 ppb	1.0801	10.78%
QC value within limits for S 181.975 Axial Recovery = Not calculated							
Sb 206.836†	5.9	2.1496 ug/L	3.76012	2.1496 ppb	3.76012	174.92%
QC value within limits for Sb 206.836 Recovery = Not calculated							
Se 196.026†	4.7	3.1953 ug/L	1.69741	3.1953 ppb	1.69741	53.12%
QC value within limits for Se 196.026 Recovery = Not calculated							
Si 251.611†	3.8	0.1190 ug/L	0.71978	0.1190 ppb	0.71978	604.99%
QC value within limits for Si 251.611 Recovery = Not calculated							
Sn 189.927†	-2.0	-0.3620 ug/L	0.03857	-0.3620 ppb	0.03857	10.66%
QC value within limits for Sn 189.927 Recovery = Not calculated							
Sr 421.552†	-7.5	-0.0536 ug/L	0.16545	-0.0536 ppb	0.16545	308.80%
QC value within limits for Sr 421.552 Recovery = Not calculated							
Ti 334.940†	121.1	0.2071 ug/L	0.07986	0.2071 ppb	0.07986	38.57%
QC value within limits for Ti 334.940 Recovery = Not calculated							
Tl 190.801†	10.5	3.3614 ug/L	2.24131	3.3614 ppb	2.24131	66.68%
QC value within limits for Tl 190.801 Recovery = Not calculated							
U 409.014†	113.8	3.6332 ug/L	3.37502	3.6332 ppb	3.37502	92.90%
QC value within limits for U 409.014 Recovery = Not calculated							
V 292.402†	92.4	0.6818 ug/L	0.32115	0.6818 ppb	0.32115	47.10%
QC value within limits for V 292.402 Recovery = Not calculated							
Zn 213.857†	-45.5	-0.4547 ug/L	0.14956	-0.4547 ppb	0.14956	32.90%
QC value within limits for Zn 213.857 Recovery = Not calculated							
SiO2†	8.2	0.5659 ug/L	1.94307	0.5659 ppb	1.94307	343.37%
QC value within limits for SiO2 Recovery = Not calculated							

All analyte(s) passed QC.

Sequence No.: 64
Sample ID: 243492001|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 73
Date Collected: 1/14/2010 22:20:57
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492001|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5191.1	5191.1	108	%			22:23:11
1	Y RADIAL	6098.2	6098.2	118.9	%			22:23:11
1	Al 396.153Radial†	102529.2	94636.9	75924	ug/L	75924	ppb	22:22:51
1	Ca 317.933Radial†	9989.7	9205.3	15501	ug/L	15501	ppb	22:22:51
1	Fe 238.204 Radial†	13693.1	12628.7	118720	ug/L	118720	ppb	22:22:51
1	K 766.490 Radial†	86895.0	77415.9	15503	ug/L	15503	ppb	22:22:51
1	Mg 279.077 IEC†	484.8	446.0	15533	ug/L	15533	ppb	22:23:11
1	Na 589.592 Radial†	2237.9	3632.5	1177.0	ug/L	1177.0	ppb	22:22:51
1	Sr 421.552†	30440.2	28078.9	200.03	ug/L	200.03	ppb	22:22:51
1	Sc 361.383	869165.0	869165.0	106.79	%			22:24:09
1	Y 371.029	796232.9	796232.9	116.08	%			22:24:09
1	Ag 328.068†	-7705.0	-7496.4	2.6669	ug/L	2.6669	ppb	22:24:09
1	As 188.979†	-65.7	-42.7	48.087	ug/L	48.087	ppb	22:24:29
1	B 249.677†	1015.7	1469.6	16.306	ug/L	16.306	ppb	22:24:09
1	Ba 233.527†	156669.1	146699.8	1220.6	ug/L	1220.6	ppb	22:24:09
1	Be 313.107†	-11201.5	-6176.6	7.8892	ug/L	7.8892	ppb	22:24:09
1	Cd 226.502†	951.5	1088.6	0.5091	ug/L	0.5091	ppb	22:24:29
1	Co 228.616†	3089.9	2966.0	53.687	ug/L	53.687	ppb	22:24:29
1	Cr 267.716†	8399.5	7769.4	94.426	ug/L	94.426	ppb	22:24:29
1	Cu 324.752†	24948.4	17063.0	60.841	ug/L	60.841	ppb	22:24:09
1	Mn 257.610†	3260517.1	3052667.3	3590.8	ug/L	3590.8	ppb	22:24:09
1	Mo 202.031†	-50.8	-66.8	4.4390	ug/L	4.4390	ppb	22:24:29
1	Ni 231.604†	2905.4	2645.5	69.601	ug/L	69.601	ppb	22:24:29
1	P 214.914†	1557.0	1230.1	697.36	ug/L	697.36	ppb	22:24:29
1	Pb 220.353†	947.2	951.5	127.00	ug/L	127.00	ppb	22:24:29
1	S 181.975 Axial†	604.0	519.1	760.51	ug/L	760.51	ppb	22:24:29
1	Sb 206.836†	73.1	35.8	-0.5891	ug/L	-0.5891	ppb	22:24:29
1	Se 196.026†	-579.6	-512.4	50.078	ug/L	50.078	ppb	22:24:29
1	Si 251.611†	315955.6	295407.5	9960.2	ug/L	9960.2	ppb	22:24:09
1	Sn 189.927†	-98.7	-98.5	-13.871	ug/L	-13.871	ppb	22:24:29
1	Ti 334.940†	2834411.4	2655463.3	4556.4	ug/L	4556.4	ppb	22:24:09
1	Tl 190.801†	-215.1	-157.6	3.6991	ug/L	3.6991	ppb	22:24:29
1	U 409.014†	-7446.5	-4931.8	-171.25	ug/L	-171.25	ppb	22:24:09
1	V 292.402†	39885.3	38754.8	257.36	ug/L	257.36	ppb	22:24:09
1	Zn 213.857†	25568.6	23081.5	218.17	ug/L	218.17	ppb	22:24:29
1	SiO2†	317138.0	296504.4	21257	ug/L	21257	ppb	22:25:29
2	Sc Radial	5234.4	5234.4	109	%			22:23:36
2	Y RADIAL	6165.8	6165.8	120.2	%			22:23:36
2	Al 396.153Radial†	104958.0	96075.8	77078	ug/L	77078	ppb	22:23:16
2	Ca 317.933Radial†	10251.1	9368.1	15775	ug/L	15775	ppb	22:23:16
2	Fe 238.204 Radial†	13964.9	12772.8	120080	ug/L	120080	ppb	22:23:16
2	K 766.490 Radial†	88600.9	78312.8	15682	ug/L	15682	ppb	22:23:16
2	Mg 279.077 IEC†	489.2	446.3	15541	ug/L	15541	ppb	22:23:36
2	Na 589.592 Radial†	2271.8	3646.4	1181.5	ug/L	1181.5	ppb	22:23:16
2	Sr 421.552†	31014.2	28371.4	202.11	ug/L	202.11	ppb	22:23:16
2	Sc 361.383	868369.3	868369.3	106.70	%			22:24:36
2	Y 371.029	796414.6	796414.6	116.10	%			22:24:36
2	Ag 328.068†	-7720.6	-7517.6	2.9947	ug/L	2.9947	ppb	22:24:36
2	As 188.979†	-71.9	-48.6	45.705	ug/L	45.705	ppb	22:24:56
2	B 249.677†	967.2	1425.1	15.001	ug/L	15.001	ppb	22:24:36
2	Ba 233.527†	156223.0	146416.1	1218.3	ug/L	1218.3	ppb	22:24:36
2	Be 313.107†	-11256.3	-6237.6	7.8533	ug/L	7.8533	ppb	22:24:36
2	Cd 226.502†	973.4	1109.8	0.6183	ug/L	0.6183	ppb	22:24:56
2	Co 228.616†	3084.7	2963.8	53.631	ug/L	53.631	ppb	22:24:56
2	Cr 267.716†	8418.5	7794.3	94.746	ug/L	94.746	ppb	22:24:56
2	Cu 324.752†	24844.6	16987.2	60.671	ug/L	60.671	ppb	22:24:36
2	Mn 257.610†	3251735.2	3047234.1	3584.5	ug/L	3584.5	ppb	22:24:36
2	Mo 202.031†	-43.9	-60.4	5.0242	ug/L	5.0242	ppb	22:24:56
2	Ni 231.604†	2894.6	2637.8	69.398	ug/L	69.398	ppb	22:24:56

2	P 214.914†	1572.5	1245.9	706.72 ug/L	706.72 ppb	22:24:56
2	Pb 220.353†	954.5	959.2	128.10 ug/L	128.10 ppb	22:24:56
2	S 181.975 Axial†	593.8	510.1	746.81 ug/L	746.81 ppb	22:24:56
2	Sb 206.836†	69.7	32.6	-1.6867 ug/L	-1.6867 ppb	22:24:56
2	Se 196.026†	-582.4	-515.4	52.509 ug/L	52.509 ppb	22:24:56
2	Si 251.611†	314652.0	294456.8	9928.2 ug/L	9928.2 ppb	22:24:36
2	Sn 189.927†	-86.4	-87.1	-11.696 ug/L	-11.696 ppb	22:24:56
2	Ti 334.940†	2828621.0	2652468.2	4551.3 ug/L	4551.3 ppb	22:24:36
2	Tl 190.801†	-213.5	-156.2	4.0495 ug/L	4.0495 ppb	22:24:56
2	U 409.014†	-7451.5	-4942.8	-171.76 ug/L	-171.76 ppb	22:24:36
2	V 292.402†	39732.9	38646.2	256.39 ug/L	256.39 ppb	22:24:36
2	Zn 213.857†	25608.8	23141.2	218.63 ug/L	218.63 ppb	22:24:56
2	SiO2†	311712.8	291691.8	20912 ug/L	20912 ppb	22:25:34
3	Sc Radial	5163.9	5163.9	108 %		22:24:01
3	Y RADIAL	6074.8	6074.8	118.4 %		22:24:01
3	Al 396.153Radial†	103649.9	96174.3	77157 ug/L	77157 ppb	22:23:41
3	Ca 317.933Radial†	10083.1	9340.5	15729 ug/L	15729 ppb	22:23:41
3	Fe 238.204 Radial†	13769.8	12766.3	120010 ug/L	120010 ppb	22:23:41
3	K 766.490 Radial†	87286.5	78201.0	15660 ug/L	15660 ppb	22:23:41
3	Mg 279.077 IEC†	488.4	451.6	15730 ug/L	15730 ppb	22:24:01
3	Na 589.592 Radial†	2179.5	3589.1	1162.9 ug/L	1162.9 ppb	22:23:41
3	Sr 421.552†	30596.0	28371.2	202.11 ug/L	202.11 ppb	22:23:41
3	Sc 361.383	864537.0	864537.0	106.23 %		22:25:03
3	Y 371.029	794769.2	794769.2	115.86 %		22:25:03
3	Ag 328.068†	-7679.5	-7511.0	3.0061 ug/L	3.0061 ppb	22:25:03
3	As 188.979†	-77.6	-54.2	43.042 ug/L	43.042 ppb	22:25:23
3	B 249.677†	897.2	1363.2	13.502 ug/L	13.502 ppb	22:25:03
3	Ba 233.527†	155058.0	145968.4	1214.6 ug/L	1214.6 ppb	22:25:03
3	Be 313.107†	-11491.2	-6505.4	7.7240 ug/L	7.7240 ppb	22:25:03
3	Cd 226.502†	973.5	1114.0	0.6742 ug/L	0.6742 ppb	22:25:23
3	Co 228.616†	3107.5	2998.1	54.395 ug/L	54.395 ppb	22:25:23
3	Cr 267.716†	8450.1	7859.1	95.507 ug/L	95.507 ppb	22:25:23
3	Cu 324.752†	24834.8	17081.2	60.967 ug/L	60.967 ppb	22:25:03
3	Mn 257.610†	3227837.0	3038246.3	3574.0 ug/L	3574.0 ppb	22:25:03
3	Mo 202.031†	-42.7	-59.5	5.0834 ug/L	5.0834 ppb	22:25:23
3	Ni 231.604†	2916.5	2670.5	70.259 ug/L	70.259 ppb	22:25:23
3	P 214.914†	1571.5	1251.5	710.29 ug/L	710.29 ppb	22:25:23
3	Pb 220.353†	976.6	984.0	131.30 ug/L	131.30 ppb	22:25:23
3	S 181.975 Axial†	610.3	528.1	773.70 ug/L	773.70 ppb	22:25:23
3	Sb 206.836†	74.8	37.7	0.1326 ug/L	0.1326 ppb	22:25:23
3	Se 196.026†	-580.7	-516.3	51.737 ug/L	51.737 ppb	22:25:23
3	Si 251.611†	312660.5	293889.3	9909.0 ug/L	9909.0 ppb	22:25:03
3	Sn 189.927†	-114.3	-113.7	-16.625 ug/L	-16.625 ppb	22:25:23
3	Ti 334.940†	2809866.6	2646564.8	4541.2 ug/L	4541.2 ppb	22:25:03
3	Tl 190.801†	-226.2	-169.0	-0.1732 ug/L	-0.1732 ppb	22:25:23
3	U 409.014†	-7383.3	-4909.6	-170.69 ug/L	-170.69 ppb	22:25:03
3	V 292.402†	39516.2	38607.2	256.13 ug/L	256.13 ppb	22:25:03
3	Zn 213.857†	25713.4	23346.0	220.67 ug/L	220.67 ppb	22:25:23
3	SiO2†	314735.7	295832.5	21209 ug/L	21209 ppb	22:25:39

Mean Data: 243492001|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	867357.1	106.57	%	0.304				0.29%
Sc Radial	5196.5	108	%	0.7				0.68%
Y 371.029	795805.5	116.01	%	0.132				0.11%
Y RADIAL	6113.0	119.2	%	0.92				0.77%
Ag 328.068†	-7508.3	2.8892	ug/L	0.19263	2.8892	ppb	0.19263	6.67%
Al 396.153Radial†	95629.0	76720	ug/L	690.4	76720	ppb	690.4	0.90%
As 188.979†	-48.5	45.612	ug/L	2.5238	45.612	ppb	2.5238	5.53%
B 249.677†	1419.3	14.936	ug/L	1.4026	14.936	ppb	1.4026	9.39%
Ba 233.527†	146361.5	1217.9	ug/L	3.04	1217.9	ppb	3.04	0.25%
Be 313.107†	-6306.5	7.8222	ug/L	0.08693	7.8222	ppb	0.08693	1.11%
Ca 317.933Radial†	9304.6	15668	ug/L	146.7	15668	ppb	146.7	0.94%
Cd 226.502†	1104.1	0.6005	ug/L	0.08400	0.6005	ppb	0.08400	13.99%
Co 228.616†	2975.9	53.905	ug/L	0.4259	53.905	ppb	0.4259	0.79%
Cr 267.716†	7807.6	94.893	ug/L	0.5555	94.893	ppb	0.5555	0.59%
Cu 324.752†	17043.8	60.826	ug/L	0.1487	60.826	ppb	0.1487	0.24%
Fe 238.204 Radial†	12722.6	119600	ug/L	765.1	119600	ppb	765.1	0.64%
K 766.490 Radial†	77976.6	15615	ug/L	97.9	15615	ppb	97.9	0.63%

Mg 279.077 IEC†	448.0	15601 ug/L	111.2	15601 ppb	111.2	0.71%
Mn 257.610†	3046049.2	3583.1 ug/L	8.49	3583.1 ppb	8.49	0.24%
Mo 202.031†	-62.3	4.8489 ug/L	0.35621	4.8489 ppb	0.35621	7.35%
Na 589.592 Radial†	3622.7	1173.8 ug/L	9.68	1173.8 ppb	9.68	0.82%
Ni 231.604†	2651.2	69.752 ug/L	0.4499	69.752 ppb	0.4499	0.65%
P 214.914†	1242.5	704.79 ug/L	6.681	704.79 ppb	6.681	0.95%
Pb 220.353†	964.9	128.80 ug/L	2.235	128.80 ppb	2.235	1.74%
S 181.975 Axial†	519.1	760.34 ug/L	13.444	760.34 ppb	13.444	1.77%
Sb 206.836†	35.3	-0.7144 ug/L	0.91612	-0.7144 ppb	0.91612	128.24%
Se 196.026†	-514.7	51.441 ug/L	1.2422	51.441 ppb	1.2422	2.41%
Si 251.611†	294584.6	9932.5 ug/L	25.87	9932.5 ppb	25.87	0.26%
Sn 189.927†	-99.8	-14.064 ug/L	2.4703	-14.064 ppb	2.4703	17.56%
Sr 421.552†	28273.8	201.42 ug/L	1.202	201.42 ppb	1.202	0.60%
Ti 334.940†	2651498.8	4549.6 ug/L	7.76	4549.6 ppb	7.76	0.17%
Tl 190.801†	-160.9	2.5251 ug/L	2.34340	2.5251 ppb	2.34340	92.80%
U 409.014†	-4928.1	-171.23 ug/L	0.534	-171.23 ppb	0.534	0.31%
V 292.402†	38669.4	256.62 ug/L	0.646	256.62 ppb	0.646	0.25%
Zn 213.857†	23189.6	219.16 ug/L	1.334	219.16 ppb	1.334	0.61%
SiO2†	294676.2	21126 ug/L	186.9	21126 ppb	186.9	0.88%

Sequence No.: 65
Sample ID: 243492002|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 74
Date Collected: 1/14/2010 22:27:51
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492002|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5098.0	5098.0	106	%			22:29:44
1	Y RADIAL	6457.8	6457.8	125.9	%			22:29:44
1	Al 396.153Radial†	31171.1	29299.0	23505	ug/L	23505	ppb	22:29:44
1	Ca 317.933Radial†	7538.2	7069.6	11905	ug/L	11905	ppb	22:29:44
1	Fe 238.204 Radial†	8052.8	7558.4	71056	ug/L	71056	ppb	22:29:44
1	K 766.490 Radial†	30026.3	25432.4	5089.1	ug/L	5089.1	ppb	22:29:44
1	Mg 279.077 IEC†	175.2	163.1	5652.5	ug/L	5652.5	ppb	22:30:04
1	Na 589.592 Radial†	7281.9	8410.7	2725.1	ug/L	2725.1	ppb	22:29:44
1	Sr 421.552†	13413.1	12588.9	89.643	ug/L	89.643	ppb	22:29:44
1	Sc 361.383	864969.3	864969.3	106.28	%			22:31:02
1	Y 371.029	856042.3	856042.3	124.79	%			22:31:02
1	Ag 328.068†	-4189.6	-4223.6	2.5829	ug/L	2.5829	ppb	22:31:07
1	As 188.979†	-33.2	-12.4	23.584	ug/L	23.584	ppb	22:31:27
1	B 249.677†	222.3	727.7	6.0547	ug/L	6.0547	ppb	22:31:07
1	Ba 233.527†	51871.3	48805.2	407.02	ug/L	407.02	ppb	22:31:07
1	Be 313.107†	-6031.1	-1362.6	2.7422	ug/L	2.7422	ppb	22:31:07
1	Cd 226.502†	437.1	608.8	-0.2037	ug/L	-0.2037	ppb	22:31:27
1	Co 228.616†	1926.2	1885.1	37.049	ug/L	37.049	ppb	22:31:27
1	Cr 267.716†	9696.6	9027.9	108.08	ug/L	108.08	ppb	22:31:07
1	Cu 324.752†	25943.8	18113.0	61.701	ug/L	61.701	ppb	22:31:07
1	Mn 257.610†	2466232.3	2320119.4	2727.4	ug/L	2727.4	ppb	22:31:02
1	Mo 202.031†	139.2	111.7	13.948	ug/L	13.948	ppb	22:31:27
1	Ni 231.604†	2749.5	2511.9	66.100	ug/L	66.100	ppb	22:31:27
1	P 214.914†	1314.6	1009.1	581.02	ug/L	581.02	ppb	22:31:27
1	Pb 220.353†	330.0	375.1	46.487	ug/L	46.487	ppb	22:31:27
1	S 181.975 Axial†	418.5	347.3	513.91	ug/L	513.91	ppb	22:31:27
1	Sb 206.836†	48.5	12.9	1.3063	ug/L	1.3063	ppb	22:31:27
1	Se 196.026†	-344.9	-294.2	37.217	ug/L	37.217	ppb	22:31:27
1	Si 251.611†	220603.8	207124.3	6983.4	ug/L	6983.4	ppb	22:31:07
1	Sn 189.927†	-73.4	-75.2	-10.903	ug/L	-10.903	ppb	22:31:27
1	Ti 334.940†	894477.2	843017.2	1447.4	ug/L	1447.4	ppb	22:31:02
1	Tl 190.801†	-134.8	-83.0	-1.8603	ug/L	-1.8603	ppb	22:31:27
1	U 409.014†	-9276.6	-6687.6	-221.92	ug/L	-221.92	ppb	22:31:02
1	V 292.402†	9775.5	10605.1	64.404	ug/L	64.404	ppb	22:31:07
1	Zn 213.857†	25149.6	22803.4	220.03	ug/L	220.03	ppb	22:31:07
1	SiO2†	220867.2	207361.8	14866	ug/L	14866	ppb	22:32:34
2	Sc Radial	4997.3	4997.3	104	%			22:30:09
2	Y RADIAL	6381.5	6381.5	124.4	%			22:30:09
2	Al 396.153Radial†	30754.4	29490.0	23658	ug/L	23658	ppb	22:30:09
2	Ca 317.933Radial†	7447.0	7124.9	11998	ug/L	11998	ppb	22:30:09
2	Fe 238.204 Radial†	7930.9	7594.1	71391	ug/L	71391	ppb	22:30:09
2	K 766.490 Radial†	29617.4	25609.2	5124.5	ug/L	5124.5	ppb	22:30:09
2	Mg 279.077 IEC†	176.3	167.5	5805.3	ug/L	5805.3	ppb	22:30:29
2	Na 589.592 Radial†	7181.1	8452.1	2738.5	ug/L	2738.5	ppb	22:30:09
2	Sr 421.552†	13179.1	12618.7	89.855	ug/L	89.855	ppb	22:30:09
2	Sc 361.383	874011.3	874011.3	107.39	%			22:31:33
2	Y 371.029	865836.8	865836.8	126.22	%			22:31:33
2	Ag 328.068†	-4155.4	-4151.0	3.0400	ug/L	3.0400	ppb	22:31:38
2	As 188.979†	-39.4	-17.9	21.172	ug/L	21.172	ppb	22:31:58
2	B 249.677†	263.3	763.7	6.8790	ug/L	6.8790	ppb	22:31:38
2	Ba 233.527†	51395.4	47857.2	399.17	ug/L	399.17	ppb	22:31:38
2	Be 313.107†	-6160.1	-1423.9	2.7129	ug/L	2.7129	ppb	22:31:38
2	Cd 226.502†	444.4	611.4	-0.2083	ug/L	-0.2083	ppb	22:31:58
2	Co 228.616†	1907.1	1848.6	36.251	ug/L	36.251	ppb	22:31:58
2	Cr 267.716†	9681.5	8919.5	106.81	ug/L	106.81	ppb	22:31:38
2	Cu 324.752†	25852.1	17775.0	60.638	ug/L	60.638	ppb	22:31:38
2	Mn 257.610†	2482419.5	2311186.0	2717.0	ug/L	2717.0	ppb	22:31:33
2	Mo 202.031†	131.0	102.7	13.306	ug/L	13.306	ppb	22:31:58
2	Ni 231.604†	2713.9	2452.0	64.523	ug/L	64.523	ppb	22:31:58

2	P 214.914†	1300.7	983.3	564.58 ug/L	564.58 ppb	22:31:58
2	Pb 220.353†	338.3	379.6	47.062 ug/L	47.062 ppb	22:31:58
2	S 181.975 Axial†	407.4	332.9	492.42 ug/L	492.42 ppb	22:31:58
2	Sb 206.836†	46.8	10.9	0.5874 ug/L	0.5874 ppb	22:31:58
2	Se 196.026†	-346.3	-292.1	39.699 ug/L	39.699 ppb	22:31:58
2	Si 251.611†	218105.7	202650.7	6832.6 ug/L	6832.6 ppb	22:31:38
2	Sn 189.927†	-66.9	-68.4	-9.6198 ug/L	-9.6198 ppb	22:31:58
2	Ti 334.940†	902476.6	841759.1	1445.3 ug/L	1445.3 ppb	22:31:33
2	Tl 190.801†	-112.7	-61.1	5.0877 ug/L	5.0877 ppb	22:31:58
2	U 409.014†	-9251.3	-6573.7	-218.32 ug/L	-218.32 ppb	22:31:33
2	V 292.402†	9743.3	10480.0	63.456 ug/L	63.456 ppb	22:31:38
2	Zn 213.857†	24887.1	22314.2	215.13 ug/L	215.13 ppb	22:31:38
2	SiO2†	221704.6	205991.6	14768 ug/L	14768 ppb	22:32:40
3	Sc Radial	5079.9	5079.9	106 %		22:30:34
3	Y RADIAL	6446.0	6446.0	125.7 %		22:30:34
3	Al 396.153Radial†	31261.4	29488.9	23657 ug/L	23657 ppb	22:30:34
3	Ca 317.933Radial†	7551.2	7107.1	11968 ug/L	11968 ppb	22:30:34
3	Fe 238.204 Radial†	8041.9	7575.3	71214 ug/L	71214 ppb	22:30:34
3	K 766.490 Radial†	30025.1	25532.1	5109.1 ug/L	5109.1 ppb	22:30:34
3	Mg 279.077 IEC†	175.7	164.2	5691.5 ug/L	5691.5 ppb	22:30:54
3	Na 589.592 Radial†	7201.7	8359.5	2708.5 ug/L	2708.5 ppb	22:30:34
3	Sr 421.552†	13410.3	12631.3	89.945 ug/L	89.945 ppb	22:30:34
3	Sc 361.383	860927.2	860927.2	105.78 %		22:32:04
3	Y 371.029	853304.3	853304.3	124.40 %		22:32:04
3	Ag 328.068†	-4295.3	-4342.0	2.0516 ug/L	2.0516 ppb	22:32:09
3	As 188.979†	-26.1	-5.8	26.575 ug/L	26.575 ppb	22:32:29
3	B 249.677†	251.0	755.8	6.7142 ug/L	6.7142 ppb	22:32:09
3	Ba 233.527†	52394.2	49528.7	413.03 ug/L	413.03 ppb	22:32:09
3	Be 313.107†	-6149.0	-1500.6	2.6856 ug/L	2.6856 ppb	22:32:09
3	Cd 226.502†	433.6	607.4	-0.2349 ug/L	-0.2349 ppb	22:32:29
3	Co 228.616†	1923.1	1890.6	37.169 ug/L	37.169 ppb	22:32:29
3	Cr 267.716†	9834.0	9200.7	110.12 ug/L	110.12 ppb	22:32:09
3	Cu 324.752†	26227.4	18495.7	62.927 ug/L	62.927 ppb	22:32:09
3	Mn 257.610†	2448917.7	2314646.3	2721.0 ug/L	2721.0 ppb	22:32:04
3	Mo 202.031†	130.5	104.1	13.398 ug/L	13.398 ppb	22:32:29
3	Ni 231.604†	2731.2	2506.8	65.965 ug/L	65.965 ppb	22:32:29
3	P 214.914†	1301.4	1002.4	576.43 ug/L	576.43 ppb	22:32:29
3	Pb 220.353†	319.9	367.0	45.473 ug/L	45.473 ppb	22:32:29
3	S 181.975 Axial†	405.9	337.2	498.85 ug/L	498.85 ppb	22:32:29
3	Sb 206.836†	45.6	10.4	0.4172 ug/L	0.4172 ppb	22:32:29
3	Se 196.026†	-340.9	-291.9	39.288 ug/L	39.288 ppb	22:32:29
3	Si 251.611†	222113.9	209526.5	7064.4 ug/L	7064.4 ppb	22:32:09
3	Sn 189.927†	-64.8	-67.4	-9.4410 ug/L	-9.4410 ppb	22:32:29
3	Ti 334.940†	889832.0	842577.4	1446.7 ug/L	1446.7 ppb	22:32:04
3	Tl 190.801†	-134.1	-82.8	-1.8564 ug/L	-1.8564 ppb	22:32:29
3	U 409.014†	-9019.5	-6485.5	-215.49 ug/L	-215.49 ppb	22:32:04
3	V 292.402†	9930.2	10794.6	65.753 ug/L	65.753 ppb	22:32:09
3	Zn 213.857†	25451.3	23199.7	223.97 ug/L	223.97 ppb	22:32:09
3	SiO2†	220855.9	208326.9	14935 ug/L	14935 ppb	22:32:45

Mean Data: 243492002|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	866635.9	106.48	%	0.823				0.77%
Sc Radial	5058.4	106	%	1.1				1.06%
Y 371.029	858394.5	125.14	%	0.961				0.77%
Y RADIAL	6428.4	125.3	%	0.80				0.64%
Ag 328.068†	-4238.9	2.5582	ug/L	0.49470	2.5582	ppb	0.49470	19.34%
Al 396.153Radial†	29426.0	23607	ug/L	88.3	23607	ppb	88.3	0.37%
As 188.979†	-12.0	23.777	ug/L	2.7069	23.777	ppb	2.7069	11.38%
B 249.677†	749.1	6.5493	ug/L	0.43618	6.5493	ppb	0.43618	6.66%
Ba 233.527†	48730.3	406.40	ug/L	6.950	406.40	ppb	6.950	1.71%
Be 313.107†	-1429.0	2.7136	ug/L	0.02828	2.7136	ppb	0.02828	1.04%
Ca 317.933Radial†	7100.5	11957	ug/L	47.6	11957	ppb	47.6	0.40%
Cd 226.502†	609.2	-0.2157	ug/L	0.01686	-0.2157	ppb	0.01686	7.82%
Co 228.616†	1874.7	36.823	ug/L	0.4992	36.823	ppb	0.4992	1.36%
Cr 267.716†	9049.4	108.34	ug/L	1.672	108.34	ppb	1.672	1.54%
Cu 324.752†	18127.9	61.755	ug/L	1.1458	61.755	ppb	1.1458	1.86%
Fe 238.204 Radial†	7575.9	71220	ug/L	167.7	71220	ppb	167.7	0.24%
K 766.490 Radial†	25524.6	5107.5	ug/L	17.75	5107.5	ppb	17.75	0.35%

Mg 279.077 IEC†	164.9	5716.4	ug/L	79.43	5716.4	ppb	79.43	1.39%
Mn 257.610†	2315317.2	2721.8	ug/L	5.27	2721.8	ppb	5.27	0.19%
Mo 202.031†	106.1	13.551	ug/L	0.3469	13.551	ppb	0.3469	2.56%
Na 589.592 Radial†	8407.4	2724.1	ug/L	15.02	2724.1	ppb	15.02	0.55%
Ni 231.604†	2490.3	65.530	ug/L	0.8740	65.530	ppb	0.8740	1.33%
P 214.914†	998.3	574.01	ug/L	8.483	574.01	ppb	8.483	1.48%
Pb 220.353†	373.9	46.341	ug/L	0.8049	46.341	ppb	0.8049	1.74%
S 181.975 Axial†	339.2	501.73	ug/L	11.031	501.73	ppb	11.031	2.20%
Sb 206.836†	11.4	0.7703	ug/L	0.47193	0.7703	ppb	0.47193	61.27%
Se 196.026†	-292.7	38.735	ug/L	1.3306	38.735	ppb	1.3306	3.44%
Si 251.611†	206433.8	6960.2	ug/L	117.65	6960.2	ppb	117.65	1.69%
Sn 189.927†	-70.3	-9.9879	ug/L	0.79753	-9.9879	ppb	0.79753	7.98%
Sr 421.552†	12612.9	89.815	ug/L	0.1550	89.815	ppb	0.1550	0.17%
Ti 334.940†	842451.3	1446.5	ug/L	1.10	1446.5	ppb	1.10	0.08%
Tl 190.801†	-75.6	0.4570	ug/L	4.01028	0.4570	ppb	4.01028	877.56%
U 409.014†	-6582.3	-218.58	ug/L	3.223	-218.58	ppb	3.223	1.47%
V 292.402†	10626.5	64.537	ug/L	1.1543	64.537	ppb	1.1543	1.79%
Zn 213.857†	22772.4	219.71	ug/L	4.427	219.71	ppb	4.427	2.01%
SiO2†	207226.8	14856	ug/L	84.1	14856	ppb	84.1	0.57%

Sequence No.: 66
Sample ID: 243492003|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 75
Date Collected: 1/14/2010 22:34:55
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492003|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5122.4	5122.4	107	%			22:37:08
1	Y RADIAL	5954.7	5954.7	116.1	%			22:37:08
1	Al 396.153Radial†	104004.7	97285.9	78049	ug/L	78049	ppb	22:36:48
1	Ca 317.933Radial†	13320.0	12443.9	20955	ug/L	20955	ppb	22:36:48
1	Fe 238.204 Radial†	12995.0	12145.2	114180	ug/L	114180	ppb	22:36:48
1	K 766.490 Radial†	82510.8	74390.5	14894	ug/L	14894	ppb	22:36:48
1	Mg 279.077 IEC†	525.2	489.7	17074	ug/L	17074	ppb	22:37:08
1	Na 589.592 Radial†	8854.2	9848.9	3191.1	ug/L	3191.1	ppb	22:36:48
1	Sr 421.552†	34761.6	32497.7	231.48	ug/L	231.48	ppb	22:36:48
1	Sc 361.383	868693.8	868693.8	106.74	%			22:38:06
1	Y 371.029	785884.0	785884.0	114.57	%			22:38:06
1	Ag 328.068†	-7233.1	-7058.1	3.1201	ug/L	3.1201	ppb	22:38:11
1	As 188.979†	-48.9	-27.0	43.142	ug/L	43.142	ppb	22:38:31
1	B 249.677†	851.8	1316.5	13.302	ug/L	13.302	ppb	22:38:11
1	Ba 233.527†	152504.6	142877.7	1188.7	ug/L	1188.7	ppb	22:38:11
1	Be 313.107†	-2817.6	1672.5	8.1394	ug/L	8.1394	ppb	22:38:11
1	Cd 226.502†	849.7	993.7	-0.1353	ug/L	-0.1353	ppb	22:38:31
1	Co 228.616†	3366.3	3226.6	62.052	ug/L	62.052	ppb	22:38:31
1	Cr 267.716†	7482.2	6914.2	84.195	ug/L	84.195	ppb	22:38:11
1	Cu 324.752†	24422.0	16582.5	59.067	ug/L	59.067	ppb	22:38:11
1	Mn 257.610†	2608844.7	2443781.7	2876.2	ug/L	2876.2	ppb	22:38:06
1	Mo 202.031†	-22.5	-40.4	6.1149	ug/L	6.1149	ppb	22:38:31
1	Ni 231.604†	2808.6	2556.2	67.248	ug/L	67.248	ppb	22:38:31
1	P 214.914†	1340.3	1027.9	572.76	ug/L	572.76	ppb	22:38:31
1	Pb 220.353†	756.4	773.2	105.16	ug/L	105.16	ppb	22:38:31
1	S 181.975 Axial†	727.3	634.9	932.89	ug/L	932.89	ppb	22:38:31
1	Sb 206.836†	77.2	39.6	4.6876	ug/L	4.6876	ppb	22:38:31
1	Se 196.026†	-546.6	-481.7	55.786	ug/L	55.786	ppb	22:38:31
1	Si 251.611†	282020.5	263774.7	8893.6	ug/L	8893.6	ppb	22:38:11
1	Sn 189.927†	-123.9	-122.2	-17.501	ug/L	-17.501	ppb	22:38:31
1	Ti 334.940†	2047096.1	1919279.6	3294.1	ug/L	3294.1	ppb	22:38:06
1	Tl 190.801†	-176.2	-121.2	1.4788	ug/L	1.4788	ppb	22:38:31
1	U 409.014†	-7458.6	-4946.9	-171.19	ug/L	-171.19	ppb	22:38:11
1	V 292.402†	34229.0	33475.7	221.33	ug/L	221.33	ppb	22:38:11
1	Zn 213.857†	25592.4	23116.8	218.98	ug/L	218.98	ppb	22:38:11
1	SiO2†	284855.7	266420.7	19100	ug/L	19100	ppb	22:39:39
2	Sc Radial	5131.5	5131.5	107	%			22:37:33
2	Y RADIAL	5958.0	5958.0	116.2	%			22:37:33
2	Al 396.153Radial†	107371.0	100255.7	80431	ug/L	80431	ppb	22:37:13
2	Ca 317.933Radial†	13823.7	12892.0	21710	ug/L	21710	ppb	22:37:13
2	Fe 238.204 Radial†	13477.4	12574.0	118210	ug/L	118210	ppb	22:37:13
2	K 766.490 Radial†	84960.8	76540.5	15325	ug/L	15325	ppb	22:37:13
2	Mg 279.077 IEC†	530.8	494.1	17221	ug/L	17221	ppb	22:37:33
2	Na 589.592 Radial†	9205.7	10162.3	3292.6	ug/L	3292.6	ppb	22:37:13
2	Sr 421.552†	35821.7	33429.5	238.12	ug/L	238.12	ppb	22:37:13
2	Sc 361.383	870996.4	870996.4	107.02	%			22:38:37
2	Y 371.029	789259.0	789259.0	115.06	%			22:38:37
2	Ag 328.068†	-7328.9	-7129.8	4.0540	ug/L	4.0540	ppb	22:38:42
2	As 188.979†	-50.8	-28.6	43.286	ug/L	43.286	ppb	22:39:02
2	B 249.677†	983.8	1437.8	15.597	ug/L	15.597	ppb	22:38:42
2	Ba 233.527†	152664.3	142649.2	1187.0	ug/L	1187.0	ppb	22:38:42
2	Be 313.107†	-2888.1	1613.6	8.1012	ug/L	8.1012	ppb	22:38:42
2	Cd 226.502†	874.5	1014.7	-0.3035	ug/L	-0.3035	ppb	22:39:02
2	Co 228.616†	3403.3	3252.8	62.574	ug/L	62.574	ppb	22:39:02
2	Cr 267.716†	7458.2	6873.2	83.786	ug/L	83.786	ppb	22:38:42
2	Cu 324.752†	24659.2	16743.7	59.792	ug/L	59.792	ppb	22:38:42
2	Mn 257.610†	2608372.6	2436879.1	2868.5	ug/L	2868.5	ppb	22:38:37
2	Mo 202.031†	-32.1	-49.3	5.7775	ug/L	5.7775	ppb	22:39:02
2	Ni 231.604†	2819.2	2559.1	67.325	ug/L	67.325	ppb	22:39:02

2	P 214.914†	1343.0	1027.0	569.45 ug/L	569.45 ppb	22:39:02
2	Pb 220.353†	786.0	799.0	108.60 ug/L	108.60 ppb	22:39:02
2	S 181.975 Axial†	742.4	647.2	950.85 ug/L	950.85 ppb	22:39:02
2	Sb 206.836†	72.2	34.7	2.9308 ug/L	2.9308 ppb	22:39:02
2	Se 196.026†	-558.2	-491.3	62.739 ug/L	62.739 ppb	22:39:02
2	Si 251.611†	282429.6	263458.5	8883.0 ug/L	8883.0 ppb	22:38:42
2	Sn 189.927†	-126.7	-124.5	-17.734 ug/L	-17.734 ppb	22:39:02
2	Ti 334.940†	2048463.7	1915487.2	3287.7 ug/L	3287.7 ppb	22:38:37
2	Tl 190.801†	-166.8	-112.0	4.3481 ug/L	4.3481 ppb	22:39:02
2	U 409.014†	-7299.8	-4780.1	-166.32 ug/L	-166.32 ppb	22:38:42
2	V 292.402†	34143.8	33311.3	219.57 ug/L	219.57 ppb	22:38:42
2	Zn 213.857†	25621.0	23080.1	218.22 ug/L	218.22 ppb	22:38:42
2	SiO2†	285065.6	265911.3	19064 ug/L	19064 ppb	22:39:44
3	Sc Radial	5062.6	5062.6	106 %		22:37:59
3	Y RADIAL	5881.7	5881.7	114.7 %		22:37:59
3	Al 396.153Radial†	106955.6	101226.9	81210 ug/L	81210 ppb	22:37:39
3	Ca 317.933Radial†	13737.6	12986.2	21868 ug/L	21868 ppb	22:37:39
3	Fe 238.204 Radial†	13373.1	12646.6	118890 ug/L	118890 ppb	22:37:39
3	K 766.490 Radial†	84814.8	77482.0	15513 ug/L	15513 ppb	22:37:39
3	Mg 279.077 IEC†	518.5	489.2	17051 ug/L	17051 ppb	22:37:59
3	Na 589.592 Radial†	9064.8	10146.0	3287.3 ug/L	3287.3 ppb	22:37:39
3	Sr 421.552†	35714.0	33782.8	240.64 ug/L	240.64 ppb	22:37:39
3	Sc 361.383	870955.0	870955.0	107.01 %		22:39:08
3	Y 371.029	788633.8	788633.8	114.97 %		22:39:08
3	Ag 328.068†	-7365.0	-7163.8	4.1164 ug/L	4.1164 ppb	22:39:13
3	As 188.979†	-43.9	-22.2	46.366 ug/L	46.366 ppb	22:39:33
3	B 249.677†	904.7	1363.9	13.690 ug/L	13.690 ppb	22:39:13
3	Ba 233.527†	152922.6	142897.4	1189.0 ug/L	1189.0 ppb	22:39:13
3	Be 313.107†	-2795.8	1699.7	8.1382 ug/L	8.1382 ppb	22:39:13
3	Cd 226.502†	859.1	1000.3	-0.5445 ug/L	-0.5445 ppb	22:39:33
3	Co 228.616†	3360.4	3212.8	61.695 ug/L	61.695 ppb	22:39:33
3	Cr 267.716†	7469.3	6884.0	83.930 ug/L	83.930 ppb	22:39:13
3	Cu 324.752†	24446.5	16546.0	59.200 ug/L	59.200 ppb	22:39:13
3	Mn 257.610†	2612602.4	2440947.4	2873.4 ug/L	2873.4 ppb	22:39:08
3	Mo 202.031†	-27.6	-45.1	6.1397 ug/L	6.1397 ppb	22:39:33
3	Ni 231.604†	2786.3	2528.6	66.520 ug/L	66.520 ppb	22:39:33
3	P 214.914†	1329.5	1014.5	561.25 ug/L	561.25 ppb	22:39:33
3	Pb 220.353†	746.5	762.2	103.98 ug/L	103.98 ppb	22:39:33
3	S 181.975 Axial†	737.0	642.2	943.18 ug/L	943.18 ppb	22:39:33
3	Sb 206.836†	73.3	35.7	3.3061 ug/L	3.3061 ppb	22:39:33
3	Se 196.026†	-544.8	-478.7	73.431 ug/L	73.431 ppb	22:39:33
3	Si 251.611†	281961.8	263033.9	8868.7 ug/L	8868.7 ppb	22:39:13
3	Sn 189.927†	-124.7	-122.6	-17.358 ug/L	-17.358 ppb	22:39:33
3	Ti 334.940†	2049128.0	1916198.9	3288.9 ug/L	3288.9 ppb	22:39:08
3	Tl 190.801†	-169.0	-114.0	3.7188 ug/L	3.7188 ppb	22:39:33
3	U 409.014†	-7493.3	-4961.2	-172.18 ug/L	-172.18 ppb	22:39:13
3	V 292.402†	34365.7	33520.2	220.97 ug/L	220.97 ppb	22:39:13
3	Zn 213.857†	25591.4	23053.6	217.89 ug/L	217.89 ppb	22:39:13
3	SiO2†	285511.1	266340.3	19095 ug/L	19095 ppb	22:39:49

Mean Data: 243492003|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	870215.0	106.92	%	0.162				0.15%
Sc Radial	5105.5	107	%	0.8				0.73%
Y 371.029	787925.6	114.86	%	0.262				0.23%
Y RADIAL	5931.5	115.6	%	0.84				0.73%
Ag 328.068†	-7117.2	3.7635	ug/L	0.55807	3.7635	ppb	0.55807	14.83%
Al 396.153Radial†	99589.5	79897	ug/L	1647.2	79897	ppb	1647.2	2.06%
As 188.979†	-25.9	44.265	ug/L	1.8209	44.265	ppb	1.8209	4.11%
B 249.677†	1372.8	14.196	ug/L	1.2283	14.196	ppb	1.2283	8.65%
Ba 233.527†	142808.1	1188.2	ug/L	1.12	1188.2	ppb	1.12	0.09%
Be 313.107†	1661.9	8.1263	ug/L	0.02170	8.1263	ppb	0.02170	0.27%
Ca 317.933Radial†	12774.1	21511	ug/L	487.9	21511	ppb	487.9	2.27%
Cd 226.502†	1002.9	-0.3278	ug/L	0.20568	-0.3278	ppb	0.20568	62.75%
Co 228.616†	3230.7	62.107	ug/L	0.4423	62.107	ppb	0.4423	0.71%
Cr 267.716†	6890.5	83.970	ug/L	0.2072	83.970	ppb	0.2072	0.25%
Cu 324.752†	16624.1	59.353	ug/L	0.3858	59.353	ppb	0.3858	0.65%
Fe 238.204 Radial†	12455.3	117090	ug/L	2547.0	117090	ppb	2547.0	2.18%
K 766.490 Radial†	76137.7	15244	ug/L	317.3	15244	ppb	317.3	2.08%

Mg 279.077 IEC†	491.0	17115	ug/L	92.6	17115	ppb	92.6	0.54%
Mn 257.610†	2440536.0	2872.7	ug/L	3.89	2872.7	ppb	3.89	0.14%
Mo 202.031†	-44.9	6.0107	ug/L	0.20236	6.0107	ppb	0.20236	3.37%
Na 589.592 Radial†	10052.4	3257.0	ug/L	57.16	3257.0	ppb	57.16	1.75%
Ni 231.604†	2548.0	67.031	ug/L	0.4439	67.031	ppb	0.4439	0.66%
P 214.914†	1023.1	567.82	ug/L	5.923	567.82	ppb	5.923	1.04%
Pb 220.353†	778.1	105.91	ug/L	2.398	105.91	ppb	2.398	2.26%
S 181.975 Axial†	641.4	942.31	ug/L	9.015	942.31	ppb	9.015	0.96%
Sb 206.836†	36.7	3.6415	ug/L	0.92521	3.6415	ppb	0.92521	25.41%
Se 196.026†	-483.9	63.985	ug/L	8.8882	63.985	ppb	8.8882	13.89%
Si 251.611†	263422.4	8881.8	ug/L	12.53	8881.8	ppb	12.53	0.14%
Sn 189.927†	-123.1	-17.531	ug/L	0.1894	-17.531	ppb	0.1894	1.08%
Sr 421.552†	33236.7	236.75	ug/L	4.729	236.75	ppb	4.729	2.00%
Ti 334.940†	1916988.5	3290.2	ug/L	3.40	3290.2	ppb	3.40	0.10%
Tl 190.801†	-115.7	3.1819	ug/L	1.50809	3.1819	ppb	1.50809	47.40%
U 409.014†	-4896.0	-169.90	ug/L	3.137	-169.90	ppb	3.137	1.85%
V 292.402†	33435.8	220.62	ug/L	0.930	220.62	ppb	0.930	0.42%
Zn 213.857†	23083.5	218.36	ug/L	0.556	218.36	ppb	0.556	0.25%
SiO2†	266224.1	19086	ug/L	19.6	19086	ppb	19.6	0.10%

Sequence No.: 67
Sample ID: 243492004|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 76
Date Collected: 1/14/2010 22:41:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492004|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5044.8	5044.8	105	%			22:44:12
1	Y RADIAL	5882.4	5882.4	114.7	%			22:44:12
1	Al 396.153Radial†	75885.6	72075.7	57824	ug/L	57824	ppb	22:43:52
1	Ca 317.933Radial†	11067.2	10495.9	17675	ug/L	17675	ppb	22:43:52
1	Fe 238.204 Radial†	11161.9	10591.1	99566	ug/L	99566	ppb	22:43:52
1	K 766.490 Radial†	73439.9	66962.3	13408	ug/L	13408	ppb	22:43:52
1	Mg 279.077 IEC†	377.8	357.3	12439	ug/L	12439	ppb	22:44:12
1	Na 589.592 Radial†	385.7	1933.3	626.40	ug/L	626.40	ppb	22:43:52
1	Sr 421.552†	26945.2	25574.0	182.16	ug/L	182.16	ppb	22:43:52
1	Sc 361.383	865652.2	865652.2	106.36	%			22:45:10
1	Y 371.029	787405.8	787405.8	114.79	%			22:45:10
1	Ag 328.068†	-6041.2	-5961.4	3.6518	ug/L	3.6518	ppb	22:45:15
1	As 188.979†	-46.2	-24.6	36.973	ug/L	36.973	ppb	22:45:35
1	B 249.677†	749.5	1223.2	13.471	ug/L	13.471	ppb	22:45:15
1	Ba 233.527†	115399.9	108494.8	903.10	ug/L	903.10	ppb	22:45:15
1	Be 313.107†	-5560.6	-915.7	6.1143	ug/L	6.1143	ppb	22:45:15
1	Cd 226.502†	722.9	877.2	0.0111	ug/L	0.0111	ppb	22:45:35
1	Co 228.616†	2181.3	2123.5	39.083	ug/L	39.083	ppb	22:45:35
1	Cr 267.716†	9286.5	8635.2	104.15	ug/L	104.15	ppb	22:45:15
1	Cu 324.752†	20862.4	13316.2	47.859	ug/L	47.859	ppb	22:45:15
1	Mn 257.610†	2369018.4	2226890.7	2620.7	ug/L	2620.7	ppb	22:45:10
1	Mo 202.031†	-10.4	-29.1	5.7814	ug/L	5.7814	ppb	22:45:35
1	Ni 231.604†	2758.4	2518.2	66.263	ug/L	66.263	ppb	22:45:35
1	P 214.914†	1449.0	1134.4	649.59	ug/L	649.59	ppb	22:45:35
1	Pb 220.353†	653.6	679.0	90.117	ug/L	90.117	ppb	22:45:35
1	S 181.975 Axial†	540.9	462.1	678.84	ug/L	678.84	ppb	22:45:35
1	Sb 206.836†	56.0	19.9	-0.9437	ug/L	-0.9437	ppb	22:45:35
1	Se 196.026†	-484.2	-424.9	44.912	ug/L	44.912	ppb	22:45:35
1	Si 251.611†	310336.9	291325.5	9822.6	ug/L	9822.6	ppb	22:45:15
1	Sn 189.927†	-106.3	-106.1	-15.254	ug/L	-15.254	ppb	22:45:35
1	Ti 334.940†	1767614.2	1663256.0	2854.8	ug/L	2854.8	ppb	22:45:10
1	Tl 190.801†	-158.7	-105.3	1.8888	ug/L	1.8888	ppb	22:45:35
1	U 409.014†	-6988.2	-4529.2	-156.23	ug/L	-156.23	ppb	22:45:15
1	V 292.402†	28313.8	28027.2	184.56	ug/L	184.56	ppb	22:45:15
1	Zn 213.857†	23686.1	21408.8	203.38	ug/L	203.38	ppb	22:45:15
1	SiO2†	311779.2	292671.2	20982	ug/L	20982	ppb	22:46:43
2	Sc Radial	5153.9	5153.9	108	%			22:44:38
2	Y RADIAL	5991.9	5991.9	116.8	%			22:44:38
2	Al 396.153Radial†	74881.7	69616.4	55851	ug/L	55851	ppb	22:44:18
2	Ca 317.933Radial†	10928.8	10144.7	17083	ug/L	17083	ppb	22:44:18
2	Fe 238.204 Radial†	11025.4	10239.8	96263	ug/L	96263	ppb	22:44:18
2	K 766.490 Radial†	72637.2	64739.2	12963	ug/L	12963	ppb	22:44:18
2	Mg 279.077 IEC†	380.2	351.9	12255	ug/L	12255	ppb	22:44:38
2	Na 589.592 Radial†	351.8	1894.0	613.67	ug/L	613.67	ppb	22:44:18
2	Sr 421.552†	26455.2	24576.6	175.05	ug/L	175.05	ppb	22:44:18
2	Sc 361.383	874792.2	874792.2	107.49	%			22:45:41
2	Y 371.029	796608.3	796608.3	116.13	%			22:45:41
2	Ag 328.068†	-6090.8	-5948.1	2.6537	ug/L	2.6537	ppb	22:45:46
2	As 188.979†	-50.3	-27.9	34.557	ug/L	34.557	ppb	22:46:06
2	B 249.677†	803.3	1265.9	15.047	ug/L	15.047	ppb	22:45:46
2	Ba 233.527†	115379.7	107342.4	893.44	ug/L	893.44	ppb	22:45:46
2	Be 313.107†	-5655.2	-949.1	6.0638	ug/L	6.0638	ppb	22:45:46
2	Cd 226.502†	723.0	870.2	0.2683	ug/L	0.2683	ppb	22:46:06
2	Co 228.616†	2175.1	2096.3	38.570	ug/L	38.570	ppb	22:46:06
2	Cr 267.716†	9288.7	8546.0	103.04	ug/L	103.04	ppb	22:45:46
2	Cu 324.752†	20808.8	13061.5	46.876	ug/L	46.876	ppb	22:45:46
2	Mn 257.610†	2380736.3	2214521.1	2605.8	ug/L	2605.8	ppb	22:45:41
2	Mo 202.031†	-11.0	-29.6	5.4806	ug/L	5.4806	ppb	22:46:06
2	Ni 231.604†	2770.8	2502.7	65.854	ug/L	65.854	ppb	22:46:06

2	P 214.914†	1447.5	1118.8	641.96 ug/L	641.96 ppb	22:46:06
2	Pb 220.353†	663.9	682.2	90.405 ug/L	90.405 ppb	22:46:06
2	S 181.975 Axial†	539.3	455.3	669.03 ug/L	669.03 ppb	22:46:06
2	Sb 206.836†	55.9	19.2	-1.1549 ug/L	-1.1549 ppb	22:46:06
2	Se 196.026†	-464.8	-402.1	49.259 ug/L	49.259 ppb	22:46:06
2	Si 251.611†	309527.5	287524.0	9694.4 ug/L	9694.4 ppb	22:45:46
2	Sn 189.927†	-105.9	-104.6	-15.128 ug/L	-15.128 ppb	22:46:06
2	Ti 334.940†	1775996.2	1653690.6	2838.3 ug/L	2838.3 ppb	22:45:41
2	Tl 190.801†	-162.8	-107.5	0.9757 ug/L	0.9757 ppb	22:46:06
2	U 409.014†	-7351.5	-4798.5	-164.45 ug/L	-164.45 ppb	22:45:46
2	V 292.402†	28296.1	27732.5	182.91 ug/L	182.91 ppb	22:45:46
2	Zn 213.857†	23658.3	21150.2	201.12 ug/L	201.12 ppb	22:45:46
2	SiO2†	313006.4	290750.3	20845 ug/L	20845 ppb	22:46:48
3	Sc Radial	5075.3	5075.3	106 %		22:45:03
3	Y RADIAL	5923.9	5923.9	115.5 %		22:45:03
3	Al 396.153Radial†	75401.3	71185.8	57110 ug/L	57110 ppb	22:44:43
3	Ca 317.933Radial†	10970.6	10341.6	17415 ug/L	17415 ppb	22:44:43
3	Fe 238.204 Radial†	11085.9	10455.7	98293 ug/L	98293 ppb	22:44:43
3	K 766.490 Radial†	72923.3	66055.7	13227 ug/L	13227 ppb	22:44:43
3	Mg 279.077 IEC†	382.7	359.8	12527 ug/L	12527 ppb	22:45:03
3	Na 589.592 Radial†	374.2	1920.2	622.16 ug/L	622.16 ppb	22:44:43
3	Sr 421.552†	26760.3	25245.9	179.82 ug/L	179.82 ppb	22:44:43
3	Sc 361.383	863961.0	863961.0	106.16 %		22:46:12
3	Y 371.029	785546.1	785546.1	114.52 %		22:46:12
3	Ag 328.068†	-6035.8	-5967.4	3.2147 ug/L	3.2147 ppb	22:46:17
3	As 188.979†	-40.7	-19.5	38.952 ug/L	38.952 ppb	22:46:37
3	B 249.677†	854.6	1323.6	16.119 ug/L	16.119 ppb	22:46:17
3	Ba 233.527†	115370.0	108679.0	904.59 ug/L	904.59 ppb	22:46:17
3	Be 313.107†	-5428.1	-801.1	6.1534 ug/L	6.1534 ppb	22:46:17
3	Cd 226.502†	718.5	874.4	0.1093 ug/L	0.1093 ppb	22:46:37
3	Co 228.616†	2193.5	2139.0	39.444 ug/L	39.444 ppb	22:46:37
3	Cr 267.716†	9345.2	8707.6	104.98 ug/L	104.98 ppb	22:46:17
3	Cu 324.752†	20854.4	13347.1	47.893 ug/L	47.893 ppb	22:46:17
3	Mn 257.610†	2367015.6	2229363.9	2623.4 ug/L	2623.4 ppb	22:46:12
3	Mo 202.031†	-15.5	-33.9	5.3223 ug/L	5.3223 ppb	22:46:37
3	Ni 231.604†	2789.5	2552.6	67.168 ug/L	67.168 ppb	22:46:37
3	P 214.914†	1461.9	1149.2	659.88 ug/L	659.88 ppb	22:46:37
3	Pb 220.353†	666.9	692.8	91.844 ug/L	91.844 ppb	22:46:37
3	S 181.975 Axial†	541.9	464.0	681.74 ug/L	681.74 ppb	22:46:37
3	Sb 206.836†	75.1	38.0	5.6528 ug/L	5.6528 ppb	22:46:37
3	Se 196.026†	-475.9	-417.9	45.381 ug/L	45.381 ppb	22:46:37
3	Si 251.611†	309933.4	291516.5	9829.0 ug/L	9829.0 ppb	22:46:17
3	Sn 189.927†	-109.5	-109.2	-15.899 ug/L	-15.899 ppb	22:46:37
3	Ti 334.940†	1762405.5	1661602.4	2851.9 ug/L	2851.9 ppb	22:46:12
3	Tl 190.801†	-163.9	-110.5	0.2134 ug/L	0.2134 ppb	22:46:37
3	U 409.014†	-7110.1	-4656.9	-160.16 ug/L	-160.16 ppb	22:46:17
3	V 292.402†	28192.6	27965.1	184.29 ug/L	184.29 ppb	22:46:17
3	Zn 213.857†	23673.9	21440.9	203.82 ug/L	203.82 ppb	22:46:17
3	SiO2†	314779.9	296071.7	21226 ug/L	21226 ppb	22:46:53

Mean Data: 243492004|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	868135.1	106.67	%	0.716				0.67%
Sc Radial	5091.3	106	%	1.2				1.11%
Y 371.029	789853.4	115.15	%	0.864				0.75%
Y RADIAL	5932.8	115.7	%	1.08				0.93%
Ag 328.068†	-5959.0	3.1734	ug/L	0.50034	3.1734	ppb	0.50034	15.77%
Al 396.153Radial†	70959.3	56928	ug/L	999.0	56928	ppb	999.0	1.75%
As 188.979†	-24.0	36.827	ug/L	2.2008	36.827	ppb	2.2008	5.98%
B 249.677†	1270.9	14.879	ug/L	1.3321	14.879	ppb	1.3321	8.95%
Ba 233.527†	108172.0	900.38	ug/L	6.053	900.38	ppb	6.053	0.67%
Be 313.107†	-888.6	6.1105	ug/L	0.04492	6.1105	ppb	0.04492	0.74%
Ca 317.933Radial†	10327.4	17391	ug/L	296.4	17391	ppb	296.4	1.70%
Cd 226.502†	874.0	0.1296	ug/L	0.12976	0.1296	ppb	0.12976	100.14%
Co 228.616†	2119.6	39.032	ug/L	0.4393	39.032	ppb	0.4393	1.13%
Cr 267.716†	8629.6	104.06	ug/L	0.976	104.06	ppb	0.976	0.94%
Cu 324.752†	13241.6	47.543	ug/L	0.5776	47.543	ppb	0.5776	1.21%
Fe 238.204 Radial†	10428.9	98040	ug/L	1665.7	98040	ppb	1665.7	1.70%
K 766.490 Radial†	65919.1	13199	ug/L	223.8	13199	ppb	223.8	1.70%

Mg 279.077 IEC†	356.3	12407	ug/L	139.2	12407	ppb	139.2	1.12%
Mn 257.610†	2223591.9	2616.6	ug/L	9.46	2616.6	ppb	9.46	0.36%
Mo 202.031†	-30.8	5.5281	ug/L	0.23324	5.5281	ppb	0.23324	4.22%
Na 589.592 Radial†	1915.8	620.74	ug/L	6.480	620.74	ppb	6.480	1.04%
Ni 231.604†	2524.5	66.428	ug/L	0.6722	66.428	ppb	0.6722	1.01%
P 214.914†	1134.2	650.47	ug/L	8.993	650.47	ppb	8.993	1.38%
Pb 220.353†	684.7	90.789	ug/L	0.9249	90.789	ppb	0.9249	1.02%
S 181.975 Axial†	460.5	676.54	ug/L	6.663	676.54	ppb	6.663	0.98%
Sb 206.836†	25.7	1.1848	ug/L	3.87088	1.1848	ppb	3.87088	326.72%
Se 196.026†	-414.9	46.517	ug/L	2.3856	46.517	ppb	2.3856	5.13%
Si 251.611†	290122.0	9782.0	ug/L	75.93	9782.0	ppb	75.93	0.78%
Sn 189.927†	-106.6	-15.427	ug/L	0.4136	-15.427	ppb	0.4136	2.68%
Sr 421.552†	25132.2	179.01	ug/L	3.621	179.01	ppb	3.621	2.02%
Ti 334.940†	1659516.4	2848.3	ug/L	8.80	2848.3	ppb	8.80	0.31%
Tl 190.801†	-107.8	1.0260	ug/L	0.83885	1.0260	ppb	0.83885	81.76%
U 409.014†	-4661.5	-160.28	ug/L	4.112	-160.28	ppb	4.112	2.57%
V 292.402†	27908.2	183.92	ug/L	0.884	183.92	ppb	0.884	0.48%
Zn 213.857†	21333.3	202.77	ug/L	1.445	202.77	ppb	1.445	0.71%
SiO2†	293164.4	21018	ug/L	193.2	21018	ppb	193.2	0.92%

Sequence No.: 68
Sample ID: 243492005|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 77
Date Collected: 1/14/2010 22:49:03
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492005|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5197.7	5197.7	108	%			22:51:17
1	Y RADIAL	6419.2	6419.2	125.1	%			22:51:17
1	Al 396.153Radial†	63222.5	58283.0	46758	ug/L	46758	ppb	22:50:56
1	Ca 317.933Radial†	14806.0	13633.4	22958	ug/L	22958	ppb	22:50:56
1	Fe 238.204 Radial†	10244.4	9433.6	88684	ug/L	88684	ppb	22:50:56
1	K 766.490 Radial†	54194.8	47170.4	9440.9	ug/L	9440.9	ppb	22:50:56
1	Mg 279.077 IEC†	338.7	310.7	10814	ug/L	10814	ppb	22:51:17
1	Na 589.592 Radial†	4592.6	5800.5	1879.4	ug/L	1879.4	ppb	22:50:56
1	Sr 421.552†	29609.7	27277.6	194.26	ug/L	194.26	ppb	22:50:56
1	Sc 361.383	865122.4	865122.4	106.30	%			22:52:14
1	Y 371.029	839757.4	839757.4	122.42	%			22:52:14
1	Ag 328.068†	-5438.7	-5398.0	2.5825	ug/L	2.5825	ppb	22:52:19
1	As 188.979†	-30.0	-9.3	30.401	ug/L	30.401	ppb	22:52:39
1	B 249.677†	610.7	1093.1	12.026	ug/L	12.026	ppb	22:52:19
1	Ba 233.527†	153918.1	144797.3	1203.6	ug/L	1203.6	ppb	22:52:19
1	Be 313.107†	-0.6	4311.7	5.3407	ug/L	5.3407	ppb	22:52:19
1	Cd 226.502†	568.8	732.7	-0.5811	ug/L	-0.5811	ppb	22:52:39
1	Co 228.616†	2955.4	2853.0	57.890	ug/L	57.890	ppb	22:52:39
1	Cr 267.716†	6319.4	5849.3	70.999	ug/L	70.999	ppb	22:52:19
1	Cu 324.752†	17789.1	10437.1	38.133	ug/L	38.133	ppb	22:52:19
1	Mn 257.610†	2293629.6	2157332.3	2538.1	ug/L	2538.1	ppb	22:52:14
1	Mo 202.031†	99.5	74.3	12.673	ug/L	12.673	ppb	22:52:39
1	Ni 231.604†	2267.2	2057.8	54.132	ug/L	54.132	ppb	22:52:39
1	P 214.914†	1133.6	838.6	468.60	ug/L	468.60	ppb	22:52:39
1	Pb 220.353†	475.0	511.4	67.446	ug/L	67.446	ppb	22:52:39
1	S 181.975 Axial†	478.1	403.4	593.20	ug/L	593.20	ppb	22:52:39
1	Sb 206.836†	54.3	18.3	2.5807	ug/L	2.5807	ppb	22:52:39
1	Se 196.026†	-436.7	-380.5	38.438	ug/L	38.438	ppb	22:52:39
1	Si 251.611†	282997.9	265784.9	8961.3	ug/L	8961.3	ppb	22:52:19
1	Sn 189.927†	-115.1	-114.4	-16.178	ug/L	-16.178	ppb	22:52:39
1	Ti 334.940†	988761.9	931566.8	1600.4	ug/L	1600.4	ppb	22:52:14
1	Tl 190.801†	-140.0	-87.8	-3.2403	ug/L	-3.2403	ppb	22:52:39
1	U 409.014†	-9445.7	-6845.1	-228.88	ug/L	-228.88	ppb	22:52:14
1	V 292.402†	17316.2	17697.4	112.90	ug/L	112.90	ppb	22:52:19
1	Zn 213.857†	25882.7	23488.9	225.27	ug/L	225.27	ppb	22:52:19
1	SiO2†	283340.4	266096.8	19077	ug/L	19077	ppb	22:53:47
2	Sc Radial	5176.5	5176.5	108	%			22:51:42
2	Y RADIAL	6368.4	6368.4	124.2	%			22:51:42
2	Al 396.153Radial†	62707.9	58045.0	46567	ug/L	46567	ppb	22:51:22
2	Ca 317.933Radial†	14656.1	13550.4	22818	ug/L	22818	ppb	22:51:22
2	Fe 238.204 Radial†	10185.7	9417.9	88537	ug/L	88537	ppb	22:51:22
2	K 766.490 Radial†	54055.4	47245.6	9456.0	ug/L	9456.0	ppb	22:51:22
2	Mg 279.077 IEC†	342.7	315.7	10992	ug/L	10992	ppb	22:51:42
2	Na 589.592 Radial†	4568.5	5795.5	1877.8	ug/L	1877.8	ppb	22:51:22
2	Sr 421.552†	29444.4	27236.2	193.97	ug/L	193.97	ppb	22:51:22
2	Sc 361.383	865118.7	865118.7	106.30	%			22:52:45
2	Y 371.029	838906.2	838906.2	122.30	%			22:52:45
2	Ag 328.068†	-5401.1	-5362.7	2.7093	ug/L	2.7093	ppb	22:52:50
2	As 188.979†	-21.3	-1.2	34.006	ug/L	34.006	ppb	22:53:10
2	B 249.677†	557.0	1042.6	10.820	ug/L	10.820	ppb	22:52:50
2	Ba 233.527†	152891.3	143831.9	1195.6	ug/L	1195.6	ppb	22:52:50
2	Be 313.107†	69.0	4377.2	5.3626	ug/L	5.3626	ppb	22:52:50
2	Cd 226.502†	607.4	769.0	-0.1406	ug/L	-0.1406	ppb	22:53:10
2	Co 228.616†	2949.6	2847.5	57.772	ug/L	57.772	ppb	22:53:10
2	Cr 267.716†	6366.1	5893.2	71.514	ug/L	71.514	ppb	22:52:50
2	Cu 324.752†	17819.8	10466.0	38.219	ug/L	38.219	ppb	22:52:50
2	Mn 257.610†	2295413.8	2159020.1	2540.0	ug/L	2540.0	ppb	22:52:45
2	Mo 202.031†	97.1	72.0	12.490	ug/L	12.490	ppb	22:53:10
2	Ni 231.604†	2294.4	2083.3	54.805	ug/L	54.805	ppb	22:53:10

2	P 214.914†	1139.2	843.8	472.00 ug/L	472.00 ppb	22:53:10
2	Pb 220.353†	475.5	511.9	67.481 ug/L	67.481 ppb	22:53:10
2	S 181.975 Axial†	477.0	402.3	591.61 ug/L	591.61 ppb	22:53:10
2	Sb 206.836†	47.5	11.9	0.2390 ug/L	0.2390 ppb	22:53:10
2	Se 196.026†	-422.4	-367.0	46.933 ug/L	46.933 ppb	22:53:10
2	Si 251.611†	281324.2	264211.6	8908.3 ug/L	8908.3 ppb	22:52:50
2	Sn 189.927†	-117.0	-116.2	-16.532 ug/L	-16.532 ppb	22:53:10
2	Ti 334.940†	987626.6	930502.7	1598.6 ug/L	1598.6 ppb	22:52:45
2	Tl 190.801†	-123.0	-71.8	1.8597 ug/L	1.8597 ppb	22:53:10
2	U 409.014†	-9548.4	-6941.8	-231.95 ug/L	-231.95 ppb	22:52:45
2	V 292.402†	17196.8	17585.1	112.11 ug/L	112.11 ppb	22:52:50
2	Zn 213.857†	25670.5	23289.3	223.29 ug/L	223.29 ppb	22:52:50
2	SiO2†	287523.7	270033.4	19359 ug/L	19359 ppb	22:53:52
3	Sc Radial	5056.1	5056.1	106 %		22:52:07
3	Y RADIAL	6261.8	6261.8	122.1 %		22:52:07
3	Al 396.153Radial†	63119.0	59817.0	47989 ug/L	47989 ppb	22:51:47
3	Ca 317.933Radial†	14703.9	13918.8	23439 ug/L	23439 ppb	22:51:47
3	Fe 238.204 Radial†	10211.9	9667.3	90881 ug/L	90881 ppb	22:51:47
3	K 766.490 Radial†	54159.3	48535.7	9714.2 ug/L	9714.2 ppb	22:51:47
3	Mg 279.077 IEC†	335.0	316.0	10998 ug/L	10998 ppb	22:52:07
3	Na 589.592 Radial†	4649.9	5973.3	1935.4 ug/L	1935.4 ppb	22:51:47
3	Sr 421.552†	29601.7	28034.3	199.65 ug/L	199.65 ppb	22:51:47
3	Sc 361.383	872385.9	872385.9	107.19 %		22:53:16
3	Y 371.029	842572.6	842572.6	122.83 %		22:53:16
3	Ag 328.068†	-5287.9	-5214.7	4.1740 ug/L	4.1740 ppb	22:53:21
3	As 188.979†	-4.1	15.0	41.838 ug/L	41.838 ppb	22:53:41
3	B 249.677†	616.4	1093.6	11.684 ug/L	11.684 ppb	22:53:21
3	Ba 233.527†	150910.9	140786.2	1170.4 ug/L	1170.4 ppb	22:53:21
3	Be 313.107†	6.1	4318.0	5.3334 ug/L	5.3334 ppb	22:53:21
3	Cd 226.502†	577.2	736.1	-0.7681 ug/L	-0.7681 ppb	22:53:41
3	Co 228.616†	2939.1	2814.6	57.017 ug/L	57.017 ppb	22:53:41
3	Cr 267.716†	6237.1	5723.0	69.547 ug/L	69.547 ppb	22:53:21
3	Cu 324.752†	17599.1	10120.4	37.237 ug/L	37.237 ppb	22:53:21
3	Mn 257.610†	2309308.9	2153994.6	2534.4 ug/L	2534.4 ppb	22:53:16
3	Mo 202.031†	90.0	64.7	12.136 ug/L	12.136 ppb	22:53:41
3	Ni 231.604†	2270.6	2043.1	53.747 ug/L	53.747 ppb	22:53:41
3	P 214.914†	1141.6	837.2	466.44 ug/L	466.44 ppb	22:53:41
3	Pb 220.353†	473.1	505.9	66.803 ug/L	66.803 ppb	22:53:41
3	S 181.975 Axial†	474.8	396.5	582.78 ug/L	582.78 ppb	22:53:41
3	Sb 206.836†	56.9	20.3	3.3341 ug/L	3.3341 ppb	22:53:41
3	Se 196.026†	-426.7	-367.7	54.234 ug/L	54.234 ppb	22:53:41
3	Si 251.611†	277417.6	258362.3	8711.1 ug/L	8711.1 ppb	22:53:21
3	Sn 189.927†	-112.9	-111.4	-15.515 ug/L	-15.515 ppb	22:53:41
3	Ti 334.940†	994376.9	929060.5	1596.2 ug/L	1596.2 ppb	22:53:16
3	Tl 190.801†	-151.7	-97.6	-6.4423 ug/L	-6.4423 ppb	22:53:41
3	U 409.014†	-9440.1	-6765.9	-226.60 ug/L	-226.60 ppb	22:53:16
3	V 292.402†	17021.0	17286.3	109.62 ug/L	109.62 ppb	22:53:21
3	Zn 213.857†	25291.2	22734.3	217.53 ug/L	217.53 ppb	22:53:21
3	SiO2†	286598.9	266917.4	19136 ug/L	19136 ppb	22:53:57

Mean Data: 243492005|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	867542.4	106.60	%	0.515				0.48%
Sc Radial	5143.4	107	%	1.6				1.48%
Y 371.029	840412.1	122.52	%	0.280				0.23%
Y RADIAL	6349.8	123.8	%	1.57				1.26%
Ag 328.068†	-5325.2	3.1552	ug/L	0.88453	3.1552	ppb	0.88453	28.03%
Al 396.153Radial†	58715.0	47104	ug/L	771.6	47104	ppb	771.6	1.64%
As 188.979†	1.5	35.415	ug/L	5.8473	35.415	ppb	5.8473	16.51%
B 249.677†	1076.4	11.510	ug/L	0.6214	11.510	ppb	0.6214	5.40%
Ba 233.527†	143138.5	1189.9	ug/L	17.32	1189.9	ppb	17.32	1.46%
Be 313.107†	4335.6	5.3456	ug/L	0.01517	5.3456	ppb	0.01517	0.28%
Ca 317.933Radial†	13700.8	23072	ug/L	325.5	23072	ppb	325.5	1.41%
Cd 226.502†	745.9	-0.4966	ug/L	0.32215	-0.4966	ppb	0.32215	64.87%
Co 228.616†	2838.4	57.560	ug/L	0.4734	57.560	ppb	0.4734	0.82%
Cr 267.716†	5821.8	70.686	ug/L	1.0202	70.686	ppb	1.0202	1.44%
Cu 324.752†	10341.2	37.863	ug/L	0.5439	37.863	ppb	0.5439	1.44%
Fe 238.204 Radial†	9506.3	89367	ug/L	1313.2	89367	ppb	1313.2	1.47%
K 766.490 Radial†	47650.6	9537.0	ug/L	153.64	9537.0	ppb	153.64	1.61%

Mg 279.077 IEC†	314.1	10935	ug/L	104.6	10935	ppb	104.6	0.96%
Mn 257.610†	2156782.4	2537.5	ug/L	2.88	2537.5	ppb	2.88	0.11%
Mo 202.031†	70.3	12.433	ug/L	0.2734	12.433	ppb	0.2734	2.20%
Na 589.592 Radial†	5856.4	1897.5	ug/L	32.80	1897.5	ppb	32.80	1.73%
Ni 231.604†	2061.4	54.228	ug/L	0.5355	54.228	ppb	0.5355	0.99%
P 214.914†	839.9	469.01	ug/L	2.803	469.01	ppb	2.803	0.60%
Pb 220.353†	509.7	67.243	ug/L	0.3814	67.243	ppb	0.3814	0.57%
S 181.975 Axial†	400.7	589.20	ug/L	5.616	589.20	ppb	5.616	0.95%
Sb 206.836†	16.9	2.0513	ug/L	1.61407	2.0513	ppb	1.61407	78.69%
Se 196.026†	-371.7	46.535	ug/L	7.9057	46.535	ppb	7.9057	16.99%
Si 251.611†	262786.3	8860.2	ug/L	131.87	8860.2	ppb	131.87	1.49%
Sn 189.927†	-114.0	-16.075	ug/L	0.5159	-16.075	ppb	0.5159	3.21%
Sr 421.552†	27516.1	195.96	ug/L	3.200	195.96	ppb	3.200	1.63%
Ti 334.940†	930376.6	1598.4	ug/L	2.13	1598.4	ppb	2.13	0.13%
Tl 190.801†	-85.8	-2.6076	ug/L	4.18696	-2.6076	ppb	4.18696	160.57%
U 409.014†	-6850.9	-229.14	ug/L	2.686	-229.14	ppb	2.686	1.17%
V 292.402†	17523.0	111.55	ug/L	1.713	111.55	ppb	1.713	1.54%
Zn 213.857†	23170.8	222.03	ug/L	4.018	222.03	ppb	4.018	1.81%
SiO2†	267682.6	19191	ug/L	148.9	19191	ppb	148.9	0.78%

Sequence No.: 69
Sample ID: 243492006|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 78
Date Collected: 1/14/2010 22:56:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492006|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5101.0	5101.0	106	%			22:58:02
1	Y RADIAL	6739.5	6739.5	131.4	%			22:58:02
1	Al 396.153Radial†	27570.9	25900.4	20778	ug/L	20778	ppb	22:58:02
1	Ca 317.933Radial†	5574.3	5220.7	8791.4	ug/L	8791.4	ppb	22:58:02
1	Fe 238.204 Radial†	7099.0	6658.2	62593	ug/L	62593	ppb	22:58:02
1	K 766.490 Radial†	27271.3	22828.2	4568.7	ug/L	4568.7	ppb	22:58:02
1	Mg 279.077 IEC†	151.5	140.8	4878.2	ug/L	4878.2	ppb	22:58:22
1	Na 589.592 Radial†	6950.8	8095.7	2623.1	ug/L	2623.1	ppb	22:58:02
1	Sr 421.552†	11752.9	11022.2	78.500	ug/L	78.500	ppb	22:58:02
1	Sc 361.383	856108.4	856108.4	105.19	%			22:59:19
1	Y 371.029	881080.6	881080.6	128.44	%			22:59:19
1	Ag 328.068†	-3666.6	-3767.2	2.0430	ug/L	2.0430	ppb	22:59:24
1	As 188.979†	-22.0	-2.1	23.017	ug/L	23.017	ppb	22:59:44
1	B 249.677†	77.1	591.8	4.1055	ug/L	4.1055	ppb	22:59:24
1	Ba 233.527†	32981.4	31352.5	261.99	ug/L	261.99	ppb	22:59:24
1	Be 313.107†	-4566.4	-28.8	2.4308	ug/L	2.4308	ppb	22:59:24
1	Cd 226.502†	322.6	504.2	-0.5798	ug/L	-0.5798	ppb	22:59:44
1	Co 228.616†	2197.4	2161.7	43.925	ug/L	43.925	ppb	22:59:44
1	Cr 267.716†	2312.3	2102.5	26.186	ug/L	26.186	ppb	22:59:44
1	Cu 324.752†	14437.3	7426.9	27.147	ug/L	27.147	ppb	22:59:24
1	Mn 257.610†	1944198.5	1847862.2	2172.9	ug/L	2172.9	ppb	22:59:19
1	Mo 202.031†	158.3	131.2	14.701	ug/L	14.701	ppb	22:59:44
1	Ni 231.604†	1314.5	1174.5	30.890	ug/L	30.890	ppb	22:59:44
1	P 214.914†	1071.2	790.5	454.46	ug/L	454.46	ppb	22:59:44
1	Pb 220.353†	275.4	326.4	40.439	ug/L	40.439	ppb	22:59:44
1	S 181.975 Axial†	328.2	265.5	392.41	ug/L	392.41	ppb	22:59:44
1	Sb 206.836†	41.4	6.6	0.1381	ug/L	0.1381	ppb	22:59:44
1	Se 196.026†	-296.8	-251.8	37.691	ug/L	37.691	ppb	22:59:44
1	Si 251.611†	210841.6	199992.3	6743.0	ug/L	6743.0	ppb	22:59:24
1	Sn 189.927†	-39.3	-43.4	-5.6458	ug/L	-5.6458	ppb	22:59:44
1	Ti 334.940†	658140.2	627052.8	1076.6	ug/L	1076.6	ppb	22:59:19
1	Tl 190.801†	-122.2	-72.2	-4.1348	ug/L	-4.1348	ppb	22:59:44
1	U 409.014†	-9587.7	-7073.6	-233.10	ug/L	-233.10	ppb	22:59:19
1	V 292.402†	6301.0	7397.3	42.900	ug/L	42.900	ppb	22:59:24
1	Zn 213.857†	22304.2	20343.3	196.59	ug/L	196.59	ppb	22:59:24
1	SiO2†	216687.4	205539.2	14735	ug/L	14735	ppb	23:00:52
2	Sc Radial	4743.1	4743.1	99.0	%			22:58:27
2	Y RADIAL	6275.8	6275.8	122.3	%			22:58:27
2	Al 396.153Radial†	25952.6	26219.3	21034	ug/L	21034	ppb	22:58:27
2	Ca 317.933Radial†	5240.9	5279.0	8889.5	ug/L	8889.5	ppb	22:58:27
2	Fe 238.204 Radial†	6689.0	6747.0	63428	ug/L	63428	ppb	22:58:27
2	K 766.490 Radial†	25944.1	23420.1	4687.2	ug/L	4687.2	ppb	22:58:27
2	Mg 279.077 IEC†	154.7	154.8	5368.7	ug/L	5368.7	ppb	22:58:47
2	Na 589.592 Radial†	6458.7	8091.2	2621.6	ug/L	2621.6	ppb	22:58:27
2	Sr 421.552†	11017.2	11111.8	79.138	ug/L	79.138	ppb	22:58:27
2	Sc 361.383	856852.6	856852.6	105.28	%			22:59:50
2	Y 371.029	880433.4	880433.4	128.35	%			22:59:50
2	Ag 328.068†	-3619.4	-3719.4	2.5468	ug/L	2.5468	ppb	22:59:55
2	As 188.979†	-18.1	1.7	24.923	ug/L	24.923	ppb	23:00:15
2	B 249.677†	174.5	684.3	6.2215	ug/L	6.2215	ppb	22:59:55
2	Ba 233.527†	33268.9	31598.4	264.06	ug/L	264.06	ppb	22:59:55
2	Be 313.107†	-4579.8	-37.8	2.4329	ug/L	2.4329	ppb	22:59:55
2	Cd 226.502†	348.0	528.1	-0.3855	ug/L	-0.3855	ppb	23:00:15
2	Co 228.616†	2189.4	2152.3	43.704	ug/L	43.704	ppb	23:00:15
2	Cr 267.716†	2295.6	2084.7	25.992	ug/L	25.992	ppb	23:00:15
2	Cu 324.752†	14597.4	7567.0	27.637	ug/L	27.637	ppb	22:59:55
2	Mn 257.610†	1951913.6	1853585.0	2179.6	ug/L	2179.6	ppb	22:59:50
2	Mo 202.031†	154.1	127.1	14.461	ug/L	14.461	ppb	23:00:15
2	Ni 231.604†	1298.9	1158.6	30.472	ug/L	30.472	ppb	23:00:15

2	P 214.914†	1070.7	789.1	452.90 ug/L	452.90 ppb	23:00:15
2	Pb 220.353†	286.1	336.3	41.691 ug/L	41.691 ppb	23:00:15
2	S 181.975 Axial†	325.5	262.7	388.07 ug/L	388.07 ppb	23:00:15
2	Sb 206.836†	32.5	-1.8	-2.9527 ug/L	-2.9527 ppb	23:00:15
2	Se 196.026†	-294.9	-249.7	41.819 ug/L	41.819 ppb	23:00:15
2	Si 251.611†	212725.4	201607.4	6797.4 ug/L	6797.4 ppb	22:59:55
2	Sn 189.927†	-37.1	-41.3	-5.2251 ug/L	-5.2251 ppb	23:00:15
2	Ti 334.940†	660245.8	628509.4	1079.1 ug/L	1079.1 ppb	22:59:50
2	Tl 190.801†	-115.5	-65.9	-2.0362 ug/L	-2.0362 ppb	23:00:15
2	U 409.014†	-9489.6	-6972.6	-229.97 ug/L	-229.97 ppb	22:59:50
2	V 292.402†	6384.6	7471.4	43.321 ug/L	43.321 ppb	22:59:55
2	Zn 213.857†	22502.7	20513.5	198.21 ug/L	198.21 ppb	22:59:55
2	SiO2†	215391.0	204129.0	14634 ug/L	14634 ppb	23:00:57
3	Sc Radial	5138.5	5138.5	107 %		22:58:52
3	Y RADIAL	6789.1	6789.1	132.4 %		22:58:52
3	Al 396.153Radial†	28059.0	26166.3	20992 ug/L	20992 ppb	22:58:52
3	Ca 317.933Radial†	5656.7	5259.3	8856.4 ug/L	8856.4 ppb	22:58:52
3	Fe 238.204 Radial†	7215.2	6717.8	63154 ug/L	63154 ppb	22:58:52
3	K 766.490 Radial†	27702.3	23043.1	4611.7 ug/L	4611.7 ppb	22:58:52
3	Mg 279.077 IEC†	154.7	142.7	4945.0 ug/L	4945.0 ppb	22:59:12
3	Na 589.592 Radial†	7131.2	8216.2	2662.1 ug/L	2662.1 ppb	22:58:52
3	Sr 421.552†	11951.6	11126.8	79.245 ug/L	79.245 ppb	22:58:52
3	Sc 361.383	857238.7	857238.7	105.33 %		23:00:21
3	Y 371.029	879948.4	879948.4	128.28 %		23:00:21
3	Ag 328.068†	-3570.5	-3671.5	2.6929 ug/L	2.6929 ppb	23:00:26
3	As 188.979†	-19.9	-0.0	24.090 ug/L	24.090 ppb	23:00:46
3	B 249.677†	214.6	722.3	7.1893 ug/L	7.1893 ppb	23:00:26
3	Ba 233.527†	32971.2	31301.5	261.59 ug/L	261.59 ppb	23:00:26
3	Be 313.107†	-4523.7	17.4	2.4531 ug/L	2.4531 ppb	23:00:26
3	Cd 226.502†	358.0	537.4	-0.2492 ug/L	-0.2492 ppb	23:00:46
3	Co 228.616†	2203.3	2164.5	43.976 ug/L	43.976 ppb	23:00:46
3	Cr 267.716†	2283.6	2072.3	25.841 ug/L	25.841 ppb	23:00:46
3	Cu 324.752†	14557.2	7522.6	27.482 ug/L	27.482 ppb	23:00:26
3	Mn 257.610†	1950879.8	1851768.3	2177.5 ug/L	2177.5 ppb	23:00:21
3	Mo 202.031†	163.0	135.5	15.065 ug/L	15.065 ppb	23:00:46
3	Ni 231.604†	1286.3	1146.1	30.142 ug/L	30.142 ppb	23:00:46
3	P 214.914†	1073.1	791.0	454.32 ug/L	454.32 ppb	23:00:46
3	Pb 220.353†	270.4	321.3	39.786 ug/L	39.786 ppb	23:00:46
3	S 181.975 Axial†	328.9	265.8	392.69 ug/L	392.69 ppb	23:00:46
3	Sb 206.836†	39.0	4.3	-0.7031 ug/L	-0.7031 ppb	23:00:46
3	Se 196.026†	-301.7	-256.1	36.674 ug/L	36.674 ppb	23:00:46
3	Si 251.611†	210413.8	199321.8	6720.3 ug/L	6720.3 ppb	23:00:26
3	Sn 189.927†	-41.1	-45.2	-5.9440 ug/L	-5.9440 ppb	23:00:46
3	Ti 334.940†	660094.8	628083.5	1078.4 ug/L	1078.4 ppb	23:00:21
3	Tl 190.801†	-125.2	-75.0	-4.9750 ug/L	-4.9750 ppb	23:00:46
3	U 409.014†	-9622.8	-7095.0	-233.85 ug/L	-233.85 ppb	23:00:21
3	V 292.402†	6241.5	7332.9	42.356 ug/L	42.356 ppb	23:00:26
3	Zn 213.857†	22254.5	20268.2	195.79 ug/L	195.79 ppb	23:00:26
3	SiO2†	218508.1	206996.2	14840 ug/L	14840 ppb	23:01:02

Mean Data: 243492006|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	856733.2	105.27	%	0.071				0.07%
Sc Radial	4994.2	104	%	4.6				4.37%
Y 371.029	880487.5	128.36	%	0.083				0.06%
Y RADIAL	6601.5	128.7	%	5.52				4.29%
Ag 328.068†	-3719.4	2.4276	ug/L	0.34094	2.4276	ppb	0.34094	14.04%
Al 396.153Radial†	26095.3	20935	ug/L	137.1	20935	ppb	137.1	0.65%
As 188.979†	-0.2	24.010	ug/L	0.9557	24.010	ppb	0.9557	3.98%
B 249.677†	666.1	5.8388	ug/L	1.57713	5.8388	ppb	1.57713	27.01%
Ba 233.527†	31417.4	262.55	ug/L	1.326	262.55	ppb	1.326	0.50%
Be 313.107†	-16.4	2.4389	ug/L	0.01235	2.4389	ppb	0.01235	0.51%
Ca 317.933Radial†	5253.0	8845.8	ug/L	49.91	8845.8	ppb	49.91	0.56%
Cd 226.502†	523.3	-0.4049	ug/L	0.16614	-0.4049	ppb	0.16614	41.04%
Co 228.616†	2159.5	43.868	ug/L	0.1445	43.868	ppb	0.1445	0.33%
Cr 267.716†	2086.5	26.006	ug/L	0.1727	26.006	ppb	0.1727	0.66%
Cu 324.752†	7505.5	27.422	ug/L	0.2504	27.422	ppb	0.2504	0.91%
Fe 238.204 Radial†	6707.7	63058	ug/L	425.7	63058	ppb	425.7	0.68%
K 766.490 Radial†	23097.1	4622.5	ug/L	60.01	4622.5	ppb	60.01	1.30%

Mg 279.077 IEC†	146.1	5064.0 ug/L	266.00	5064.0 ppb	266.00	5.25%
Mn 257.610†	1851071.8	2176.7 ug/L	3.46	2176.7 ppb	3.46	0.16%
Mo 202.031†	131.2	14.742 ug/L	0.3039	14.742 ppb	0.3039	2.06%
Na 589.592 Radial†	8134.4	2635.6 ug/L	22.98	2635.6 ppb	22.98	0.87%
Ni 231.604†	1159.7	30.501 ug/L	0.3749	30.501 ppb	0.3749	1.23%
P 214.914†	790.2	453.89 ug/L	0.862	453.89 ppb	0.862	0.19%
Pb 220.353†	328.0	40.638 ug/L	0.9685	40.638 ppb	0.9685	2.38%
S 181.975 Axial†	264.7	391.06 ug/L	2.589	391.06 ppb	2.589	0.66%
Sb 206.836†	3.0	-1.1725 ug/L	1.59799	-1.1725 ppb	1.59799	136.29%
Se 196.026†	-252.6	38.728 ug/L	2.7246	38.728 ppb	2.7246	7.04%
Si 251.611†	200307.1	6753.6 ug/L	39.62	6753.6 ppb	39.62	0.59%
Sn 189.927†	-43.3	-5.6050 ug/L	0.36115	-5.6050 ppb	0.36115	6.44%
Sr 421.552†	11086.9	78.961 ug/L	0.4028	78.961 ppb	0.4028	0.51%
Ti 334.940†	627881.9	1078.0 ug/L	1.27	1078.0 ppb	1.27	0.12%
Tl 190.801†	-71.0	-3.7153 ug/L	1.51367	-3.7153 ppb	1.51367	40.74%
U 409.014†	-7047.1	-232.31 ug/L	2.058	-232.31 ppb	2.058	0.89%
V 292.402†	7400.5	42.859 ug/L	0.4840	42.859 ppb	0.4840	1.13%
Zn 213.857†	20375.0	196.86 ug/L	1.231	196.86 ppb	1.231	0.63%
SiO2†	205554.8	14736 ug/L	102.8	14736 ppb	102.8	0.70%

Sequence No.: 70
Sample ID: 243492007|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 79
Date Collected: 1/14/2010 23:03:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243492007|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5136.8	5136.8	107	%			23:05:27
1	Y RADIAL	6022.2	6022.2	117.4	%			23:05:27
1	Al 396.153Radial†	79291.6	73961.2	59336	ug/L	59336	ppb	23:05:07
1	Ca 317.933Radial†	11188.0	10420.3	17547	ug/L	17547	ppb	23:05:07
1	Fe 238.204 Radial†	11607.9	10817.2	101690	ug/L	101690	ppb	23:05:07
1	K 766.490 Radial†	75364.2	67507.4	13517	ug/L	13517	ppb	23:05:07
1	Mg 279.077 IEC†	407.3	378.4	13178	ug/L	13178	ppb	23:05:27
1	Na 589.592 Radial†	552.6	2082.4	674.71	ug/L	674.71	ppb	23:05:07
1	Sr 421.552†	27655.3	25777.9	183.61	ug/L	183.61	ppb	23:05:07
1	Sc 361.383	872007.5	872007.5	107.14	%			23:06:24
1	Y 371.029	797679.8	797679.8	116.29	%			23:06:24
1	Ag 328.068†	-6599.6	-6441.2	2.0534	ug/L	2.0534	ppb	23:06:29
1	As 188.979†	-43.0	-21.3	41.397	ug/L	41.397	ppb	23:06:49
1	B 249.677†	836.3	1299.1	14.964	ug/L	14.964	ppb	23:06:29
1	Ba 233.527†	123183.1	114968.3	956.88	ug/L	956.88	ppb	23:06:29
1	Be 313.107†	-6553.1	-1804.0	6.4010	ug/L	6.4010	ppb	23:06:29
1	Cd 226.502†	763.0	909.7	0.1739	ug/L	0.1739	ppb	23:06:49
1	Co 228.616†	2361.3	2276.5	41.803	ug/L	41.803	ppb	23:06:49
1	Cr 267.716†	10919.7	10095.9	121.45	ug/L	121.45	ppb	23:06:29
1	Cu 324.752†	21459.2	13730.3	49.302	ug/L	49.302	ppb	23:06:29
1	Mn 257.610†	2530961.6	2361803.3	2779.0	ug/L	2779.0	ppb	23:06:24
1	Mo 202.031†	-21.0	-38.9	5.2119	ug/L	5.2119	ppb	23:06:49
1	Ni 231.604†	3111.6	2829.0	74.441	ug/L	74.441	ppb	23:06:49
1	P 214.914†	1476.7	1150.4	658.19	ug/L	658.19	ppb	23:06:49
1	Pb 220.353†	697.7	715.7	94.933	ug/L	94.933	ppb	23:06:49
1	S 181.975 Axial†	582.9	497.6	731.43	ug/L	731.43	ppb	23:06:49
1	Sb 206.836†	53.0	16.7	-2.9964	ug/L	-2.9964	ppb	23:06:49
1	Se 196.026†	-486.5	-423.7	52.756	ug/L	52.756	ppb	23:06:49
1	Si 251.611†	311457.7	290245.1	9786.1	ug/L	9786.1	ppb	23:06:29
1	Sn 189.927†	-109.3	-108.1	-15.615	ug/L	-15.615	ppb	23:06:49
1	Ti 334.940†	1956528.4	1827462.1	3136.4	ug/L	3136.4	ppb	23:06:24
1	Tl 190.801†	-184.5	-128.3	-2.4084	ug/L	-2.4084	ppb	23:06:49
1	U 409.014†	-7545.6	-5001.5	-171.59	ug/L	-171.59	ppb	23:06:29
1	V 292.402†	30596.3	29963.4	197.89	ug/L	197.89	ppb	23:06:29
1	Zn 213.857†	25015.5	22487.3	213.87	ug/L	213.87	ppb	23:06:29
1	SiO2†	318711.7	297005.1	21293	ug/L	21293	ppb	23:07:57
2	Sc Radial	5129.4	5129.4	107	%			23:05:52
2	Y RADIAL	6015.2	6015.2	117.3	%			23:05:52
2	Al 396.153Radial†	80659.0	75345.9	60447	ug/L	60447	ppb	23:05:32
2	Ca 317.933Radial†	11334.6	10572.4	17803	ug/L	17803	ppb	23:05:32
2	Fe 238.204 Radial†	11811.7	11023.3	103630	ug/L	103630	ppb	23:05:32
2	K 766.490 Radial†	76300.3	68483.9	13713	ug/L	13713	ppb	23:05:32
2	Mg 279.077 IEC†	404.6	376.4	13106	ug/L	13106	ppb	23:05:52
2	Na 589.592 Radial†	580.6	2109.3	683.41	ug/L	683.41	ppb	23:05:32
2	Sr 421.552†	28071.5	26204.1	186.65	ug/L	186.65	ppb	23:05:32
2	Sc 361.383	873459.0	873459.0	107.32	%			23:06:55
2	Y 371.029	799521.5	799521.5	116.55	%			23:06:55
2	Ag 328.068†	-6565.7	-6399.3	2.8851	ug/L	2.8851	ppb	23:07:00
2	As 188.979†	-48.6	-26.4	39.528	ug/L	39.528	ppb	23:07:20
2	B 249.677†	925.5	1380.9	16.642	ug/L	16.642	ppb	23:07:00
2	Ba 233.527†	123291.5	114878.3	956.19	ug/L	956.19	ppb	23:07:00
2	Be 313.107†	-6339.8	-1595.0	6.4805	ug/L	6.4805	ppb	23:07:00
2	Cd 226.502†	768.8	913.9	0.0220	ug/L	0.0220	ppb	23:07:20
2	Co 228.616†	2336.6	2249.9	41.198	ug/L	41.198	ppb	23:07:20
2	Cr 267.716†	11002.2	10155.9	122.20	ug/L	122.20	ppb	23:07:00
2	Cu 324.752†	21404.7	13646.3	49.139	ug/L	49.139	ppb	23:07:00
2	Mn 257.610†	2531219.5	2358118.2	2774.9	ug/L	2774.9	ppb	23:06:55
2	Mo 202.031†	-19.5	-37.5	5.4738	ug/L	5.4738	ppb	23:07:20
2	Ni 231.604†	3087.6	2801.8	73.726	ug/L	73.726	ppb	23:07:20

2	P 214.914†	1485.8	1156.6	660.87 ug/L	660.87 ppb	23:07:20
2	Pb 220.353†	665.2	684.4	90.977 ug/L	90.977 ppb	23:07:20
2	S 181.975 Axial†	575.0	489.3	718.89 ug/L	718.89 ppb	23:07:20
2	Sb 206.836†	59.9	23.1	-0.6833 ug/L	-0.6833 ppb	23:07:20
2	Se 196.026†	-487.2	-423.6	59.234 ug/L	59.234 ppb	23:07:20
2	Si 251.611†	311892.1	290166.8	9783.5 ug/L	9783.5 ppb	23:07:00
2	Sn 189.927†	-122.4	-120.2	-17.777 ug/L	-17.777 ppb	23:07:20
2	Ti 334.940†	1958796.1	1826540.7	3134.9 ug/L	3134.9 ppb	23:06:55
2	Tl 190.801†	-180.0	-123.8	-1.0057 ug/L	-1.0057 ppb	23:07:20
2	U 409.014†	-7704.8	-5138.2	-176.18 ug/L	-176.18 ppb	23:07:00
2	V 292.402†	30590.9	29910.9	197.22 ug/L	197.22 ppb	23:07:00
2	Zn 213.857†	25082.4	22510.8	213.93 ug/L	213.93 ppb	23:07:00
2	SiO2†	317459.6	295344.2	21174 ug/L	21174 ppb	23:08:02
3	Sc Radial	5138.3	5138.3	107 %		23:06:17
3	Y RADIAL	6040.1	6040.1	117.8 %		23:06:17
3	Al 396.153Radial†	81407.1	75913.5	60902 ug/L	60902 ppb	23:05:57
3	Ca 317.933Radial†	11437.9	10650.4	17935 ug/L	17935 ppb	23:05:57
3	Fe 238.204 Radial†	11904.3	11090.6	104260 ug/L	104260 ppb	23:05:57
3	K 766.490 Radial†	76916.2	68935.1	13803 ug/L	13803 ppb	23:05:57
3	Mg 279.077 IEC†	408.5	379.4	13211 ug/L	13211 ppb	23:06:17
3	Na 589.592 Radial†	591.4	2118.4	686.37 ug/L	686.37 ppb	23:05:57
3	Sr 421.552†	28327.3	26397.4	188.02 ug/L	188.02 ppb	23:05:57
3	Sc 361.383	865704.2	865704.2	106.37 %		23:07:26
3	Y 371.029	792798.4	792798.4	115.57 %		23:07:26
3	Ag 328.068†	-6473.1	-6367.1	3.2511 ug/L	3.2511 ppb	23:07:31
3	As 188.979†	-46.3	-24.6	40.433 ug/L	40.433 ppb	23:07:51
3	B 249.677†	876.0	1342.1	15.592 ug/L	15.592 ppb	23:07:31
3	Ba 233.527†	122695.7	115347.2	960.10 ug/L	960.10 ppb	23:07:31
3	Be 313.107†	-6415.4	-1719.0	6.4176 ug/L	6.4176 ppb	23:07:31
3	Cd 226.502†	762.5	914.4	-0.0363 ug/L	-0.0363 ppb	23:07:51
3	Co 228.616†	2350.1	2282.0	41.903 ug/L	41.903 ppb	23:07:51
3	Cr 267.716†	10979.5	10226.3	123.04 ug/L	123.04 ppb	23:07:31
3	Cu 324.752†	21384.7	13806.1	49.681 ug/L	49.681 ppb	23:07:31
3	Mn 257.610†	2499623.6	2349541.4	2764.9 ug/L	2764.9 ppb	23:07:26
3	Mo 202.031†	-11.9	-30.5	6.0461 ug/L	6.0461 ppb	23:07:51
3	Ni 231.604†	3071.5	2812.4	74.005 ug/L	74.005 ppb	23:07:51
3	P 214.914†	1497.7	1180.2	675.48 ug/L	675.48 ppb	23:07:51
3	Pb 220.353†	700.9	723.5	96.020 ug/L	96.020 ppb	23:07:51
3	S 181.975 Axial†	580.5	499.3	733.78 ug/L	733.78 ppb	23:07:51
3	Sb 206.836†	59.7	23.4	-0.4673 ug/L	-0.4673 ppb	23:07:51
3	Se 196.026†	-488.4	-428.7	57.875 ug/L	57.875 ppb	23:07:51
3	Si 251.611†	311000.8	291932.1	9843.0 ug/L	9843.0 ppb	23:07:31
3	Sn 189.927†	-106.8	-106.6	-15.228 ug/L	-15.228 ppb	23:07:51
3	Ti 334.940†	1937689.0	1823046.8	3128.9 ug/L	3128.9 ppb	23:07:26
3	Tl 190.801†	-163.0	-109.3	3.5269 ug/L	3.5269 ppb	23:07:51
3	U 409.014†	-7543.8	-5051.1	-173.47 ug/L	-173.47 ppb	23:07:31
3	V 292.402†	30571.5	30148.0	198.86 ug/L	198.86 ppb	23:07:31
3	Zn 213.857†	24973.6	22617.8	214.93 ug/L	214.93 ppb	23:07:31
3	SiO2†	317303.7	297847.3	21353 ug/L	21353 ppb	23:08:07

Mean Data: 243492007|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	870390.2	106.95	%	0.507				0.47%
Sc Radial	5134.8	107	%	0.1				0.09%
Y 371.029	796666.6	116.14	%	0.506				0.44%
Y RADIAL	6025.8	117.5	%	0.25				0.21%
Ag 328.068†	-6402.5	2.7299	ug/L	0.61372	2.7299	ppb	0.61372	22.48%
Al 396.153Radial†	75073.5	60229	ug/L	805.6	60229	ppb	805.6	1.34%
As 188.979†	-24.1	40.453	ug/L	0.9343	40.453	ppb	0.9343	2.31%
B 249.677†	1340.7	15.732	ug/L	0.8477	15.732	ppb	0.8477	5.39%
Ba 233.527†	115064.6	957.72	ug/L	2.088	957.72	ppb	2.088	0.22%
Be 313.107†	-1706.0	6.4330	ug/L	0.04189	6.4330	ppb	0.04189	0.65%
Ca 317.933Radial†	10547.7	17762	ug/L	197.0	17762	ppb	197.0	1.11%
Cd 226.502†	912.6	0.0532	ug/L	0.10854	0.0532	ppb	0.10854	204.05%
Co 228.616†	2269.5	41.634	ug/L	0.3815	41.634	ppb	0.3815	0.92%
Cr 267.716†	10159.3	122.23	ug/L	0.796	122.23	ppb	0.796	0.65%
Cu 324.752†	13727.6	49.374	ug/L	0.2782	49.374	ppb	0.2782	0.56%
Fe 238.204 Radial†	10977.1	103190	ug/L	1339.2	103190	ppb	1339.2	1.30%
K 766.490 Radial†	68308.8	13678	ug/L	146.1	13678	ppb	146.1	1.07%

Mg 279.077 IEC†	378.1	13165 ug/L	53.7	13165 ppb	53.7	0.41%
Mn 257.610†	2356487.6	2773.0 ug/L	7.26	2773.0 ppb	7.26	0.26%
Mo 202.031†	-35.6	5.5773 ug/L	0.42661	5.5773 ppb	0.42661	7.65%
Na 589.592 Radial†	2103.3	681.50 ug/L	6.061	681.50 ppb	6.061	0.89%
Ni 231.604†	2814.4	74.058 ug/L	0.3604	74.058 ppb	0.3604	0.49%
P 214.914†	1162.4	664.85 ug/L	9.303	664.85 ppb	9.303	1.40%
Pb 220.353†	707.9	93.977 ug/L	2.6539	93.977 ppb	2.6539	2.82%
S 181.975 Axial†	495.4	728.03 ug/L	8.003	728.03 ppb	8.003	1.10%
Sb 206.836†	21.1	-1.3823 ug/L	1.40201	-1.3823 ppb	1.40201	101.42%
Se 196.026†	-425.3	56.622 ug/L	3.4157	56.622 ppb	3.4157	6.03%
Si 251.611†	290781.3	9804.2 ug/L	33.62	9804.2 ppb	33.62	0.34%
Sn 189.927†	-111.6	-16.207 ug/L	1.3736	-16.207 ppb	1.3736	8.48%
Sr 421.552†	26126.4	186.09 ug/L	2.258	186.09 ppb	2.258	1.21%
Ti 334.940†	1825683.2	3133.4 ug/L	3.98	3133.4 ppb	3.98	0.13%
Tl 190.801†	-120.5	0.0376 ug/L	3.10214	0.0376 ppb	3.10214	>999.9%
U 409.014†	-5063.6	-173.75 ug/L	2.305	-173.75 ppb	2.305	1.33%
V 292.402†	30007.4	197.99 ug/L	0.824	197.99 ppb	0.824	0.42%
Zn 213.857†	22538.6	214.24 ug/L	0.595	214.24 ppb	0.595	0.28%
SiO2†	296732.2	21273 ug/L	91.3	21273 ppb	91.3	0.43%

Sequence No.: 71
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/14/2010 23:10:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5027.5	5027.5	105	%			23:12:10
1	Y RADIAL	5334.7	5334.7	104.0	%			23:12:10
1	Al 396.153Radial†	6615.1	6307.6	5035.1	ug/L	5035.1	ppb	23:12:10
1	Ca 317.933Radial†	3141.5	2978.8	5016.1	ug/L	5016.1	ppb	23:12:30
1	Fe 238.204 Radial†	572.7	535.9	5053.4	ug/L	5053.4	ppb	23:12:30
1	K 766.490 Radial†	29887.0	25695.6	5141.6	ug/L	5141.6	ppb	23:12:10
1	Mg 279.077 IEC†	157.6	148.7	5219.3	ug/L	5219.3	ppb	23:12:30
1	Na 589.592 Radial†	30035.5	30191.4	9782.2	ug/L	9782.2	ppb	23:12:10
1	Sr 421.552†	75282.2	71728.5	511.24	ug/L	511.24	ppb	23:12:10
1	Sc 361.383	844385.1	844385.1	103.75	%			23:13:28
1	Y 371.029	700071.8	700071.8	102.06	%			23:13:28
1	Ag 328.068†	106365.7	102239.7	505.52	ug/L	505.52	ppb	23:13:33
1	As 188.979†	1177.5	1153.8	523.72	ug/L	523.72	ppb	23:13:53
1	B 249.677†	21637.4	21373.9	517.89	ug/L	517.89	ppb	23:13:33
1	Ba 233.527†	65391.2	63026.2	523.91	ug/L	523.91	ppb	23:13:33
1	Be 313.107†	1349385.5	1304925.5	519.46	ug/L	519.46	ppb	23:13:28
1	Cd 226.502†	46320.6	44844.0	525.51	ug/L	525.51	ppb	23:13:33
1	Co 228.616†	25045.2	24212.7	525.90	ug/L	525.90	ppb	23:13:33
1	Cr 267.716†	45893.2	44138.7	521.36	ug/L	521.36	ppb	23:13:33
1	Cu 324.752†	175507.7	162866.1	519.88	ug/L	519.88	ppb	23:13:33
1	Mn 257.610†	457790.2	440839.5	517.23	ug/L	517.23	ppb	23:13:28
1	Mo 202.031†	7301.5	7018.3	521.42	ug/L	521.42	ppb	23:13:53
1	Ni 231.604†	20775.1	19949.1	524.83	ug/L	524.83	ppb	23:13:33
1	P 214.914†	4459.7	4070.7	2496.8	ug/L	2496.8	ppb	23:13:53
1	Pb 220.353†	4126.2	4041.7	519.37	ug/L	519.37	ppb	23:13:53
1	S 181.975 Axial†	773.0	698.6	1041.6	ug/L	1041.6	ppb	23:13:53
1	Sb 206.836†	1508.4	1421.1	538.26	ug/L	538.26	ppb	23:13:53
1	Se 196.026†	790.9	792.6	548.47	ug/L	548.47	ppb	23:13:53
1	Si 251.611†	82257.2	78838.2	2651.8	ug/L	2651.8	ppb	23:13:33
1	Sn 189.927†	2926.4	2814.5	521.35	ug/L	521.35	ppb	23:13:53
1	Ti 334.940†	314331.2	304357.0	521.96	ug/L	521.96	ppb	23:13:28
1	Tl 190.801†	1643.0	1627.5	524.13	ug/L	524.13	ppb	23:13:53
1	U 409.014†	15479.4	16960.9	539.95	ug/L	539.95	ppb	23:13:33
1	V 292.402†	73608.1	72354.7	528.98	ug/L	528.98	ppb	23:13:33
1	Zn 213.857†	55862.1	52982.7	523.88	ug/L	523.88	ppb	23:13:33
1	SiO2†	80952.7	77570.5	5547.0	ug/L	5547.0	ppb	23:15:01
2	Sc Radial	5019.4	5019.4	105	%			23:12:35
2	Y RADIAL	5351.5	5351.5	104.3	%			23:12:35
2	Al 396.153Radial†	6637.1	6338.8	5060.4	ug/L	5060.4	ppb	23:12:35
2	Ca 317.933Radial†	3145.2	2987.1	5030.2	ug/L	5030.2	ppb	23:12:55
2	Fe 238.204 Radial†	574.6	538.6	5078.8	ug/L	5078.8	ppb	23:12:55
2	K 766.490 Radial†	30089.9	25935.3	5189.6	ug/L	5189.6	ppb	23:12:35
2	Mg 279.077 IEC†	155.8	147.2	5167.7	ug/L	5167.7	ppb	23:12:55
2	Na 589.592 Radial†	30101.9	30301.1	9817.7	ug/L	9817.7	ppb	23:12:35
2	Sr 421.552†	75623.5	72170.0	514.38	ug/L	514.38	ppb	23:12:35
2	Sc 361.383	849923.7	849923.7	104.43	%			23:13:59
2	Y 371.029	704076.3	704076.3	102.64	%			23:13:59
2	Ag 328.068†	104758.5	100032.6	494.66	ug/L	494.66	ppb	23:14:04
2	As 188.979†	1159.7	1129.3	512.74	ug/L	512.74	ppb	23:14:24
2	B 249.677†	21455.7	21063.9	510.37	ug/L	510.37	ppb	23:14:04
2	Ba 233.527†	64573.2	61832.2	513.99	ug/L	513.99	ppb	23:14:04
2	Be 313.107†	1354705.8	1301544.6	518.12	ug/L	518.12	ppb	23:13:59
2	Cd 226.502†	45721.5	43979.4	515.36	ug/L	515.36	ppb	23:14:04
2	Co 228.616†	24775.2	23796.8	516.85	ug/L	516.85	ppb	23:14:04
2	Cr 267.716†	45437.0	43413.6	512.80	ug/L	512.80	ppb	23:14:04
2	Cu 324.752†	173991.5	160311.8	511.73	ug/L	511.73	ppb	23:14:04
2	Mn 257.610†	460251.1	440320.6	516.63	ug/L	516.63	ppb	23:13:59
2	Mo 202.031†	7245.9	6919.2	514.07	ug/L	514.07	ppb	23:14:24
2	Ni 231.604†	20490.5	19546.1	514.23	ug/L	514.23	ppb	23:14:04

2	P 214.914†	4405.2	3990.4	2447.1 ug/L	2447.1 ppb	23:14:24
2	Pb 220.353†	4093.6	3984.5	512.05 ug/L	512.05 ppb	23:14:24
2	S 181.975 Axial†	760.6	681.9	1016.7 ug/L	1016.7 ppb	23:14:24
2	Sb 206.836†	1485.5	1389.8	526.50 ug/L	526.50 ppb	23:14:24
2	Se 196.026†	789.9	786.8	544.62 ug/L	544.62 ppb	23:14:24
2	Si 251.611†	81310.7	77415.2	2603.9 ug/L	2603.9 ppb	23:14:04
2	Sn 189.927†	2905.1	2775.7	514.18 ug/L	514.18 ppb	23:14:24
2	Ti 334.940†	316446.1	304407.9	522.06 ug/L	522.06 ppb	23:13:59
2	Tl 190.801†	1641.9	1616.2	520.56 ug/L	520.56 ppb	23:14:24
2	U 409.014†	15244.3	16638.5	529.67 ug/L	529.67 ppb	23:14:04
2	V 292.402†	72841.7	71158.5	520.23 ug/L	520.23 ppb	23:14:04
2	Zn 213.857†	55284.5	52078.7	514.94 ug/L	514.94 ppb	23:14:04
2	SiO2†	81595.4	77677.5	5554.9 ug/L	5554.9 ppb	23:15:06
3	Sc Radial	4972.8	4972.8	104 %		23:13:00
3	Y RADIAL	5306.9	5306.9	103.5 %		23:13:00
3	Al 396.153Radial†	6586.9	6349.7	5069.1 ug/L	5069.1 ppb	23:13:00
3	Ca 317.933Radial†	3115.8	2987.0	5029.9 ug/L	5029.9 ppb	23:13:20
3	Fe 238.204 Radial†	571.9	541.1	5102.2 ug/L	5102.2 ppb	23:13:20
3	K 766.490 Radial†	29840.7	25964.3	5195.5 ug/L	5195.5 ppb	23:13:00
3	Mg 279.077 IEC†	157.5	150.3	5275.0 ug/L	5275.0 ppb	23:13:20
3	Na 589.592 Radial†	29604.6	30091.1	9749.7 ug/L	9749.7 ppb	23:13:00
3	Sr 421.552†	74628.5	71887.7	512.37 ug/L	512.37 ppb	23:13:00
3	Sc 361.383	850186.0	850186.0	104.46 %		23:14:30
3	Y 371.029	705312.6	705312.6	102.82 %		23:14:30
3	Ag 328.068†	104771.4	100014.0	494.57 ug/L	494.57 ppb	23:14:35
3	As 188.979†	1175.1	1143.7	519.23 ug/L	519.23 ppb	23:14:55
3	B 249.677†	21182.6	20796.2	503.86 ug/L	503.86 ppb	23:14:35
3	Ba 233.527†	64155.0	61412.8	510.51 ug/L	510.51 ppb	23:14:35
3	Be 313.107†	1354658.7	1301099.3	517.94 ug/L	517.94 ppb	23:14:30
3	Cd 226.502†	45532.8	43785.2	513.08 ug/L	513.08 ppb	23:14:35
3	Co 228.616†	24591.2	23613.4	512.87 ug/L	512.87 ppb	23:14:35
3	Cr 267.716†	45152.7	43128.0	509.42 ug/L	509.42 ppb	23:14:35
3	Cu 324.752†	171483.6	157859.7	503.91 ug/L	503.91 ppb	23:14:35
3	Mn 257.610†	459221.3	439198.9	515.31 ug/L	515.31 ppb	23:14:30
3	Mo 202.031†	7273.7	6943.6	515.89 ug/L	515.89 ppb	23:14:55
3	Ni 231.604†	20457.4	19508.3	513.23 ug/L	513.23 ppb	23:14:35
3	P 214.914†	4411.4	3995.1	2451.6 ug/L	2451.6 ppb	23:14:55
3	Pb 220.353†	4111.6	4000.5	514.10 ug/L	514.10 ppb	23:14:55
3	S 181.975 Axial†	771.6	692.2	1032.1 ug/L	1032.1 ppb	23:14:55
3	Sb 206.836†	1501.6	1404.7	532.05 ug/L	532.05 ppb	23:14:55
3	Se 196.026†	783.7	780.6	540.56 ug/L	540.56 ppb	23:14:55
3	Si 251.611†	80523.9	76638.0	2577.6 ug/L	2577.6 ppb	23:14:35
3	Sn 189.927†	2926.8	2795.6	517.86 ug/L	517.86 ppb	23:14:55
3	Ti 334.940†	316161.6	304042.0	521.43 ug/L	521.43 ppb	23:14:30
3	Tl 190.801†	1632.9	1607.1	517.67 ug/L	517.67 ppb	23:14:55
3	U 409.014†	15011.3	16411.0	522.41 ug/L	522.41 ppb	23:14:35
3	V 292.402†	72313.9	70631.7	516.44 ug/L	516.44 ppb	23:14:35
3	Zn 213.857†	54781.4	51580.8	509.98 ug/L	509.98 ppb	23:14:35
3	SiO2†	81202.6	77277.3	5526.1 ug/L	5526.1 ppb	23:15:11

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	848165.0	104.21	%	0.403				0.39%
Sc Radial	5006.5	104	%	0.6				0.59%
Y 371.029	703153.6	102.51	%	0.399				0.39%
Y RADIAL	5331.0	103.9	%	0.44				0.42%
Ag 328.068†	100762.1	498.25	ug/L	6.298	498.25	ppb	6.298	1.26%
QC value within limits for Ag 328.068 Recovery = 99.65%								
Al 396.153Radial†	6332.0	5054.9	ug/L	17.70	5054.9	ppb	17.70	0.35%
QC value within limits for Al 396.153Radial Recovery = 101.10%								
As 188.979†	1142.3	518.56	ug/L	5.523	518.56	ppb	5.523	1.07%
QC value within limits for As 188.979 Recovery = 103.71%								
B 249.677†	21078.0	510.71	ug/L	7.022	510.71	ppb	7.022	1.37%
QC value within limits for B 249.677 Recovery = 102.14%								
Ba 233.527†	62090.4	516.14	ug/L	6.955	516.14	ppb	6.955	1.35%
QC value within limits for Ba 233.527 Recovery = 103.23%								
Be 313.107†	1302523.1	518.51	ug/L	0.831	518.51	ppb	0.831	0.16%
QC value within limits for Be 313.107 Recovery = 103.70%								
Ca 317.933Radial†	2984.3	5025.4	ug/L	8.05	5025.4	ppb	8.05	0.16%

QC value within limits for Ca 317.933Radial Recovery = 100.51%

Cd 226.502†	44202.8	517.98 ug/L	6.615	517.98 ppb	6.615	1.28%
QC value within limits for Cd 226.502 Recovery = 103.60%						
Co 228.616†	23874.3	518.54 ug/L	6.677	518.54 ppb	6.677	1.29%
QC value within limits for Co 228.616 Recovery = 103.71%						
Cr 267.716†	43560.1	514.53 ug/L	6.152	514.53 ppb	6.152	1.20%
QC value within limits for Cr 267.716 Recovery = 102.91%						
Cu 324.752†	160345.9	511.84 ug/L	7.985	511.84 ppb	7.985	1.56%
QC value within limits for Cu 324.752 Recovery = 102.37%						
Fe 238.204 Radial†	538.5	5078.1 ug/L	24.43	5078.1 ppb	24.43	0.48%
QC value within limits for Fe 238.204 Radial Recovery = 101.56%						
K 766.490 Radial†	25865.0	5175.6 ug/L	29.55	5175.6 ppb	29.55	0.57%
QC value within limits for K 766.490 Radial Recovery = 103.51%						
Mg 279.077 IEC†	148.7	5220.6 ug/L	53.67	5220.6 ppb	53.67	1.03%
QC value within limits for Mg 279.077 IEC Recovery = 104.41%						
Mn 257.610†	440119.7	516.39 ug/L	0.982	516.39 ppb	0.982	0.19%
QC value within limits for Mn 257.610 Recovery = 103.28%						
Mo 202.031†	6960.4	517.13 ug/L	3.831	517.13 ppb	3.831	0.74%
QC value within limits for Mo 202.031 Recovery = 103.43%						
Na 589.592 Radial†	30194.5	9783.2 ug/L	34.03	9783.2 ppb	34.03	0.35%
QC value within limits for Na 589.592 Radial Recovery = 97.83%						
Ni 231.604†	19667.8	517.43 ug/L	6.428	517.43 ppb	6.428	1.24%
QC value within limits for Ni 231.604 Recovery = 103.49%						
P 214.914†	4018.7	2465.2 ug/L	27.46	2465.2 ppb	27.46	1.11%
QC value within limits for P 214.914 Recovery = 98.61%						
Pb 220.353†	4008.9	515.17 ug/L	3.779	515.17 ppb	3.779	0.73%
QC value within limits for Pb 220.353 Recovery = 103.03%						
S 181.975 Axial†	690.9	1030.2 ug/L	12.58	1030.2 ppb	12.58	1.22%
QC value within limits for S 181.975 Axial Recovery = 103.02%						
Sb 206.836†	1405.2	532.27 ug/L	5.884	532.27 ppb	5.884	1.11%
QC value within limits for Sb 206.836 Recovery = 106.45%						
Se 196.026†	786.7	544.55 ug/L	3.958	544.55 ppb	3.958	0.73%
QC value within limits for Se 196.026 Recovery = 108.91%						
Si 251.611†	77630.5	2611.1 ug/L	37.58	2611.1 ppb	37.58	1.44%
QC value within limits for Si 251.611 Recovery = 104.44%						
Sn 189.927†	2795.3	517.79 ug/L	3.586	517.79 ppb	3.586	0.69%
QC value within limits for Sn 189.927 Recovery = 103.56%						
Sr 421.552†	71928.7	512.66 ug/L	1.594	512.66 ppb	1.594	0.31%
QC value within limits for Sr 421.552 Recovery = 102.53%						
Ti 334.940†	304269.0	521.82 ug/L	0.340	521.82 ppb	0.340	0.07%
QC value within limits for Ti 334.940 Recovery = 104.36%						
Tl 190.801†	1616.9	520.79 ug/L	3.236	520.79 ppb	3.236	0.62%
QC value within limits for Tl 190.801 Recovery = 104.16%						
U 409.014†	16670.1	530.67 ug/L	8.813	530.67 ppb	8.813	1.66%
QC value within limits for U 409.014 Recovery = 106.13%						
V 292.402†	71381.7	521.89 ug/L	6.433	521.89 ppb	6.433	1.23%
QC value within limits for V 292.402 Recovery = 104.38%						
Zn 213.857†	52214.1	516.27 ug/L	7.040	516.27 ppb	7.040	1.36%
QC value within limits for Zn 213.857 Recovery = 103.25%						
SiO2†	77508.4	5542.7 ug/L	14.85	5542.7 ppb	14.85	0.27%
QC value within limits for SiO2 Recovery = 103.65%						

All analyte(s) passed QC.

Sequence No.: 72
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/14/2010 23:17:20
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5102.1	5102.1	106	%			23:19:12
1	Y RADIAL	5459.0	5459.0	106.4	%			23:19:12
1	Al 396.153Radial†	-4.4	-0.9	-0.7835	ug/L	-0.7835	ppb	23:19:12
1	Ca 317.933Radial†	19.4	3.1	5.1661	ug/L	5.1661	ppb	23:19:32
1	Fe 238.204 Radial†	10.6	0.1	1.0961	ug/L	1.0961	ppb	23:19:32
1	K 766.490 Radial†	2757.6	-197.8	-39.647	ug/L	-39.647	ppb	23:19:12
1	Mg 279.077 IEC†	3.1	1.4	49.341	ug/L	49.341	ppb	23:19:32
1	Na 589.592 Radial†	-1504.7	153.9	49.871	ug/L	49.871	ppb	23:19:12
1	Sr 421.552†	-6.9	-23.7	-0.1691	ug/L	-0.1691	ppb	23:19:12
1	Sc 361.383	837691.9	837691.9	102.93	%			23:20:29
1	Y 371.029	707536.8	707536.8	103.15	%			23:20:29
1	Ag 328.068†	280.2	-9.3	-0.0463	ug/L	-0.0463	ppb	23:20:29
1	As 188.979†	-25.6	-6.0	-2.7001	ug/L	-2.7001	ppb	23:20:49
1	B 249.677†	-439.1	91.9	2.2379	ug/L	2.2379	ppb	23:20:49
1	Ba 233.527†	5.8	4.2	0.0367	ug/L	0.0367	ppb	23:20:49
1	Be 313.107†	-4428.1	10.1	0.0044	ug/L	0.0044	ppb	23:20:29
1	Cd 226.502†	-187.0	15.9	0.1868	ug/L	0.1868	ppb	23:20:49
1	Co 228.616†	-84.0	-8.9	-0.1926	ug/L	-0.1926	ppb	23:20:49
1	Cr 267.716†	96.2	-2.2	-0.0271	ug/L	-0.0271	ppb	23:20:49
1	Cu 324.752†	6232.0	-243.3	-0.7796	ug/L	-0.7796	ppb	23:20:29
1	Mn 257.610†	433.8	17.1	0.0182	ug/L	0.0182	ppb	23:20:49
1	Mo 202.031†	32.1	11.8	0.8782	ug/L	0.8782	ppb	23:20:49
1	Ni 231.604†	81.9	4.5	0.1182	ug/L	0.1182	ppb	23:20:49
1	P 214.914†	206.3	-27.4	-17.341	ug/L	-17.341	ppb	23:20:49
1	Pb 220.353†	-61.3	5.0	0.6450	ug/L	0.6450	ppb	23:20:49
1	S 181.975 Axial†	48.5	0.7	0.9899	ug/L	0.9899	ppb	23:20:49
1	Sb 206.836†	38.7	4.9	1.8363	ug/L	1.8363	ppb	23:20:49
1	Se 196.026†	-26.0	5.1	3.4053	ug/L	3.4053	ppb	23:20:49
1	Si 251.611†	470.7	11.4	0.3735	ug/L	0.3735	ppb	23:20:49
1	Sn 189.927†	15.4	8.8	1.6273	ug/L	1.6273	ppb	23:20:49
1	Ti 334.940†	-1320.1	104.5	0.1736	ug/L	0.1736	ppb	23:20:29
1	Tl 190.801†	-42.7	2.4	0.7617	ug/L	0.7617	ppb	23:20:49
1	U 409.014†	-1934.1	161.8	5.1681	ug/L	5.1681	ppb	23:20:29
1	V 292.402†	-1325.6	119.3	0.8833	ug/L	0.8833	ppb	23:20:29
1	Zn 213.857†	828.1	-55.8	-0.5563	ug/L	-0.5563	ppb	23:20:49
1	SiO2†	461.9	-7.5	-0.5590	ug/L	-0.5590	ppb	23:21:45
2	Sc Radial	4998.4	4998.4	104	%			23:19:37
2	Y RADIAL	5400.1	5400.1	105.3	%			23:19:37
2	Al 396.153Radial†	8.5	11.4	9.1402	ug/L	9.1402	ppb	23:19:37
2	Ca 317.933Radial†	15.9	0.1	0.1589	ug/L	0.1589	ppb	23:19:57
2	Fe 238.204 Radial†	9.7	-0.6	-5.3208	ug/L	-5.3208	ppb	23:19:57
2	K 766.490 Radial†	2849.6	-55.9	-11.224	ug/L	-11.224	ppb	23:19:37
2	Mg 279.077 IEC†	1.2	-0.3	-11.481	ug/L	-11.481	ppb	23:19:57
2	Na 589.592 Radial†	-1444.0	182.8	59.224	ug/L	59.224	ppb	23:19:37
2	Sr 421.552†	-10.3	-27.1	-0.1930	ug/L	-0.1930	ppb	23:19:37
2	Sc 361.383	838309.2	838309.2	103.00	%			23:20:54
2	Y 371.029	707533.6	707533.6	103.14	%			23:20:54
2	Ag 328.068†	392.3	99.3	0.4870	ug/L	0.4870	ppb	23:20:54
2	As 188.979†	-16.2	3.1	1.4072	ug/L	1.4072	ppb	23:21:14
2	B 249.677†	-441.6	89.8	2.1877	ug/L	2.1877	ppb	23:21:14
2	Ba 233.527†	-4.1	-5.4	-0.0430	ug/L	-0.0430	ppb	23:21:14
2	Be 313.107†	-4346.5	92.5	0.0372	ug/L	0.0372	ppb	23:20:54
2	Cd 226.502†	-179.4	23.4	0.2758	ug/L	0.2758	ppb	23:21:14
2	Co 228.616†	-78.2	-3.2	-0.0686	ug/L	-0.0686	ppb	23:21:14
2	Cr 267.716†	87.1	-11.1	-0.1315	ug/L	-0.1315	ppb	23:21:14
2	Cu 324.752†	6410.7	-74.3	-0.2395	ug/L	-0.2395	ppb	23:20:54
2	Mn 257.610†	414.7	-1.7	-0.0020	ug/L	-0.0020	ppb	23:21:14
2	Mo 202.031†	25.4	5.3	0.3939	ug/L	0.3939	ppb	23:21:14
2	Ni 231.604†	67.6	-9.5	-0.2513	ug/L	-0.2513	ppb	23:21:14

2	P 214.914†	222.3	-12.0	-7.6153 ug/L	-7.6153 ppb	23:21:14
2	Pb 220.353†	-66.2	0.4	0.0490 ug/L	0.0490 ppb	23:21:14
2	S 181.975 Axial†	49.1	1.3	1.8777 ug/L	1.8777 ppb	23:21:14
2	Sb 206.836†	39.3	5.4	1.9855 ug/L	1.9855 ppb	23:21:14
2	Se 196.026†	-32.5	-1.1	-0.7797 ug/L	-0.7797 ppb	23:21:14
2	Si 251.611†	483.9	23.9	0.8019 ug/L	0.8019 ppb	23:21:14
2	Sn 189.927†	7.1	0.8	0.1511 ug/L	0.1511 ppb	23:21:14
2	Ti 334.940†	-1308.4	116.8	0.1998 ug/L	0.1998 ppb	23:20:54
2	Tl 190.801†	-41.1	4.0	1.2645 ug/L	1.2645 ppb	23:21:14
2	U 409.014†	-1987.9	111.1	3.5477 ug/L	3.5477 ppb	23:20:54
2	V 292.402†	-1309.9	135.4	0.9897 ug/L	0.9897 ppb	23:20:54
2	Zn 213.857†	851.8	-33.3	-0.3300 ug/L	-0.3300 ppb	23:21:14
2	SiO2†	507.4	36.4	2.5957 ug/L	2.5957 ppb	23:21:50
3	Sc Radial	5045.7	5045.7	105 %		23:20:02
3	Y RADIAL	5431.7	5431.7	105.9 %		23:20:02
3	Al 396.153Radial†	-8.7	-5.0	-4.0522 ug/L	-4.0522 ppb	23:20:02
3	Ca 317.933Radial†	16.5	0.5	0.8831 ug/L	0.8831 ppb	23:20:22
3	Fe 238.204 Radial†	9.6	-0.8	-7.2634 ug/L	-7.2634 ppb	23:20:22
3	K 766.490 Radial†	2718.3	-206.2	-41.326 ug/L	-41.326 ppb	23:20:02
3	Mg 279.077 IEC†	0.8	-0.7	-24.992 ug/L	-24.992 ppb	23:20:22
3	Na 589.592 Radial†	-1469.3	171.7	55.631 ug/L	55.631 ppb	23:20:02
3	Sr 421.552†	23.1	4.8	0.0339 ug/L	0.0339 ppb	23:20:02
3	Sc 361.383	832681.4	832681.4	102.31 %		23:21:19
3	Y 371.029	702592.1	702592.1	102.42 %		23:21:19
3	Ag 328.068†	480.2	187.8	0.9196 ug/L	0.9196 ppb	23:21:19
3	As 188.979†	-21.9	-2.6	-1.1700 ug/L	-1.1700 ppb	23:21:40
3	B 249.677†	-439.5	88.9	2.1655 ug/L	2.1655 ppb	23:21:40
3	Ba 233.527†	1.4	-0.1	0.0006 ug/L	0.0006 ppb	23:21:40
3	Be 313.107†	-4355.3	55.4	0.0225 ug/L	0.0225 ppb	23:21:19
3	Cd 226.502†	-181.0	20.7	0.2436 ug/L	0.2436 ppb	23:21:40
3	Co 228.616†	-76.1	-1.7	-0.0357 ug/L	-0.0357 ppb	23:21:40
3	Cr 267.716†	77.2	-20.3	-0.2400 ug/L	-0.2400 ppb	23:21:40
3	Cu 324.752†	6388.5	-54.0	-0.1751 ug/L	-0.1751 ppb	23:21:19
3	Mn 257.610†	425.1	11.2	0.0135 ug/L	0.0135 ppb	23:21:40
3	Mo 202.031†	27.8	7.8	0.5817 ug/L	0.5817 ppb	23:21:40
3	Ni 231.604†	68.5	-8.2	-0.2153 ug/L	-0.2153 ppb	23:21:40
3	P 214.914†	227.8	-5.2	-3.2724 ug/L	-3.2724 ppb	23:21:40
3	Pb 220.353†	-74.8	-8.5	-1.0891 ug/L	-1.0891 ppb	23:21:40
3	S 181.975 Axial†	41.2	-6.2	-9.2224 ug/L	-9.2224 ppb	23:21:40
3	Sb 206.836†	36.2	2.6	0.9687 ug/L	0.9687 ppb	23:21:40
3	Se 196.026†	-28.0	3.0	1.9552 ug/L	1.9552 ppb	23:21:40
3	Si 251.611†	478.3	21.6	0.7223 ug/L	0.7223 ppb	23:21:40
3	Sn 189.927†	6.4	0.1	0.0267 ug/L	0.0267 ppb	23:21:40
3	Ti 334.940†	-1279.3	136.6	0.2347 ug/L	0.2347 ppb	23:21:19
3	Tl 190.801†	-34.7	9.9	3.1824 ug/L	3.1824 ppb	23:21:40
3	U 409.014†	-1947.2	137.7	4.4006 ug/L	4.4006 ppb	23:21:19
3	V 292.402†	-1334.6	102.7	0.7576 ug/L	0.7576 ppb	23:21:19
3	Zn 213.857†	844.1	-35.3	-0.3502 ug/L	-0.3502 ppb	23:21:40
3	SiO2†	516.5	48.6	3.4712 ug/L	3.4712 ppb	23:21:55

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	836227.5	102.75	%	0.379				0.37%
Sc Radial	5048.7	105	%	1.1				1.03%
Y 371.029	705887.5	102.90	%	0.416				0.40%
Y RADIAL	5430.3	105.9	%	0.57				0.54%
Ag 328.068†	92.6	0.4535	ug/L	0.48382	0.4535	ppb	0.48382	106.70%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	1.8	1.4348	ug/L	6.87028	1.4348	ppb	6.87028	478.82%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-1.8	-0.8210	ug/L	2.07573	-0.8210	ppb	2.07573	252.84%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	90.2	2.1971	ug/L	0.03709	2.1971	ppb	0.03709	1.69%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-0.4	-0.0019	ug/L	0.03991	-0.0019	ppb	0.03991	>999.9%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	52.6	0.0214	ug/L	0.01642	0.0214	ppb	0.01642	76.85%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.2	2.0694	ug/L	2.70621	2.0694	ppb	2.70621	130.77%

QC value within limits for Ca 317.933Radial Recovery = Not calculated

Cd 226.502†	20.0	0.2354 ug/L	0.04503	0.2354 ppb	0.04503	19.13%
QC value within limits for Cd 226.502 Recovery = Not calculated						
Co 228.616†	-4.6	-0.0990 ug/L	0.08276	-0.0990 ppb	0.08276	83.61%
QC value within limits for Co 228.616 Recovery = Not calculated						
Cr 267.716†	-11.2	-0.1328 ug/L	0.10646	-0.1328 ppb	0.10646	80.15%
QC value within limits for Cr 267.716 Recovery = Not calculated						
Cu 324.752†	-123.9	-0.3981 ug/L	0.33199	-0.3981 ppb	0.33199	83.40%
QC value within limits for Cu 324.752 Recovery = Not calculated						
Fe 238.204 Radial†	-0.4	-3.8294 ug/L	4.37476	-3.8294 ppb	4.37476	114.24%
QC value within limits for Fe 238.204 Radial Recovery = Not calculated						
K 766.490 Radial†	-153.3	-30.733 ug/L	16.9155	-30.733 ppb	16.9155	55.04%
QC value within limits for K 766.490 Radial Recovery = Not calculated						
Mg 279.077 IEC†	0.1	4.2893 ug/L	39.59659	4.2893 ppb	39.59659	923.15%
QC value within limits for Mg 279.077 IEC Recovery = Not calculated						
Mn 257.610†	8.9	0.0099 ug/L	0.01059	0.0099 ppb	0.01059	107.22%
QC value within limits for Mn 257.610 Recovery = Not calculated						
Mo 202.031†	8.3	0.6179 ug/L	0.24418	0.6179 ppb	0.24418	39.52%
QC value within limits for Mo 202.031 Recovery = Not calculated						
Na 589.592 Radial†	169.5	54.909 ug/L	4.7179	54.909 ppb	4.7179	8.59%
QC value within limits for Na 589.592 Radial Recovery = Not calculated						
Ni 231.604†	-4.4	-0.1161 ug/L	0.20372	-0.1161 ppb	0.20372	175.40%
QC value within limits for Ni 231.604 Recovery = Not calculated						
P 214.914†	-14.9	-9.4096 ug/L	7.20392	-9.4096 ppb	7.20392	76.56%
QC value within limits for P 214.914 Recovery = Not calculated						
Pb 220.353†	-1.0	-0.1317 ug/L	0.88104	-0.1317 ppb	0.88104	669.14%
QC value within limits for Pb 220.353 Recovery = Not calculated						
S 181.975 Axial†	-1.4	-2.1183 ug/L	6.16833	-2.1183 ppb	6.16833	291.20%
QC value within limits for S 181.975 Axial Recovery = Not calculated						
Sb 206.836†	4.3	1.5968 ug/L	0.54906	1.5968 ppb	0.54906	34.38%
QC value within limits for Sb 206.836 Recovery = Not calculated						
Se 196.026†	2.3	1.5269 ug/L	2.12510	1.5269 ppb	2.12510	139.17%
QC value within limits for Se 196.026 Recovery = Not calculated						
Si 251.611†	19.0	0.6326 ug/L	0.22786	0.6326 ppb	0.22786	36.02%
QC value within limits for Si 251.611 Recovery = Not calculated						
Sn 189.927†	3.3	0.6017 ug/L	0.89040	0.6017 ppb	0.89040	147.98%
QC value within limits for Sn 189.927 Recovery = Not calculated						
Sr 421.552†	-15.3	-0.1094 ug/L	0.12467	-0.1094 ppb	0.12467	113.98%
QC value within limits for Sr 421.552 Recovery = Not calculated						
Ti 334.940†	119.3	0.2027 ug/L	0.03065	0.2027 ppb	0.03065	15.12%
QC value within limits for Ti 334.940 Recovery = Not calculated						
Tl 190.801†	5.4	1.7362 ug/L	1.27741	1.7362 ppb	1.27741	73.57%
QC value within limits for Tl 190.801 Recovery = Not calculated						
U 409.014†	136.9	4.3722 ug/L	0.81056	4.3722 ppb	0.81056	18.54%
QC value within limits for U 409.014 Recovery = Not calculated						
V 292.402†	119.1	0.8769 ug/L	0.11618	0.8769 ppb	0.11618	13.25%
QC value within limits for V 292.402 Recovery = Not calculated						
Zn 213.857†	-41.5	-0.4121 ug/L	0.12523	-0.4121 ppb	0.12523	30.38%
QC value within limits for Zn 213.857 Recovery = Not calculated						
SiO2†	25.8	1.8360 ug/L	2.11982	1.8360 ppb	2.11982	115.46%
QC value within limits for SiO2 Recovery = Not calculated						

All analyte(s) passed QC.

Sequence No.: 76
Sample ID: 1202004428|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 83
Date Collected: 1/14/2010 23:45:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004428|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Units	Sample Conc.	Units	Analysis Time
1	Sc Radial	5170.1	5170.1	108	%			23:47:12
1	Y RADIAL	6693.0	6693.0	130.5	%			23:47:12
1	Al 396.153Radial†	40092.2	37157.8	29810	ug/L	29810	ppb	23:47:12
1	Ca 317.933Radial†	4646.0	4290.5	7224.9	ug/L	7224.9	ppb	23:47:12
1	Fe 238.204 Radial†	8133.6	7527.7	70767	ug/L	70767	ppb	23:47:12
1	K 766.490 Radial†	27096.7	22323.9	4468.7	ug/L	4468.7	ppb	23:47:12
1	Mg 279.077 IEC†	172.9	158.7	5498.8	ug/L	5498.8	ppb	23:47:32
1	Na 589.592 Radial†	3022.4	4367.9	1415.2	ug/L	1415.2	ppb	23:47:12
1	Sr 421.552†	8481.2	7842.6	55.847	ug/L	55.847	ppb	23:47:12
1	Sc 361.383	867783.1	867783.1	106.62	%			23:48:29
1	Y 371.029	875848.2	875848.2	127.68	%			23:48:29
1	Ag 328.068†	-4387.6	-4396.5	1.7732	ug/L	1.7732	ppb	23:48:34
1	As 188.979†	-25.3	-4.8	27.440	ug/L	27.440	ppb	23:48:54
1	B 249.677†	59.5	574.4	2.4313	ug/L	2.4313	ppb	23:48:34
1	Ba 233.527†	41392.0	38818.7	324.23	ug/L	324.23	ppb	23:48:34
1	Be 313.107†	-1107.5	3273.5	4.7248	ug/L	4.7248	ppb	23:48:34
1	Cd 226.502†	440.2	610.4	-0.1840	ug/L	-0.1840	ppb	23:48:54
1	Co 228.616†	882.9	900.7	15.489	ug/L	15.489	ppb	23:48:54
1	Cr 267.716†	13886.8	12928.2	154.12	ug/L	154.12	ppb	23:48:34
1	Cu 324.752†	14276.0	7091.0	26.516	ug/L	26.516	ppb	23:48:34
1	Mn 257.610†	1800130.0	1687879.3	1986.0	ug/L	1986.0	ppb	23:48:29
1	Mo 202.031†	163.7	134.2	15.545	ug/L	15.545	ppb	23:48:54
1	Ni 231.604†	1270.5	1116.4	29.377	ug/L	29.377	ppb	23:48:54
1	P 214.914†	1523.5	1201.0	712.36	ug/L	712.36	ppb	23:48:54
1	Pb 220.353†	395.8	435.8	55.574	ug/L	55.574	ppb	23:48:54
1	S 181.975 Axial†	246.3	184.5	269.79	ug/L	269.79	ppb	23:48:54
1	Sb 206.836†	50.6	14.7	1.7441	ug/L	1.7441	ppb	23:48:54
1	Se 196.026†	-335.1	-283.9	43.451	ug/L	43.451	ppb	23:48:54
1	Si 251.611†	224617.8	210215.9	7087.7	ug/L	7087.7	ppb	23:48:34
1	Sn 189.927†	-35.1	-39.0	-4.9278	ug/L	-4.9278	ppb	23:48:54
1	Ti 334.940†	936066.4	879293.3	1509.0	ug/L	1509.0	ppb	23:48:29
1	Tl 190.801†	-136.8	-84.4	-5.2678	ug/L	-5.2678	ppb	23:48:54
1	U 409.014†	-10232.6	-7555.9	-249.72	ug/L	-249.72	ppb	23:48:29
1	V 292.402†	11530.0	12220.7	75.986	ug/L	75.986	ppb	23:48:34
1	Zn 213.857†	24979.3	22567.0	217.99	ug/L	217.99	ppb	23:48:34
1	SiO2†	224182.6	209797.4	15041	ug/L	15041	ppb	23:50:02
2	Sc Radial	5016.7	5016.7	105	%			23:47:37
2	Y RADIAL	6523.9	6523.9	127.2	%			23:47:37
2	Al 396.153Radial†	39098.3	37344.7	29960	ug/L	29960	ppb	23:47:37
2	Ca 317.933Radial†	4542.9	4323.6	7280.8	ug/L	7280.8	ppb	23:47:37
2	Fe 238.204 Radial†	7861.7	7498.6	70493	ug/L	70493	ppb	23:47:37
2	K 766.490 Radial†	26245.4	22278.7	4459.6	ug/L	4459.6	ppb	23:47:37
2	Mg 279.077 IEC†	173.1	163.8	5678.1	ug/L	5678.1	ppb	23:47:57
2	Na 589.592 Radial†	2942.2	4376.9	1418.1	ug/L	1418.1	ppb	23:47:37
2	Sr 421.552†	8216.8	7830.4	55.760	ug/L	55.760	ppb	23:47:37
2	Sc 361.383	875496.9	875496.9	107.57	%			23:49:00
2	Y 371.029	880951.0	880951.0	128.43	%			23:49:00
2	Ag 328.068†	-4252.4	-4234.6	2.4803	ug/L	2.4803	ppb	23:49:05
2	As 188.979†	-17.6	2.5	30.686	ug/L	30.686	ppb	23:49:25
2	B 249.677†	56.6	571.2	2.3994	ug/L	2.3994	ppb	23:49:05
2	Ba 233.527†	41675.6	38740.4	323.57	ug/L	323.57	ppb	23:49:05
2	Be 313.107†	-1034.9	3350.2	4.7621	ug/L	4.7621	ppb	23:49:05
2	Cd 226.502†	437.0	603.8	-0.2335	ug/L	-0.2335	ppb	23:49:25
2	Co 228.616†	873.9	885.0	15.148	ug/L	15.148	ppb	23:49:25
2	Cr 267.716†	13943.8	12866.5	153.39	ug/L	153.39	ppb	23:49:05
2	Cu 324.752†	14378.6	7068.3	26.431	ug/L	26.431	ppb	23:49:05
2	Mn 257.610†	1819922.8	1691403.7	1990.1	ug/L	1990.1	ppb	23:49:00
2	Mo 202.031†	174.8	143.2	16.188	ug/L	16.188	ppb	23:49:25
2	Ni 231.604†	1302.5	1135.7	29.885	ug/L	29.885	ppb	23:49:25

2	P 214.914†	1527.2	1191.9	706.78 ug/L	706.78 ppb	23:49:25
2	Pb 220.353†	403.8	440.0	56.170 ug/L	56.170 ppb	23:49:25
2	S 181.975 Axial†	243.5	179.9	262.89 ug/L	262.89 ppb	23:49:25
2	Sb 206.836†	50.6	14.3	1.5679 ug/L	1.5679 ppb	23:49:25
2	Se 196.026†	-342.3	-287.8	39.976 ug/L	39.976 ppb	23:49:25
2	Si 251.611†	225808.5	209466.6	7062.4 ug/L	7062.4 ppb	23:49:05
2	Sn 189.927†	-40.3	-43.6	-5.7735 ug/L	-5.7735 ppb	23:49:25
2	Ti 334.940†	946270.5	881044.1	1512.0 ug/L	1512.0 ppb	23:49:00
2	Tl 190.801†	-122.3	-69.8	-0.5535 ug/L	-0.5535 ppb	23:49:25
2	U 409.014†	-10438.4	-7662.7	-253.10 ug/L	-253.10 ppb	23:49:00
2	V 292.402†	11577.3	12169.5	75.659 ug/L	75.659 ppb	23:49:05
2	Zn 213.857†	25286.7	22646.3	218.80 ug/L	218.80 ppb	23:49:05
2	SiO2†	225657.2	209315.6	15006 ug/L	15006 ppb	23:50:07
3	Sc Radial	5139.1	5139.1	107 %		23:48:02
3	Y RADIAL	6690.8	6690.8	130.4 %		23:48:02
3	Al 396.153Radial†	39938.9	37239.0	29875 ug/L	29875 ppb	23:48:02
3	Ca 317.933Radial†	4583.3	4258.0	7170.2 ug/L	7170.2 ppb	23:48:02
3	Fe 238.204 Radial†	8060.7	7505.3	70556 ug/L	70556 ppb	23:48:02
3	K 766.490 Radial†	26914.7	22305.6	4465.1 ug/L	4465.1 ppb	23:48:02
3	Mg 279.077 IEC†	169.1	156.2	5408.9 ug/L	5408.9 ppb	23:48:22
3	Na 589.592 Radial†	3013.7	4376.7	1418.1 ug/L	1418.1 ppb	23:48:02
3	Sr 421.552†	8396.9	7811.3	55.625 ug/L	55.625 ppb	23:48:02
3	Sc 361.383	865226.5	865226.5	106.31 %		23:49:31
3	Y 371.029	871649.7	871649.7	127.07 %		23:49:31
3	Ag 328.068†	-4323.8	-4348.7	1.9359 ug/L	1.9359 ppb	23:49:36
3	As 188.979†	-27.4	-7.0	26.438 ug/L	26.438 ppb	23:49:56
3	B 249.677†	79.6	593.4	2.9293 ug/L	2.9293 ppb	23:49:36
3	Ba 233.527†	41050.4	38612.2	322.51 ug/L	322.51 ppb	23:49:36
3	Be 313.107†	-1182.9	3199.5	4.6945 ug/L	4.6945 ppb	23:49:36
3	Cd 226.502†	442.0	613.3	-0.1273 ug/L	-0.1273 ppb	23:49:56
3	Co 228.616†	883.3	903.6	15.556 ug/L	15.556 ppb	23:49:56
3	Cr 267.716†	13763.2	12850.4	153.20 ug/L	153.20 ppb	23:49:36
3	Cu 324.752†	14206.8	7065.4	26.422 ug/L	26.422 ppb	23:49:36
3	Mn 257.610†	1794601.1	1687667.2	1985.8 ug/L	1985.8 ppb	23:49:31
3	Mo 202.031†	170.9	141.5	16.063 ug/L	16.063 ppb	23:49:56
3	Ni 231.604†	1296.1	1144.0	30.104 ug/L	30.104 ppb	23:49:56
3	P 214.914†	1528.1	1209.5	717.98 ug/L	717.98 ppb	23:49:56
3	Pb 220.353†	394.6	435.7	55.601 ug/L	55.601 ppb	23:49:56
3	S 181.975 Axial†	237.9	177.3	259.05 ug/L	259.05 ppb	23:49:56
3	Sb 206.836†	53.8	17.8	2.8905 ug/L	2.8905 ppb	23:49:56
3	Se 196.026†	-342.6	-291.9	37.448 ug/L	37.448 ppb	23:49:56
3	Si 251.611†	221428.7	207838.6	7007.5 ug/L	7007.5 ppb	23:49:36
3	Sn 189.927†	-30.8	-35.1	-4.2203 ug/L	-4.2203 ppb	23:49:56
3	Ti 334.940†	933063.6	879062.9	1508.6 ug/L	1508.6 ppb	23:49:31
3	Tl 190.801†	-120.5	-69.5	-0.4962 ug/L	-0.4962 ppb	23:49:56
3	U 409.014†	-10182.3	-7536.9	-249.09 ug/L	-249.09 ppb	23:49:31
3	V 292.402†	11348.5	12082.0	75.023 ug/L	75.023 ppb	23:49:36
3	Zn 213.857†	24830.6	22496.3	217.30 ug/L	217.30 ppb	23:49:36
3	SiO2†	225817.6	211956.6	15195 ug/L	15195 ppb	23:50:12

Mean Data: 1202004428|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	869502.2	106.84	%	0.657				0.61%
Sc Radial	5108.7	107	%	1.7				1.59%
Y 371.029	876149.7	127.73	%	0.679				0.53%
Y RADIAL	6635.9	129.4	%	1.89				1.46%
Ag 328.068†	-4326.6	2.0631	ug/L	0.37035	2.0631	ppb	0.37035	17.95%
Al 396.153Radial†	37247.2	29881	ug/L	75.2	29881	ppb	75.2	0.25%
As 188.979†	-3.1	28.188	ug/L	2.2208	28.188	ppb	2.2208	7.88%
B 249.677†	579.7	2.5867	ug/L	0.29718	2.5867	ppb	0.29718	11.49%
Ba 233.527†	38723.8	323.43	ug/L	0.869	323.43	ppb	0.869	0.27%
Be 313.107†	3274.4	4.7271	ug/L	0.03384	4.7271	ppb	0.03384	0.72%
Ca 317.933Radial†	4290.7	7225.3	ug/L	55.28	7225.3	ppb	55.28	0.77%
Cd 226.502†	609.2	-0.1816	ug/L	0.05314	-0.1816	ppb	0.05314	29.26%
Co 228.616†	896.4	15.398	ug/L	0.2190	15.398	ppb	0.2190	1.42%
Cr 267.716†	12881.7	153.57	ug/L	0.488	153.57	ppb	0.488	0.32%
Cu 324.752†	7074.9	26.456	ug/L	0.0516	26.456	ppb	0.0516	0.19%
Fe 238.204 Radial†	7510.5	70605	ug/L	143.6	70605	ppb	143.6	0.20%
K 766.490 Radial†	22302.7	4464.5	ug/L	4.56	4464.5	ppb	4.56	0.10%

Mg 279.077 IEC†	159.6	5528.6	ug/L	137.06	5528.6	ppb	137.06	2.48%
Mn 257.610†	1688983.4	1987.3	ug/L	2.45	1987.3	ppb	2.45	0.12%
Mo 202.031†	139.6	15.932	ug/L	0.3412	15.932	ppb	0.3412	2.14%
Na 589.592 Radial†	4373.8	1417.1	ug/L	1.67	1417.1	ppb	1.67	0.12%
Ni 231.604†	1132.1	29.789	ug/L	0.3731	29.789	ppb	0.3731	1.25%
P 214.914†	1200.8	712.37	ug/L	5.596	712.37	ppb	5.596	0.79%
Pb 220.353†	437.2	55.782	ug/L	0.3363	55.782	ppb	0.3363	0.60%
S 181.975 Axial†	180.6	263.91	ug/L	5.446	263.91	ppb	5.446	2.06%
Sb 206.836†	15.6	2.0675	ug/L	0.71814	2.0675	ppb	0.71814	34.73%
Se 196.026†	-287.9	40.292	ug/L	3.0135	40.292	ppb	3.0135	7.48%
Si 251.611†	209173.7	7052.5	ug/L	40.98	7052.5	ppb	40.98	0.58%
Sn 189.927†	-39.3	-4.9739	ug/L	0.77761	-4.9739	ppb	0.77761	15.63%
Sr 421.552†	7828.1	55.744	ug/L	0.1120	55.744	ppb	0.1120	0.20%
Ti 334.940†	879800.1	1509.9	ug/L	1.86	1509.9	ppb	1.86	0.12%
Tl 190.801†	-74.5	-2.1058	ug/L	2.73847	-2.1058	ppb	2.73847	130.04%
U 409.014†	-7585.2	-250.64	ug/L	2.155	-250.64	ppb	2.155	0.86%
V 292.402†	12157.4	75.556	ug/L	0.4894	75.556	ppb	0.4894	0.65%
Zn 213.857†	22569.8	218.03	ug/L	0.753	218.03	ppb	0.753	0.35%
SiO2†	210356.5	15081	ug/L	100.8	15081	ppb	100.8	0.67%

Sequence No.: 77
Sample ID: 1202004429|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 84
Date Collected: 1/14/2010 23:52:24
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004429|941050|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5091.0	5091.0	106	%			23:54:37
1	Y RADIAL	6942.0	6942.0	135.3	%			23:54:37
1	Al 396.153Radial†	72448.0	68185.8	54680	ug/L	54680	ppb	23:54:17
1	Ca 317.933Radial†	6837.1	6419.4	10810	ug/L	10810	ppb	23:54:37
1	Fe 238.204 Radial†	8648.3	8129.2	76434	ug/L	76434	ppb	23:54:17
1	K 766.490 Radial†	57264.1	51105.1	10231	ug/L	10231	ppb	23:54:17
1	Mg 279.077 IEC†	366.1	343.0	11967	ug/L	11967	ppb	23:54:37
1	Na 589.592 Radial†	18429.6	18911.5	6127.4	ug/L	6127.4	ppb	23:54:17
1	Sr 421.552†	80807.4	76032.5	541.87	ug/L	541.87	ppb	23:54:17
1	Sc 361.383	883865.0	883865.0	108.60	%			23:55:36
1	Y 371.029	940381.8	940381.8	137.09	%			23:55:36
1	Ag 328.068†	100180.8	91965.2	478.40	ug/L	478.40	ppb	23:55:36
1	As 188.979†	1084.0	1017.0	491.19	ug/L	491.19	ppb	23:55:56
1	B 249.677†	20304.7	19215.2	453.93	ug/L	453.93	ppb	23:55:36
1	Ba 233.527†	98752.5	90930.2	757.49	ug/L	757.49	ppb	23:55:36
1	Be 313.107†	1294617.3	1196399.9	479.55	ug/L	479.55	ppb	23:55:36
1	Cd 226.502†	42210.9	39065.5	450.32	ug/L	450.32	ppb	23:55:56
1	Co 228.616†	23291.4	21519.5	463.38	ug/L	463.38	ppb	23:55:56
1	Cr 267.716†	52740.3	48467.7	573.96	ug/L	573.96	ppb	23:55:36
1	Cu 324.752†	179800.5	159262.8	512.33	ug/L	512.33	ppb	23:55:36
1	Mn 257.610†	2365377.1	2177642.3	2560.6	ug/L	2560.6	ppb	23:55:36
1	Mo 202.031†	6778.3	6222.2	467.94	ug/L	467.94	ppb	23:55:56
1	Ni 231.604†	20219.5	18543.1	487.85	ug/L	487.85	ppb	23:55:56
1	P 214.914†	2136.3	1739.3	965.50	ug/L	965.50	ppb	23:55:56
1	Pb 220.353†	4225.2	3955.2	512.05	ug/L	512.05	ppb	23:55:56
1	S 181.975 Axial†	3692.4	3353.5	4994.5	ug/L	4994.5	ppb	23:55:56
1	Sb 206.836†	1354.0	1214.1	456.38	ug/L	456.38	ppb	23:55:56
1	Se 196.026†	400.3	399.0	521.35	ug/L	521.35	ppb	23:55:56
1	Si 251.611†	302431.4	278033.9	9368.7	ug/L	9368.7	ppb	23:55:36
1	Sn 189.927†	2754.2	2530.0	470.81	ug/L	470.81	ppb	23:55:56
1	Ti 334.940†	1219007.5	1123852.9	1928.2	ug/L	1928.2	ppb	23:55:36
1	Tl 190.801†	1432.1	1362.6	461.01	ug/L	461.01	ppb	23:55:56
1	U 409.014†	5412.3	7024.6	214.36	ug/L	214.36	ppb	23:55:36
1	V 292.402†	79221.0	74354.1	530.19	ug/L	530.19	ppb	23:55:36
1	Zn 213.857†	77442.1	70448.6	691.40	ug/L	691.40	ppb	23:55:36
1	SiO2†	306793.3	282040.0	20207	ug/L	20207	ppb	23:56:56
2	Sc Radial	5050.4	5050.4	105	%			23:55:02
2	Y RADIAL	6886.2	6886.2	134.2	%			23:55:02
2	Al 396.153Radial†	70871.0	67238.5	53920	ug/L	53920	ppb	23:54:42
2	Ca 317.933Radial†	6758.3	6396.5	10771	ug/L	10771	ppb	23:55:02
2	Fe 238.204 Radial†	8456.8	8013.1	75343	ug/L	75343	ppb	23:54:42
2	K 766.490 Radial†	56222.2	50550.6	10120	ug/L	10120	ppb	23:54:42
2	Mg 279.077 IEC†	361.8	341.7	11922	ug/L	11922	ppb	23:55:02
2	Na 589.592 Radial†	18009.0	18652.0	6043.4	ug/L	6043.4	ppb	23:54:42
2	Sr 421.552†	79214.7	75133.7	535.47	ug/L	535.47	ppb	23:54:42
2	Sc 361.383	865610.1	865610.1	106.36	%			23:56:03
2	Y 371.029	924063.0	924063.0	134.71	%			23:56:03
2	Ag 328.068†	100371.8	94090.2	488.54	ug/L	488.54	ppb	23:56:03
2	As 188.979†	1084.0	1038.0	500.85	ug/L	500.85	ppb	23:56:23
2	B 249.677†	20322.1	19625.8	464.08	ug/L	464.08	ppb	23:56:03
2	Ba 233.527†	99299.5	93362.1	777.65	ug/L	777.65	ppb	23:56:03
2	Be 313.107†	1298853.1	1225522.6	491.23	ug/L	491.23	ppb	23:56:03
2	Cd 226.502†	41710.0	39414.2	454.53	ug/L	454.53	ppb	23:56:23
2	Co 228.616†	23076.1	21769.4	468.73	ug/L	468.73	ppb	23:56:23
2	Cr 267.716†	52981.2	49718.4	588.71	ug/L	588.71	ppb	23:56:03
2	Cu 324.752†	180332.3	163254.4	525.01	ug/L	525.01	ppb	23:56:03
2	Mn 257.610†	2379558.2	2236908.7	2630.0	ug/L	2630.0	ppb	23:56:03
2	Mo 202.031†	6707.3	6287.0	472.67	ug/L	472.67	ppb	23:56:23
2	Ni 231.604†	19992.5	18722.3	492.57	ug/L	492.57	ppb	23:56:23

2	P 214.914†	2116.2	1761.8	978.07 ug/L	978.07 ppb	23:56:23
2	Pb 220.353†	4192.2	4006.1	518.52 ug/L	518.52 ppb	23:56:23
2	S 181.975 Axial†	3651.5	3386.7	5044.2 ug/L	5044.2 ppb	23:56:23
2	Sb 206.836†	1339.7	1226.9	461.10 ug/L	461.10 ppb	23:56:23
2	Se 196.026†	391.0	398.0	517.08 ug/L	517.08 ppb	23:56:23
2	Si 251.611†	303486.6	284898.9	9600.1 ug/L	9600.1 ppb	23:56:03
2	Sn 189.927†	2717.2	2548.6	474.23 ug/L	474.23 ppb	23:56:23
2	Ti 334.940†	1225103.6	1153256.4	1978.6 ug/L	1978.6 ppb	23:56:03
2	Tl 190.801†	1413.7	1373.0	465.07 ug/L	465.07 ppb	23:56:23
2	U 409.014†	5499.5	7211.7	220.42 ug/L	220.42 ppb	23:56:03
2	V 292.402†	79596.4	76245.5	544.02 ug/L	544.02 ppb	23:56:03
2	Zn 213.857†	77756.2	72247.8	709.40 ug/L	709.40 ppb	23:56:03
2	SiO2†	305593.5	286869.5	20554 ug/L	20554 ppb	23:57:01
3	Sc Radial	5076.6	5076.6	106 %		23:55:27
3	Y RADIAL	6942.9	6942.9	135.4 %		23:55:27
3	Al 396.153Radial†	70978.7	66993.0	53723 ug/L	53723 ppb	23:55:07
3	Ca 317.933Radial†	6779.8	6383.7	10750 ug/L	10750 ppb	23:55:27
3	Fe 238.204 Radial†	8456.6	7971.4	74951 ug/L	74951 ppb	23:55:07
3	K 766.490 Radial†	56507.9	50544.8	10119 ug/L	10119 ppb	23:55:07
3	Mg 279.077 IEC†	367.2	345.1	12042 ug/L	12042 ppb	23:55:27
3	Na 589.592 Radial†	18071.1	18622.4	6033.8 ug/L	6033.8 ppb	23:55:07
3	Sr 421.552†	79420.9	74940.3	534.09 ug/L	534.09 ppb	23:55:07
3	Sc 361.383	866701.0	866701.0	106.49 %		23:56:30
3	Y 371.029	925522.6	925522.6	134.92 %		23:56:30
3	Ag 328.068†	100504.6	94096.2	488.43 ug/L	488.43 ppb	23:56:30
3	As 188.979†	1081.9	1034.8	499.28 ug/L	499.28 ppb	23:56:50
3	B 249.677†	20453.0	19724.7	466.55 ug/L	466.55 ppb	23:56:30
3	Ba 233.527†	99389.7	93329.3	777.37 ug/L	777.37 ppb	23:56:30
3	Be 313.107†	1300093.5	1225150.2	491.09 ug/L	491.09 ppb	23:56:30
3	Cd 226.502†	41962.7	39602.1	456.77 ug/L	456.77 ppb	23:56:50
3	Co 228.616†	23223.4	21880.3	471.16 ug/L	471.16 ppb	23:56:50
3	Cr 267.716†	52950.4	49626.7	587.62 ug/L	587.62 ppb	23:56:30
3	Cu 324.752†	180840.2	163517.9	525.83 ug/L	525.83 ppb	23:56:30
3	Mn 257.610†	2379966.3	2234476.0	2627.1 ug/L	2627.1 ppb	23:56:30
3	Mo 202.031†	6761.5	6330.0	475.83 ug/L	475.83 ppb	23:56:50
3	Ni 231.604†	20089.5	18789.7	494.34 ug/L	494.34 ppb	23:56:50
3	P 214.914†	2108.2	1751.8	971.85 ug/L	971.85 ppb	23:56:50
3	Pb 220.353†	4206.9	4015.0	519.66 ug/L	519.66 ppb	23:56:50
3	S 181.975 Axial†	3668.2	3398.1	5061.3 ug/L	5061.3 ppb	23:56:50
3	Sb 206.836†	1350.5	1235.5	464.36 ug/L	464.36 ppb	23:56:50
3	Se 196.026†	392.5	398.9	516.44 ug/L	516.44 ppb	23:56:50
3	Si 251.611†	305299.7	286242.3	9645.4 ug/L	9645.4 ppb	23:56:30
3	Sn 189.927†	2746.6	2573.1	478.75 ug/L	478.75 ppb	23:56:50
3	Ti 334.940†	1226856.4	1153452.6	1978.9 ug/L	1978.9 ppb	23:56:30
3	Tl 190.801†	1425.0	1382.0	467.93 ug/L	467.93 ppb	23:56:50
3	U 409.014†	5697.2	7390.8	226.19 ug/L	226.19 ppb	23:56:30
3	V 292.402†	79624.9	76178.0	543.64 ug/L	543.64 ppb	23:56:30
3	Zn 213.857†	77803.7	72200.4	708.95 ug/L	708.95 ppb	23:56:30
3	SiO2†	311054.1	291635.6	20895 ug/L	20895 ppb	23:57:06

Mean Data: 1202004429|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	872058.7	107.15	%	1.258				1.17%
Sc Radial	5072.7	106	%	0.4				0.41%
Y 371.029	929989.1	135.57	%	1.316				0.97%
Y RADIAL	6923.7	135.0	%	0.63				0.47%
Ag 328.068†	93383.8	485.12	ug/L	5.823	485.12	ppb	5.823	1.20%
Al 396.153Radial†	67472.5	54108	ug/L	505.5	54108	ppb	505.5	0.93%
As 188.979†	1029.9	497.11	ug/L	5.183	497.11	ppb	5.183	1.04%
B 249.677†	19521.9	461.52	ug/L	6.689	461.52	ppb	6.689	1.45%
Ba 233.527†	92540.5	770.84	ug/L	11.559	770.84	ppb	11.559	1.50%
Be 313.107†	1215690.9	487.29	ug/L	6.702	487.29	ppb	6.702	1.38%
Ca 317.933Radial†	6399.8	10777	ug/L	30.5	10777	ppb	30.5	0.28%
Cd 226.502†	39360.6	453.87	ug/L	3.274	453.87	ppb	3.274	0.72%
Co 228.616†	21723.1	467.76	ug/L	3.978	467.76	ppb	3.978	0.85%
Cr 267.716†	49270.9	583.43	ug/L	8.219	583.43	ppb	8.219	1.41%
Cu 324.752†	162011.7	521.06	ug/L	7.568	521.06	ppb	7.568	1.45%
Fe 238.204 Radial†	8037.9	75576	ug/L	768.5	75576	ppb	768.5	1.02%
K 766.490 Radial†	50733.5	10157	ug/L	64.5	10157	ppb	64.5	0.63%

Mg 279.077 IEC†	343.3	11977 ug/L	60.7	11977 ppb	60.7	0.51%
Mn 257.610†	2216342.3	2605.9 ug/L	39.25	2605.9 ppb	39.25	1.51%
Mo 202.031†	6279.7	472.14 ug/L	3.971	472.14 ppb	3.971	0.84%
Na 589.592 Radial†	18728.7	6068.2 ug/L	51.53	6068.2 ppb	51.53	0.85%
Ni 231.604†	18685.0	491.59 ug/L	3.353	491.59 ppb	3.353	0.68%
P 214.914†	1751.0	971.80 ug/L	6.287	971.80 ppb	6.287	0.65%
Pb 220.353†	3992.1	516.74 ug/L	4.105	516.74 ppb	4.105	0.79%
S 181.975 Axial†	3379.5	5033.3 ug/L	34.68	5033.3 ppb	34.68	0.69%
Sb 206.836†	1225.5	460.61 ug/L	4.011	460.61 ppb	4.011	0.87%
Se 196.026†	398.6	518.29 ug/L	2.669	518.29 ppb	2.669	0.52%
Si 251.611†	283058.4	9538.0 ug/L	148.40	9538.0 ppb	148.40	1.56%
Sn 189.927†	2550.6	474.60 ug/L	3.981	474.60 ppb	3.981	0.84%
Sr 421.552†	75368.8	537.14 ug/L	4.154	537.14 ppb	4.154	0.77%
Ti 334.940†	1143520.6	1961.9 ug/L	29.21	1961.9 ppb	29.21	1.49%
Tl 190.801†	1372.5	464.67 ug/L	3.475	464.67 ppb	3.475	0.75%
U 409.014†	7209.1	220.32 ug/L	5.918	220.32 ppb	5.918	2.69%
V 292.402†	75592.5	539.28 ug/L	7.876	539.28 ppb	7.876	1.46%
Zn 213.857†	71632.2	703.25 ug/L	10.267	703.25 ppb	10.267	1.46%
SiO2†	286848.4	20552 ug/L	343.9	20552 ppb	343.9	1.67%

Sequence No.: 78
Sample ID: 1202004431|941050|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 85
Date Collected: 1/14/2010 23:59:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004431|941050|1

Rep1#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	5056.1	5056.1	106	%			00:01:31
1	Y RADIAL	6699.3	6699.3	130.6	%			00:01:31
1	Al 396.153Radial†	83480.2	79111.5	63445	ug/L	63445	ppb	00:01:11
1	Ca 317.933Radial†	7676.7	7259.5	12225	ug/L	12225	ppb	00:01:31
1	Fe 238.204 Radial†	9455.7	8950.6	84157	ug/L	84157	ppb	00:01:11
1	K 766.490 Radial†	60992.0	55010.4	11013	ug/L	11013	ppb	00:01:11
1	Mg 279.077 IEC†	410.7	387.7	13526	ug/L	13526	ppb	00:01:31
1	Na 589.592 Radial†	18634.5	19225.5	6229.2	ug/L	6229.2	ppb	00:01:11
1	Sr 421.552†	80680.9	76438.4	544.75	ug/L	544.75	ppb	00:01:11
1	Sc 361.383	861826.7	861826.7	105.89	%			00:02:30
1	Y 371.029	894712.6	894712.6	130.43	%			00:02:30
1	Ag 328.068†	100886.9	94990.9	495.87	ug/L	495.87	ppb	00:02:30
1	As 188.979†	1079.7	1038.4	505.29	ug/L	505.29	ppb	00:02:51
1	B 249.677†	20697.2	20063.9	473.29	ug/L	473.29	ppb	00:02:30
1	Ba 233.527†	102652.4	96938.3	807.62	ug/L	807.62	ppb	00:02:30
1	Be 313.107†	1312767.6	1244023.7	499.16	ug/L	499.16	ppb	00:02:30
1	Cd 226.502†	43232.4	41024.1	472.49	ug/L	472.49	ppb	00:02:30
1	Co 228.616†	23386.7	22157.9	476.54	ug/L	476.54	ppb	00:02:51
1	Cr 267.716†	52533.1	49513.9	586.50	ug/L	586.50	ppb	00:02:30
1	Cu 324.752†	182788.0	166317.7	535.26	ug/L	535.26	ppb	00:02:30
1	Mn 257.610†	2213080.8	2089517.5	2458.0	ug/L	2458.0	ppb	00:02:30
1	Mo 202.031†	6736.5	6342.3	477.47	ug/L	477.47	ppb	00:02:51
1	Ni 231.604†	20244.2	19042.5	500.99	ug/L	500.99	ppb	00:02:51
1	P 214.914†	2304.1	1948.0	1090.3	ug/L	1090.3	ppb	00:02:51
1	Pb 220.353†	4240.2	4068.8	527.78	ug/L	527.78	ppb	00:02:51
1	S 181.975 Axial†	3688.7	3437.0	5117.4	ug/L	5117.4	ppb	00:02:51
1	Sb 206.836†	1344.2	1236.7	464.03	ug/L	464.03	ppb	00:02:51
1	Se 196.026†	372.5	382.1	535.88	ug/L	535.88	ppb	00:02:51
1	Si 251.611†	331822.7	312910.7	10545	ug/L	10545	ppb	00:02:30
1	Sn 189.927†	2745.6	2586.7	481.65	ug/L	481.65	ppb	00:02:51
1	Ti 334.940†	1377156.1	1301903.7	2233.7	ug/L	2233.7	ppb	00:02:30
1	Tl 190.801†	1421.8	1386.6	470.61	ug/L	470.61	ppb	00:02:51
1	U 409.014†	5598.3	7327.7	223.13	ug/L	223.13	ppb	00:02:30
1	V 292.402†	81936.0	78783.3	560.87	ug/L	560.87	ppb	00:02:30
1	Zn 213.857†	78686.3	73447.0	720.44	ug/L	720.44	ppb	00:02:30
1	SiO2†	332056.4	313121.1	22435	ug/L	22435	ppb	00:03:51
2	Sc Radial	5051.2	5051.2	105	%			00:01:56
2	Y RADIAL	6695.7	6695.7	130.5	%			00:01:56
2	Al 396.153Radial†	83472.7	79180.7	63501	ug/L	63501	ppb	00:01:36
2	Ca 317.933Radial†	7637.7	7229.6	12174	ug/L	12174	ppb	00:01:56
2	Fe 238.204 Radial†	9439.7	8944.1	84095	ug/L	84095	ppb	00:01:36
2	K 766.490 Radial†	60826.8	54909.4	10993	ug/L	10993	ppb	00:01:36
2	Mg 279.077 IEC†	407.4	385.0	13432	ug/L	13432	ppb	00:01:56
2	Na 589.592 Radial†	18463.3	19080.1	6182.1	ug/L	6182.1	ppb	00:01:36
2	Sr 421.552†	80633.3	76467.0	544.96	ug/L	544.96	ppb	00:01:36
2	Sc 361.383	870830.9	870830.9	107.00	%			00:02:58
2	Y 371.029	903023.0	903023.0	131.64	%			00:02:58
2	Ag 328.068†	101847.1	94903.3	495.42	ug/L	495.42	ppb	00:02:58
2	As 188.979†	1072.4	1021.1	497.51	ug/L	497.51	ppb	00:03:18
2	B 249.677†	20874.9	20027.9	472.45	ug/L	472.45	ppb	00:02:58
2	Ba 233.527†	103736.7	96949.3	807.71	ug/L	807.71	ppb	00:02:58
2	Be 313.107†	1326008.6	1243580.2	498.99	ug/L	498.99	ppb	00:02:58
2	Cd 226.502†	43611.0	40955.7	471.69	ug/L	471.69	ppb	00:02:58
2	Co 228.616†	23241.3	21793.7	468.60	ug/L	468.60	ppb	00:03:18
2	Cr 267.716†	52949.3	49389.9	585.03	ug/L	585.03	ppb	00:02:58
2	Cu 324.752†	184966.4	166568.8	536.06	ug/L	536.06	ppb	00:02:58
2	Mn 257.610†	2236771.4	2090049.1	2458.6	ug/L	2458.6	ppb	00:02:58
2	Mo 202.031†	6672.7	6216.9	468.16	ug/L	468.16	ppb	00:03:18
2	Ni 231.604†	20126.5	18734.8	492.89	ug/L	492.89	ppb	00:03:18

2	P 214.914†	2300.5	1922.1	1073.6 ug/L	1073.6 ppb	00:03:18
2	Pb 220.353†	4241.3	4028.4	522.59 ug/L	522.59 ppb	00:03:18
2	S 181.975 Axial†	3679.8	3392.6	5051.2 ug/L	5051.2 ppb	00:03:18
2	Sb 206.836†	1345.3	1224.6	459.25 ug/L	459.25 ppb	00:03:18
2	Se 196.026†	357.6	364.5	523.88 ug/L	523.88 ppb	00:03:18
2	Si 251.611†	336328.0	313881.3	10577 ug/L	10577 ppb	00:02:58
2	Sn 189.927†	2711.1	2527.6	470.71 ug/L	470.71 ppb	00:03:18
2	Ti 334.940†	1393765.1	1303979.2	2237.3 ug/L	2237.3 ppb	00:02:58
2	Tl 190.801†	1425.2	1375.8	467.24 ug/L	467.24 ppb	00:03:18
2	U 409.014†	5669.9	7340.0	223.53 ug/L	223.53 ppb	00:02:58
2	V 292.402†	82885.4	78870.6	561.37 ug/L	561.37 ppb	00:02:58
2	Zn 213.857†	79424.7	73368.8	719.71 ug/L	719.71 ppb	00:02:58
2	SiO2†	333913.0	311613.9	22328 ug/L	22328 ppb	00:03:56
3	Sc Radial	5046.0	5046.0	105 %		00:02:22
3	Y RADIAL	6702.4	6702.4	130.7 %		00:02:22
3	Al 396.153Radial†	83869.8	79639.7	63869 ug/L	63869 ppb	00:02:02
3	Ca 317.933Radial†	7663.4	7261.5	12228 ug/L	12228 ppb	00:02:22
3	Fe 238.204 Radial†	9427.2	8941.4	84070 ug/L	84070 ppb	00:02:02
3	K 766.490 Radial†	61254.1	55374.8	11086 ug/L	11086 ppb	00:02:02
3	Mg 279.077 IEC†	410.4	388.2	13546 ug/L	13546 ppb	00:02:22
3	Na 589.592 Radial†	18500.0	19133.2	6199.3 ug/L	6199.3 ppb	00:02:02
3	Sr 421.552†	80981.9	76877.1	547.88 ug/L	547.88 ppb	00:02:02
3	Sc 361.383	852288.7	852288.7	104.72 %		00:03:25
3	Y 371.029	884559.0	884559.0	128.95 %		00:03:25
3	Ag 328.068†	99617.3	94844.7	495.12 ug/L	495.12 ppb	00:03:25
3	As 188.979†	1063.1	1034.0	503.26 ug/L	503.26 ppb	00:03:45
3	B 249.677†	20427.2	20024.9	472.34 ug/L	472.34 ppb	00:03:25
3	Ba 233.527†	101416.5	96842.9	806.82 ug/L	806.82 ppb	00:03:25
3	Be 313.107†	1293867.4	1239849.4	497.50 ug/L	497.50 ppb	00:03:25
3	Cd 226.502†	42553.8	40832.9	470.26 ug/L	470.26 ppb	00:03:25
3	Co 228.616†	23323.6	22344.8	480.61 ug/L	480.61 ppb	00:03:45
3	Cr 267.716†	51778.1	49348.1	584.54 ug/L	584.54 ppb	00:03:25
3	Cu 324.752†	180609.8	166169.5	534.78 ug/L	534.78 ppb	00:03:25
3	Mn 257.610†	2184586.1	2085696.0	2453.5 ug/L	2453.5 ppb	00:03:25
3	Mo 202.031†	6732.2	6409.4	482.45 ug/L	482.45 ppb	00:03:45
3	Ni 231.604†	20248.2	19260.3	506.72 ug/L	506.72 ppb	00:03:45
3	P 214.914†	2284.8	1953.9	1094.4 ug/L	1094.4 ppb	00:03:45
3	Pb 220.353†	4210.2	4085.0	529.96 ug/L	529.96 ppb	00:03:45
3	S 181.975 Axial†	3693.1	3480.1	5181.7 ug/L	5181.7 ppb	00:03:45
3	Sb 206.836†	1347.7	1254.2	470.58 ug/L	470.58 ppb	00:03:45
3	Se 196.026†	352.9	367.4	525.75 ug/L	525.75 ppb	00:03:45
3	Si 251.611†	329320.5	314028.2	10582 ug/L	10582 ppb	00:03:25
3	Sn 189.927†	2724.8	2595.8	483.33 ug/L	483.33 ppb	00:03:45
3	Ti 334.940†	1360661.0	1300706.5	2231.6 ug/L	2231.6 ppb	00:03:25
3	Tl 190.801†	1418.4	1398.3	474.32 ug/L	474.32 ppb	00:03:45
3	U 409.014†	5474.4	7268.6	221.25 ug/L	221.25 ppb	00:03:25
3	V 292.402†	80896.0	78656.2	560.03 ug/L	560.03 ppb	00:03:25
3	Zn 213.857†	77516.3	73161.4	717.56 ug/L	717.56 ppb	00:03:25
3	SiO2†	332272.9	316837.1	22702 ug/L	22702 ppb	00:04:01

Mean Data: 1202004431|941050|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	861648.8	105.87	%	1.139				1.08%
Sc Radial	5051.1	105	%	0.1				0.10%
Y 371.029	894098.2	130.34	%	1.348				1.03%
Y RADIAL	6699.1	130.6	%	0.07				0.05%
Ag 328.068†	94913.0	495.47	ug/L	0.377	495.47	ppb	0.377	0.08%
Al 396.153Radial†	79310.7	63605	ug/L	230.1	63605	ppb	230.1	0.36%
As 188.979†	1031.2	502.02	ug/L	4.033	502.02	ppb	4.033	0.80%
B 249.677†	20038.9	472.69	ug/L	0.520	472.69	ppb	0.520	0.11%
Ba 233.527†	96910.2	807.38	ug/L	0.487	807.38	ppb	0.487	0.06%
Be 313.107†	1242484.4	498.55	ug/L	0.915	498.55	ppb	0.915	0.18%
Ca 317.933Radial†	7250.2	12209	ug/L	30.1	12209	ppb	30.1	0.25%
Cd 226.502†	40937.6	471.48	ug/L	1.129	471.48	ppb	1.129	0.24%
Co 228.616†	22098.8	475.25	ug/L	6.109	475.25	ppb	6.109	1.29%
Cr 267.716†	49417.3	585.36	ug/L	1.018	585.36	ppb	1.018	0.17%
Cu 324.752†	166352.0	535.36	ug/L	0.644	535.36	ppb	0.644	0.12%
Fe 238.204 Radial†	8945.4	84107	ug/L	44.4	84107	ppb	44.4	0.05%
K 766.490 Radial†	55098.2	11031	ug/L	49.0	11031	ppb	49.0	0.44%

Mg 279.077 IEC†	386.9	13501 ug/L	60.9	13501 ppb	60.9	0.45%
Mn 257.610†	2088420.8	2456.7 ug/L	2.79	2456.7 ppb	2.79	0.11%
Mo 202.031†	6322.9	476.03 ug/L	7.253	476.03 ppb	7.253	1.52%
Na 589.592 Radial†	19146.3	6203.5 ug/L	23.84	6203.5 ppb	23.84	0.38%
Ni 231.604†	19012.5	500.20 ug/L	6.947	500.20 ppb	6.947	1.39%
P 214.914†	1941.4	1086.1 ug/L	11.03	1086.1 ppb	11.03	1.02%
Pb 220.353†	4060.8	526.78 ug/L	3.781	526.78 ppb	3.781	0.72%
S 181.975 Axial†	3436.6	5116.8 ug/L	65.29	5116.8 ppb	65.29	1.28%
Sb 206.836†	1238.5	464.62 ug/L	5.689	464.62 ppb	5.689	1.22%
Se 196.026†	371.3	528.50 ug/L	6.453	528.50 ppb	6.453	1.22%
Si 251.611†	313606.7	10568 ug/L	20.5	10568 ppb	20.5	0.19%
Sn 189.927†	2570.0	478.56 ug/L	6.854	478.56 ppb	6.854	1.43%
Sr 421.552†	76594.1	545.86 ug/L	1.749	545.86 ppb	1.749	0.32%
Ti 334.940†	1302196.5	2234.2 ug/L	2.84	2234.2 ppb	2.84	0.13%
Tl 190.801†	1386.9	470.72 ug/L	3.538	470.72 ppb	3.538	0.75%
U 409.014†	7312.1	222.64 ug/L	1.215	222.64 ppb	1.215	0.55%
V 292.402†	78770.1	560.76 ug/L	0.675	560.76 ppb	0.675	0.12%
Zn 213.857†	73325.7	719.24 ug/L	1.496	719.24 ppb	1.496	0.21%
SiO2†	313857.4	22488 ug/L	192.5	22488 ppb	192.5	0.86%

Sequence No.: 79
Sample ID: 1202004430|941050|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 86
Date Collected: 1/15/2010 00:06:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004430|941050|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5071.1	5071.1	106	%			00:08:07
1	Y RADIAL	5677.8	5677.8	110.7	%			00:08:07
1	Al 396.153Radial†	8633.4	8160.4	6546.7	ug/L	6546.7	ppb	00:08:07
1	Ca 317.933Radial†	1031.0	959.0	1614.9	ug/L	1614.9	ppb	00:08:27
1	Fe 238.204 Radial†	1682.0	1579.4	14847	ug/L	14847	ppb	00:08:27
1	K 766.490 Radial†	8008.6	4779.4	956.68	ug/L	956.68	ppb	00:08:07
1	Mg 279.077 IEC†	41.6	37.8	1311.8	ug/L	1311.8	ppb	00:08:27
1	Na 589.592 Radial†	-471.0	1121.9	363.51	ug/L	363.51	ppb	00:08:07
1	Sr 421.552†	1796.9	1680.5	11.967	ug/L	11.967	ppb	00:08:07
1	Sc 361.383	856137.4	856137.4	105.19	%			00:09:24
1	Y 371.029	748163.1	748163.1	109.07	%			00:09:24
1	Ag 328.068†	-594.7	-847.0	0.7392	ug/L	0.7392	ppb	00:09:24
1	As 188.979†	-26.8	-6.6	3.1246	ug/L	3.1246	ppb	00:09:44
1	B 249.677†	-288.8	244.0	3.5156	ug/L	3.5156	ppb	00:09:24
1	Ba 233.527†	9504.3	9033.6	75.398	ug/L	75.398	ppb	00:09:24
1	Be 313.107†	-3582.2	906.9	1.0499	ug/L	1.0499	ppb	00:09:24
1	Cd 226.502†	-54.2	146.1	0.1728	ug/L	0.1728	ppb	00:09:44
1	Co 228.616†	126.0	192.5	3.3600	ug/L	3.3600	ppb	00:09:44
1	Cr 267.716†	1948.6	1756.7	21.058	ug/L	21.058	ppb	00:09:24
1	Cu 324.752†	8088.6	1391.1	5.2535	ug/L	5.2535	ppb	00:09:24
1	Mn 257.610†	363777.5	345411.7	406.46	ug/L	406.46	ppb	00:09:24
1	Mo 202.031†	41.0	19.7	2.6325	ug/L	2.6325	ppb	00:09:44
1	Ni 231.604†	330.2	238.8	6.2829	ug/L	6.2829	ppb	00:09:44
1	P 214.914†	446.6	196.7	114.31	ug/L	114.31	ppb	00:09:44
1	Pb 220.353†	34.3	97.1	12.455	ug/L	12.455	ppb	00:09:44
1	S 181.975 Axial†	88.5	37.7	55.000	ug/L	55.000	ppb	00:09:44
1	Sb 206.836†	34.6	0.1	-0.7050	ug/L	-0.7050	ppb	00:09:44
1	Se 196.026†	-93.1	-58.1	10.081	ug/L	10.081	ppb	00:09:44
1	Si 251.611†	47969.8	45155.4	1522.5	ug/L	1522.5	ppb	00:09:24
1	Sn 189.927†	-7.1	-12.8	-1.8782	ug/L	-1.8782	ppb	00:09:44
1	Ti 334.940†	184816.5	177078.2	303.91	ug/L	303.91	ppb	00:09:24
1	Tl 190.801†	-55.4	-8.8	1.5933	ug/L	1.5933	ppb	00:09:44
1	U 409.014†	-3739.3	-1513.8	-50.084	ug/L	-50.084	ppb	00:09:24
1	V 292.402†	1202.7	2550.4	15.861	ug/L	15.861	ppb	00:09:24
1	Zn 213.857†	6041.6	4883.0	47.213	ug/L	47.213	ppb	00:09:24
1	SiO2†	46572.7	43817.0	3141.3	ug/L	3141.3	ppb	00:10:40
2	Sc Radial	5093.4	5093.4	106	%			00:08:32
2	Y RADIAL	5691.1	5691.1	110.9	%			00:08:32
2	Al 396.153Radial†	8611.6	8104.1	6501.5	ug/L	6501.5	ppb	00:08:32
2	Ca 317.933Radial†	1034.0	957.5	1612.3	ug/L	1612.3	ppb	00:08:52
2	Fe 238.204 Radial†	1680.9	1571.3	14771	ug/L	14771	ppb	00:08:52
2	K 766.490 Radial†	7890.9	4635.4	927.84	ug/L	927.84	ppb	00:08:32
2	Mg 279.077 IEC†	41.9	37.9	1314.4	ug/L	1314.4	ppb	00:08:52
2	Na 589.592 Radial†	-467.9	1126.7	365.07	ug/L	365.07	ppb	00:08:32
2	Sr 421.552†	1821.9	1696.6	12.081	ug/L	12.081	ppb	00:08:32
2	Sc 361.383	852203.7	852203.7	104.71	%			00:09:49
2	Y 371.029	745007.4	745007.4	108.61	%			00:09:49
2	Ag 328.068†	-637.7	-890.6	0.4970	ug/L	0.4970	ppb	00:09:49
2	As 188.979†	-22.5	-2.6	4.9179	ug/L	4.9179	ppb	00:10:09
2	B 249.677†	-267.7	262.9	3.9878	ug/L	3.9878	ppb	00:09:49
2	Ba 233.527†	9485.1	9056.9	75.588	ug/L	75.588	ppb	00:09:49
2	Be 313.107†	-3646.1	830.2	1.0196	ug/L	1.0196	ppb	00:09:49
2	Cd 226.502†	-53.4	146.5	0.1868	ug/L	0.1868	ppb	00:10:09
2	Co 228.616†	110.8	178.5	3.0572	ug/L	3.0572	ppb	00:10:09
2	Cr 267.716†	1930.5	1747.9	20.952	ug/L	20.952	ppb	00:09:49
2	Cu 324.752†	8104.1	1441.5	5.4089	ug/L	5.4089	ppb	00:09:49
2	Mn 257.610†	362275.2	345573.3	406.64	ug/L	406.64	ppb	00:09:49
2	Mo 202.031†	38.4	17.4	2.4577	ug/L	2.4577	ppb	00:10:09
2	Ni 231.604†	329.5	239.5	6.3034	ug/L	6.3034	ppb	00:10:09

2	P 214.914†	452.7	204.4	119.27 ug/L	119.27 ppb	00:10:09
2	Pb 220.353†	21.4	85.0	10.893 ug/L	10.893 ppb	00:10:09
2	S 181.975 Axial†	94.2	43.5	63.672 ug/L	63.672 ppb	00:10:09
2	Sb 206.836†	37.8	3.4	0.4893 ug/L	0.4893 ppb	00:10:09
2	Se 196.026†	-97.3	-62.6	6.8540 ug/L	6.8540 ppb	00:10:09
2	Si 251.611†	47970.1	45366.1	1529.6 ug/L	1529.6 ppb	00:09:49
2	Sn 189.927†	-2.4	-8.4	-1.0679 ug/L	-1.0679 ppb	00:10:09
2	Ti 334.940†	184016.7	177125.4	303.99 ug/L	303.99 ppb	00:09:49
2	Tl 190.801†	-47.9	-1.8	3.8263 ug/L	3.8263 ppb	00:10:09
2	U 409.014†	-3650.6	-1445.4	-47.894 ug/L	-47.894 ppb	00:09:49
2	V 292.402†	1146.4	2502.0	15.524 ug/L	15.524 ppb	00:09:49
2	Zn 213.857†	6073.5	4939.9	47.788 ug/L	47.788 ppb	00:09:49
2	SiO2†	47582.4	44985.6	3225.1 ug/L	3225.1 ppb	00:10:45
3	Sc Radial	5145.6	5145.6	107 %		00:08:57
3	Y RADIAL	5766.6	5766.6	112.4 %		00:08:57
3	Al 396.153Radial†	8652.0	8059.5	6465.8 ug/L	6465.8 ppb	00:08:57
3	Ca 317.933Radial†	1037.5	950.9	1601.2 ug/L	1601.2 ppb	00:09:17
3	Fe 238.204 Radial†	1680.5	1554.9	14617 ug/L	14617 ppb	00:09:17
3	K 766.490 Radial†	7935.1	4601.3	921.01 ug/L	921.01 ppb	00:08:57
3	Mg 279.077 IEC†	39.1	34.9	1209.9 ug/L	1209.9 ppb	00:09:17
3	Na 589.592 Radial†	-496.3	1104.8	357.96 ug/L	357.96 ppb	00:08:57
3	Sr 421.552†	1752.6	1614.7	11.498 ug/L	11.498 ppb	00:08:57
3	Sc 361.383	844202.9	844202.9	103.73 %		00:10:15
3	Y 371.029	739351.6	739351.6	107.78 %		00:10:15
3	Ag 328.068†	-688.9	-945.7	0.1752 ug/L	0.1752 ppb	00:10:15
3	As 188.979†	-17.9	1.6	6.7572 ug/L	6.7572 ppb	00:10:35
3	B 249.677†	-308.8	220.8	2.9891 ug/L	2.9891 ppb	00:10:15
3	Ba 233.527†	9361.5	9023.6	75.308 ug/L	75.308 ppb	00:10:15
3	Be 313.107†	-3465.6	971.2	1.0736 ug/L	1.0736 ppb	00:10:15
3	Cd 226.502†	-42.9	156.2	0.3167 ug/L	0.3167 ppb	00:10:35
3	Co 228.616†	108.6	177.4	3.0351 ug/L	3.0351 ppb	00:10:35
3	Cr 267.716†	1934.7	1769.4	21.202 ug/L	21.202 ppb	00:10:15
3	Cu 324.752†	7932.5	1349.4	5.1056 ug/L	5.1056 ppb	00:10:15
3	Mn 257.610†	357677.4	344419.7	405.27 ug/L	405.27 ppb	00:10:15
3	Mo 202.031†	36.2	15.6	2.3134 ug/L	2.3134 ppb	00:10:35
3	Ni 231.604†	342.0	254.5	6.6984 ug/L	6.6984 ppb	00:10:35
3	P 214.914†	430.0	186.7	108.10 ug/L	108.10 ppb	00:10:35
3	Pb 220.353†	26.3	89.9	11.533 ug/L	11.533 ppb	00:10:35
3	S 181.975 Axial†	89.4	39.7	58.017 ug/L	58.017 ppb	00:10:35
3	Sb 206.836†	30.8	-3.0	-1.8723 ug/L	-1.8723 ppb	00:10:35
3	Se 196.026†	-101.3	-67.3	3.2103 ug/L	3.2103 ppb	00:10:35
3	Si 251.611†	46973.2	44839.3	1511.8 ug/L	1511.8 ppb	00:10:15
3	Sn 189.927†	-8.7	-14.5	-2.1928 ug/L	-2.1928 ppb	00:10:35
3	Ti 334.940†	181759.5	176614.8	303.12 ug/L	303.12 ppb	00:10:15
3	Tl 190.801†	-52.0	-6.2	2.3999 ug/L	2.3999 ppb	00:10:35
3	U 409.014†	-3536.4	-1368.4	-45.415 ug/L	-45.415 ppb	00:10:15
3	V 292.402†	1162.2	2527.6	15.733 ug/L	15.733 ppb	00:10:15
3	Zn 213.857†	5942.8	4868.9	47.093 ug/L	47.093 ppb	00:10:15
3	SiO2†	47080.6	44932.5	3221.3 ug/L	3221.3 ppb	00:10:50

Mean Data: 1202004430|941050|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	850848.0	104.54	%	0.747				0.71%
Sc Radial	5103.4	107	%	0.8				0.75%
Y 371.029	744174.0	108.49	%	0.651				0.60%
Y RADIAL	5711.8	111.4	%	0.93				0.84%
Ag 328.068†	-894.4	0.4705	ug/L	0.28292	0.4705	ppb	0.28292	60.14%
Al 396.153Radial†	8108.0	6504.7	ug/L	40.54	6504.7	ppb	40.54	0.62%
As 188.979†	-2.5	4.9332	ug/L	1.81636	4.9332	ppb	1.81636	36.82%
B 249.677†	242.6	3.4975	ug/L	0.49962	3.4975	ppb	0.49962	14.29%
Ba 233.527†	9038.0	75.431	ug/L	0.1430	75.431	ppb	0.1430	0.19%
Be 313.107†	902.8	1.0477	ug/L	0.02707	1.0477	ppb	0.02707	2.58%
Ca 317.933Radial†	955.8	1609.5	ug/L	7.27	1609.5	ppb	7.27	0.45%
Cd 226.502†	149.6	0.2254	ug/L	0.07932	0.2254	ppb	0.07932	35.19%
Co 228.616†	182.8	3.1508	ug/L	0.18152	3.1508	ppb	0.18152	5.76%
Cr 267.716†	1758.0	21.071	ug/L	0.1257	21.071	ppb	0.1257	0.60%
Cu 324.752†	1394.0	5.2560	ug/L	0.15170	5.2560	ppb	0.15170	2.89%
Fe 238.204 Radial†	1568.5	14745	ug/L	117.2	14745	ppb	117.2	0.80%
K 766.490 Radial†	4672.0	935.17	ug/L	18.935	935.17	ppb	18.935	2.02%

Mg 279.077 IEC†	36.9	1278.7 ug/L	59.62	1278.7 ppb	59.62	4.66%
Mn 257.610†	345134.9	406.12 ug/L	0.740	406.12 ppb	0.740	0.18%
Mo 202.031†	17.6	2.4679 ug/L	0.15976	2.4679 ppb	0.15976	6.47%
Na 589.592 Radial†	1117.8	362.18 ug/L	3.738	362.18 ppb	3.738	1.03%
Ni 231.604†	244.3	6.4282 ug/L	0.23419	6.4282 ppb	0.23419	3.64%
P 214.914†	195.9	113.89 ug/L	5.600	113.89 ppb	5.600	4.92%
Pb 220.353†	90.7	11.627 ug/L	0.7852	11.627 ppb	0.7852	6.75%
S 181.975 Axial†	40.3	58.896 ug/L	4.4021	58.896 ppb	4.4021	7.47%
Sb 206.836†	0.2	-0.6960 ug/L	1.18083	-0.6960 ppb	1.18083	169.66%
Se 196.026†	-62.7	6.7151 ug/L	3.43743	6.7151 ppb	3.43743	51.19%
Si 251.611†	45120.3	1521.3 ug/L	8.94	1521.3 ppb	8.94	0.59%
Sn 189.927†	-11.9	-1.7130 ug/L	0.58038	-1.7130 ppb	0.58038	33.88%
Sr 421.552†	1664.0	11.849 ug/L	0.3092	11.849 ppb	0.3092	2.61%
Ti 334.940†	176939.5	303.67 ug/L	0.481	303.67 ppb	0.481	0.16%
Tl 190.801†	-5.6	2.6065 ug/L	1.13070	2.6065 ppb	1.13070	43.38%
U 409.014†	-1442.5	-47.798 ug/L	2.3363	-47.798 ppb	2.3363	4.89%
V 292.402†	2526.7	15.706 ug/L	0.1699	15.706 ppb	0.1699	1.08%
Zn 213.857†	4897.3	47.365 ug/L	0.3717	47.365 ppb	0.3717	0.78%
SiO2†	44578.4	3195.9 ug/L	47.31	3195.9 ppb	47.31	1.48%

Sequence No.: 80
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 1/15/2010 00:13:02
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	5001.0	5001.0	104	%			00:14:53
1	Y RADIAL	5344.0	5344.0	104.2	%			00:14:53
1	Al 396.153Radial†	6503.4	6234.0	4976.4	ug/L	4976.4	ppb	00:14:53
1	Ca 317.933Radial†	3177.6	3029.2	5101.1	ug/L	5101.1	ppb	00:15:13
1	Fe 238.204 Radial†	591.9	557.2	5253.9	ug/L	5253.9	ppb	00:15:13
1	K 766.490 Radial†	29677.3	25645.4	5131.4	ug/L	5131.4	ppb	00:14:53
1	Mg 279.077 IEC†	158.8	150.6	5286.7	ug/L	5286.7	ppb	00:15:13
1	Na 589.592 Radial†	31026.7	31292.7	10139	ug/L	10139	ppb	00:14:53
1	Sr 421.552†	75515.3	72331.7	515.53	ug/L	515.53	ppb	00:14:53
1	Sc 361.383	852356.1	852356.1	104.73	%			00:16:11
1	Y 371.029	708980.7	708980.7	103.36	%			00:16:11
1	Ag 328.068†	107431.3	102298.4	505.86	ug/L	505.86	ppb	00:16:16
1	As 188.979†	1171.1	1137.0	516.16	ug/L	516.16	ppb	00:16:36
1	B 249.677†	21641.3	21182.5	513.22	ug/L	513.22	ppb	00:16:16
1	Ba 233.527†	65122.3	62180.0	516.89	ug/L	516.89	ppb	00:16:16
1	Be 313.107†	1364223.1	1306930.1	520.24	ug/L	520.24	ppb	00:16:11
1	Cd 226.502†	46379.4	44482.6	521.25	ug/L	521.25	ppb	00:16:16
1	Co 228.616†	24971.7	23916.7	519.47	ug/L	519.47	ppb	00:16:16
1	Cr 267.716†	45866.1	43699.2	516.17	ug/L	516.17	ppb	00:16:16
1	Cu 324.752†	174525.9	160346.6	511.85	ug/L	511.85	ppb	00:16:16
1	Mn 257.610†	460004.1	438827.1	514.89	ug/L	514.89	ppb	00:16:11
1	Mo 202.031†	7272.6	6924.9	514.51	ug/L	514.51	ppb	00:16:36
1	Ni 231.604†	20809.4	19794.5	520.76	ug/L	520.76	ppb	00:16:16
1	P 214.914†	4439.1	4010.8	2459.9	ug/L	2459.9	ppb	00:16:36
1	Pb 220.353†	4117.7	3996.4	513.53	ug/L	513.53	ppb	00:16:36
1	S 181.975 Axial†	781.1	699.3	1042.7	ug/L	1042.7	ppb	00:16:36
1	Sb 206.836†	1497.9	1397.5	529.43	ug/L	529.43	ppb	00:16:36
1	Se 196.026†	786.2	781.1	541.38	ug/L	541.38	ppb	00:16:36
1	Si 251.611†	82660.1	78481.5	2639.8	ug/L	2639.8	ppb	00:16:16
1	Sn 189.927†	2928.7	2790.3	516.88	ug/L	516.88	ppb	00:16:36
1	Ti 334.940†	310814.3	298165.7	511.35	ug/L	511.35	ppb	00:16:16
1	Tl 190.801†	1632.3	1602.4	516.06	ug/L	516.06	ppb	00:16:36
1	U 409.014†	15279.7	16630.7	529.39	ug/L	529.39	ppb	00:16:16
1	V 292.402†	73628.8	71711.1	524.21	ug/L	524.21	ppb	00:16:16
1	Zn 213.857†	55801.0	52420.8	518.29	ug/L	518.29	ppb	00:16:16
1	SiO2†	81906.6	77751.7	5560.2	ug/L	5560.2	ppb	00:17:43
2	Sc Radial	5013.9	5013.9	105	%			00:15:18
2	Y RADIAL	5357.1	5357.1	104.4	%			00:15:18
2	Al 396.153Radial†	6568.3	6279.9	5013.3	ug/L	5013.3	ppb	00:15:18
2	Ca 317.933Radial†	3146.1	2991.3	5037.1	ug/L	5037.1	ppb	00:15:39
2	Fe 238.204 Radial†	581.9	546.2	5149.7	ug/L	5149.7	ppb	00:15:39
2	K 766.490 Radial†	29759.9	25651.0	5132.6	ug/L	5132.6	ppb	00:15:18
2	Mg 279.077 IEC†	156.6	148.2	5202.1	ug/L	5202.1	ppb	00:15:39
2	Na 589.592 Radial†	31176.4	31358.9	10160	ug/L	10160	ppb	00:15:18
2	Sr 421.552†	75895.1	72507.8	516.79	ug/L	516.79	ppb	00:15:18
2	Sc 361.383	854416.6	854416.6	104.98	%			00:16:42
2	Y 371.029	708353.8	708353.8	103.26	%			00:16:42
2	Ag 328.068†	104210.9	98983.5	489.52	ug/L	489.52	ppb	00:16:47
2	As 188.979†	1167.5	1130.9	513.32	ug/L	513.32	ppb	00:17:07
2	B 249.677†	21270.2	20779.2	503.44	ug/L	503.44	ppb	00:16:47
2	Ba 233.527†	64331.2	61276.5	509.37	ug/L	509.37	ppb	00:16:47
2	Be 313.107†	1361579.0	1301270.2	517.97	ug/L	517.97	ppb	00:16:42
2	Cd 226.502†	45659.1	43689.7	511.96	ug/L	511.96	ppb	00:16:47
2	Co 228.616†	24656.6	23559.1	511.71	ug/L	511.71	ppb	00:16:47
2	Cr 267.716†	45210.9	42969.5	507.55	ug/L	507.55	ppb	00:16:47
2	Cu 324.752†	171792.4	157341.0	502.26	ug/L	502.26	ppb	00:16:47
2	Mn 257.610†	461881.8	439556.4	515.74	ug/L	515.74	ppb	00:16:42
2	Mo 202.031†	7245.9	6882.7	511.36	ug/L	511.36	ppb	00:17:07
2	Ni 231.604†	20441.6	19396.3	510.29	ug/L	510.29	ppb	00:16:47

2	P 214.914†	4433.1	3994.8	2451.6 ug/L	2451.6 ppb	00:17:07
2	Pb 220.353†	4087.4	3958.0	508.62 ug/L	508.62 ppb	00:17:07
2	S 181.975 Axial†	778.9	695.5	1036.9 ug/L	1036.9 ppb	00:17:07
2	Sb 206.836†	1502.4	1398.3	529.56 ug/L	529.56 ppb	00:17:07
2	Se 196.026†	785.1	778.2	539.09 ug/L	539.09 ppb	00:17:07
2	Si 251.611†	81270.5	76967.5	2588.8 ug/L	2588.8 ppb	00:16:47
2	Sn 189.927†	2897.7	2754.1	510.17 ug/L	510.17 ppb	00:17:07
2	Ti 334.940†	306906.3	293727.4	503.74 ug/L	503.74 ppb	00:16:47
2	Tl 190.801†	1636.6	1602.8	516.17 ug/L	516.17 ppb	00:17:07
2	U 409.014†	15021.3	16349.3	520.43 ug/L	520.43 ppb	00:16:47
2	V 292.402†	72420.4	70390.4	514.64 ug/L	514.64 ppb	00:16:47
2	Zn 213.857†	55038.5	51566.0	509.85 ug/L	509.85 ppb	00:16:47
2	SiO2†	82668.2	78288.5	5598.8 ug/L	5598.8 ppb	00:17:49
3	Sc Radial	5039.0	5039.0	105 %		00:15:44
3	Y RADIAL	5393.4	5393.4	105.1 %		00:15:44
3	Al 396.153Radial†	6589.5	6268.8	5004.2 ug/L	5004.2 ppb	00:15:44
3	Ca 317.933Radial†	3181.6	3010.1	5068.8 ug/L	5068.8 ppb	00:16:04
3	Fe 238.204 Radial†	591.1	552.2	5206.2 ug/L	5206.2 ppb	00:16:04
3	K 766.490 Radial†	29863.9	25608.3	5124.0 ug/L	5124.0 ppb	00:15:44
3	Mg 279.077 IEC†	160.2	150.8	5293.3 ug/L	5293.3 ppb	00:16:04
3	Na 589.592 Radial†	31147.2	31182.9	10103 ug/L	10103 ppb	00:15:44
3	Sr 421.552†	76320.7	72551.5	517.10 ug/L	517.10 ppb	00:15:44
3	Sc 361.383	851042.9	851042.9	104.57 %		00:17:13
3	Y 371.029	706610.8	706610.8	103.01 %		00:17:13
3	Ag 328.068†	104238.6	99403.4	491.60 ug/L	491.60 ppb	00:17:18
3	As 188.979†	1171.9	1139.5	517.24 ug/L	517.24 ppb	00:17:38
3	B 249.677†	21316.1	20903.4	506.45 ug/L	506.45 ppb	00:17:18
3	Ba 233.527†	64522.7	61702.6	512.92 ug/L	512.92 ppb	00:17:18
3	Be 313.107†	1354547.6	1299687.4	517.35 ug/L	517.35 ppb	00:17:13
3	Cd 226.502†	45686.4	43888.2	514.28 ug/L	514.28 ppb	00:17:18
3	Co 228.616†	24668.1	23663.1	513.98 ug/L	513.98 ppb	00:17:18
3	Cr 267.716†	45378.1	43300.1	511.46 ug/L	511.46 ppb	00:17:18
3	Cu 324.752†	171904.9	158097.3	504.67 ug/L	504.67 ppb	00:17:18
3	Mn 257.610†	459202.2	438738.0	514.78 ug/L	514.78 ppb	00:17:13
3	Mo 202.031†	7276.9	6939.7	515.61 ug/L	515.61 ppb	00:17:38
3	Ni 231.604†	20511.8	19540.6	514.08 ug/L	514.08 ppb	00:17:18
3	P 214.914†	4434.1	4012.6	2462.5 ug/L	2462.5 ppb	00:17:38
3	Pb 220.353†	4122.4	4006.9	514.90 ug/L	514.90 ppb	00:17:38
3	S 181.975 Axial†	776.1	695.7	1037.4 ug/L	1037.4 ppb	00:17:38
3	Sb 206.836†	1494.1	1396.1	528.94 ug/L	528.94 ppb	00:17:38
3	Se 196.026†	787.7	783.7	542.97 ug/L	542.97 ppb	00:17:38
3	Si 251.611†	81327.6	77329.0	2600.9 ug/L	2600.9 ppb	00:17:18
3	Sn 189.927†	2925.3	2791.4	517.08 ug/L	517.08 ppb	00:17:38
3	Ti 334.940†	307297.2	295260.2	506.37 ug/L	506.37 ppb	00:17:18
3	Tl 190.801†	1641.9	1614.0	519.76 ug/L	519.76 ppb	00:17:38
3	U 409.014†	15107.6	16488.6	524.87 ug/L	524.87 ppb	00:17:18
3	V 292.402†	72574.5	70811.3	517.74 ug/L	517.74 ppb	00:17:18
3	Zn 213.857†	55071.2	51805.1	512.21 ug/L	512.21 ppb	00:17:18
3	SiO2†	81509.4	77492.5	5541.6 ug/L	5541.6 ppb	00:17:54

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	852605.2	104.76	%	0.209				0.20%
Sc Radial	5018.0	105	%	0.4				0.39%
Y 371.029	707981.8	103.21	%	0.179				0.17%
Y RADIAL	5364.8	104.6	%	0.50				0.48%
Ag 328.068†	100228.4	495.66	ug/L	8.898	495.66	ppb	8.898	1.80%
QC value within limits for Ag 328.068 Recovery = 99.13%								
Al 396.153Radial†	6260.9	4998.0	ug/L	19.27	4998.0	ppb	19.27	0.39%
QC value within limits for Al 396.153Radial Recovery = 99.96%								
As 188.979†	1135.8	515.57	ug/L	2.025	515.57	ppb	2.025	0.39%
QC value within limits for As 188.979 Recovery = 103.11%								
B 249.677†	20955.1	507.70	ug/L	5.008	507.70	ppb	5.008	0.99%
QC value within limits for B 249.677 Recovery = 101.54%								
Ba 233.527†	61719.7	513.06	ug/L	3.760	513.06	ppb	3.760	0.73%
QC value within limits for Ba 233.527 Recovery = 102.61%								
Be 313.107†	1302629.2	518.52	ug/L	1.520	518.52	ppb	1.520	0.29%
QC value within limits for Be 313.107 Recovery = 103.70%								
Ca 317.933Radial†	3010.2	5069.0	ug/L	31.96	5069.0	ppb	31.96	0.63%

QC value within limits for Ca 317.933Radial Recovery = 101.38%

Cd 226.502†	44020.2	515.83 ug/L	4.835	515.83 ppb	4.835	0.94%
QC value within limits for Cd 226.502 Recovery = 103.17%						
Co 228.616†	23713.0	515.05 ug/L	3.989	515.05 ppb	3.989	0.77%
QC value within limits for Co 228.616 Recovery = 103.01%						
Cr 267.716†	43322.9	511.73 ug/L	4.317	511.73 ppb	4.317	0.84%
QC value within limits for Cr 267.716 Recovery = 102.35%						
Cu 324.752†	158595.0	506.26 ug/L	4.991	506.26 ppb	4.991	0.99%
QC value within limits for Cu 324.752 Recovery = 101.25%						
Fe 238.204 Radial†	551.9	5203.3 ug/L	52.13	5203.3 ppb	52.13	1.00%
QC value within limits for Fe 238.204 Radial Recovery = 104.07%						
K 766.490 Radial†	25634.9	5129.3 ug/L	4.64	5129.3 ppb	4.64	0.09%
QC value within limits for K 766.490 Radial Recovery = 102.59%						
Mg 279.077 IEC†	149.9	5260.7 ug/L	50.85	5260.7 ppb	50.85	0.97%
QC value within limits for Mg 279.077 IEC Recovery = 105.21%						
Mn 257.610†	439040.5	515.13 ug/L	0.524	515.13 ppb	0.524	0.10%
QC value within limits for Mn 257.610 Recovery = 103.03%						
Mo 202.031†	6915.8	513.83 ug/L	2.201	513.83 ppb	2.201	0.43%
QC value within limits for Mo 202.031 Recovery = 102.77%						
Na 589.592 Radial†	31278.2	10134 ug/L	28.8	10134 ppb	28.8	0.28%
QC value within limits for Na 589.592 Radial Recovery = 101.34%						
Ni 231.604†	19577.2	515.04 ug/L	5.305	515.04 ppb	5.305	1.03%
QC value within limits for Ni 231.604 Recovery = 103.01%						
P 214.914†	4006.0	2458.0 ug/L	5.68	2458.0 ppb	5.68	0.23%
QC value within limits for P 214.914 Recovery = 98.32%						
Pb 220.353†	3987.1	512.35 ug/L	3.299	512.35 ppb	3.299	0.64%
QC value within limits for Pb 220.353 Recovery = 102.47%						
S 181.975 Axial†	696.8	1039.0 ug/L	3.23	1039.0 ppb	3.23	0.31%
QC value within limits for S 181.975 Axial Recovery = 103.90%						
Sb 206.836†	1397.3	529.31 ug/L	0.329	529.31 ppb	0.329	0.06%
QC value within limits for Sb 206.836 Recovery = 105.86%						
Se 196.026†	781.0	541.15 ug/L	1.952	541.15 ppb	1.952	0.36%
QC value within limits for Se 196.026 Recovery = 108.23%						
Si 251.611†	77592.7	2609.8 ug/L	26.65	2609.8 ppb	26.65	1.02%
QC value within limits for Si 251.611 Recovery = 104.39%						
Sn 189.927†	2778.6	514.71 ug/L	3.932	514.71 ppb	3.932	0.76%
QC value within limits for Sn 189.927 Recovery = 102.94%						
Sr 421.552†	72463.6	516.48 ug/L	0.830	516.48 ppb	0.830	0.16%
QC value within limits for Sr 421.552 Recovery = 103.30%						
Ti 334.940†	295717.8	507.15 ug/L	3.865	507.15 ppb	3.865	0.76%
QC value within limits for Ti 334.940 Recovery = 101.43%						
Tl 190.801†	1606.4	517.33 ug/L	2.107	517.33 ppb	2.107	0.41%
QC value within limits for Tl 190.801 Recovery = 103.47%						
U 409.014†	16489.5	524.90 ug/L	4.477	524.90 ppb	4.477	0.85%
QC value within limits for U 409.014 Recovery = 104.98%						
V 292.402†	70970.9	518.86 ug/L	4.880	518.86 ppb	4.880	0.94%
QC value within limits for V 292.402 Recovery = 103.77%						
Zn 213.857†	51930.6	513.45 ug/L	4.353	513.45 ppb	4.353	0.85%
QC value within limits for Zn 213.857 Recovery = 102.69%						
SiO2†	77844.3	5566.8 ug/L	29.17	5566.8 ppb	29.17	0.52%
QC value within limits for SiO2 Recovery = 104.10%						

All analyte(s) passed QC.

Sequence No.: 81
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 6
Date Collected: 1/15/2010 00:20:04
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4957.9	4957.9	103	%			00:21:55
1	Y RADIAL	5303.2	5303.2	103.4	%			00:21:55
1	Al 396.153Radial†	-18.7	-14.9	-11.942	ug/L	-11.942	ppb	00:21:55
1	Ca 317.933Radial†	19.5	3.7	6.2363	ug/L	6.2363	ppb	00:22:15
1	Fe 238.204 Radial†	11.5	1.2	11.412	ug/L	11.412	ppb	00:22:15
1	K 766.490 Radial†	2826.4	-56.0	-11.240	ug/L	-11.240	ppb	00:21:55
1	Mg 279.077 IEC†	-0.0	-1.6	-54.605	ug/L	-54.605	ppb	00:22:15
1	Na 589.592 Radial†	-1511.8	106.0	34.335	ug/L	34.335	ppb	00:21:55
1	Sr 421.552†	65.2	45.8	0.3264	ug/L	0.3264	ppb	00:21:55
1	Sc 361.383	829467.5	829467.5	101.92	%			00:23:12
1	Y 371.029	700108.1	700108.1	102.06	%			00:23:12
1	Ag 328.068†	356.1	67.8	0.3375	ug/L	0.3375	ppb	00:23:12
1	As 188.979†	-28.6	-9.2	-4.1371	ug/L	-4.1371	ppb	00:23:32
1	B 249.677†	-386.5	139.3	3.3889	ug/L	3.3889	ppb	00:23:32
1	Ba 233.527†	-2.8	-4.3	-0.0334	ug/L	-0.0334	ppb	00:23:32
1	Be 313.107†	-4367.9	26.5	0.0108	ug/L	0.0108	ppb	00:23:12
1	Cd 226.502†	-173.7	27.2	0.3178	ug/L	0.3178	ppb	00:23:32
1	Co 228.616†	-77.1	-2.9	-0.0628	ug/L	-0.0628	ppb	00:23:32
1	Cr 267.716†	70.1	-26.9	-0.3177	ug/L	-0.3177	ppb	00:23:32
1	Cu 324.752†	6299.4	-117.1	-0.3747	ug/L	-0.3747	ppb	00:23:12
1	Mn 257.610†	425.5	13.2	0.0189	ug/L	0.0189	ppb	00:23:32
1	Mo 202.031†	25.4	5.6	0.4141	ug/L	0.4141	ppb	00:23:32
1	Ni 231.604†	88.6	11.8	0.3114	ug/L	0.3114	ppb	00:23:32
1	P 214.914†	220.2	-11.8	-7.5054	ug/L	-7.5054	ppb	00:23:32
1	Pb 220.353†	-50.8	14.7	1.8850	ug/L	1.8850	ppb	00:23:32
1	S 181.975 Axial†	34.7	-12.4	-18.481	ug/L	-18.481	ppb	00:23:32
1	Sb 206.836†	39.1	5.7	2.0635	ug/L	2.0635	ppb	00:23:32
1	Se 196.026†	-40.5	-9.4	-6.2467	ug/L	-6.2467	ppb	00:23:32
1	Si 251.611†	626.2	168.5	5.6776	ug/L	5.6776	ppb	00:23:32
1	Sn 189.927†	-1.8	-7.9	-1.4542	ug/L	-1.4542	ppb	00:23:32
1	Ti 334.940†	-1348.2	64.2	0.1143	ug/L	0.1143	ppb	00:23:12
1	Tl 190.801†	-42.3	2.4	0.7726	ug/L	0.7726	ppb	00:23:32
1	U 409.014†	-1994.7	83.7	2.6739	ug/L	2.6739	ppb	00:23:12
1	V 292.402†	-1337.4	94.9	0.6928	ug/L	0.6928	ppb	00:23:12
1	Zn 213.857†	856.6	-19.9	-0.2009	ug/L	-0.2009	ppb	00:23:32
1	SiO2†	640.3	172.0	12.319	ug/L	12.319	ppb	00:24:28
2	Sc Radial	5004.1	5004.1	104	%			00:22:21
2	Y RADIAL	5390.2	5390.2	105.1	%			00:22:21
2	Al 396.153Radial†	-6.2	-2.7	-2.2166	ug/L	-2.2166	ppb	00:22:21
2	Ca 317.933Radial†	19.3	3.3	5.6296	ug/L	5.6296	ppb	00:22:41
2	Fe 238.204 Radial†	13.5	3.1	29.028	ug/L	29.028	ppb	00:22:41
2	K 766.490 Radial†	2864.1	-45.1	-9.0552	ug/L	-9.0552	ppb	00:22:21
2	Mg 279.077 IEC†	2.5	0.9	30.757	ug/L	30.757	ppb	00:22:41
2	Na 589.592 Radial†	-1494.7	135.8	43.995	ug/L	43.995	ppb	00:22:21
2	Sr 421.552†	-9.7	-26.5	-0.1888	ug/L	-0.1888	ppb	00:22:21
2	Sc 361.383	819793.9	819793.9	100.73	%			00:23:38
2	Y 371.029	692279.2	692279.2	100.92	%			00:23:38
2	Ag 328.068†	310.1	26.3	0.1401	ug/L	0.1401	ppb	00:23:38
2	As 188.979†	-15.5	3.5	1.5716	ug/L	1.5716	ppb	00:23:58
2	B 249.677†	-371.3	149.9	3.6453	ug/L	3.6453	ppb	00:23:58
2	Ba 233.527†	-8.3	-9.7	-0.0785	ug/L	-0.0785	ppb	00:23:58
2	Be 313.107†	-4282.0	61.2	0.0251	ug/L	0.0251	ppb	00:23:38
2	Cd 226.502†	-170.0	28.8	0.3354	ug/L	0.3354	ppb	00:23:58
2	Co 228.616†	-80.6	-7.3	-0.1575	ug/L	-0.1575	ppb	00:23:58
2	Cr 267.716†	99.9	3.5	0.0422	ug/L	0.0422	ppb	00:23:58
2	Cu 324.752†	6194.4	-148.5	-0.4725	ug/L	-0.4725	ppb	00:23:38
2	Mn 257.610†	428.0	20.6	0.0258	ug/L	0.0258	ppb	00:23:58
2	Mo 202.031†	29.6	10.1	0.7535	ug/L	0.7535	ppb	00:23:58
2	Ni 231.604†	103.7	27.9	0.7338	ug/L	0.7338	ppb	00:23:58

2	P 214.914†	217.0	-12.4	-7.8387 ug/L	-7.8387 ppb	00:23:58
2	Pb 220.353†	-45.9	19.1	2.4401 ug/L	2.4401 ppb	00:23:58
2	S 181.975 Axial†	43.2	-3.6	-5.3403 ug/L	-5.3403 ppb	00:23:58
2	Sb 206.836†	30.4	-2.6	-0.9174 ug/L	-0.9174 ppb	00:23:58
2	Se 196.026†	-38.7	-8.0	-5.2777 ug/L	-5.2777 ppb	00:23:58
2	Si 251.611†	638.5	188.0	6.3312 ug/L	6.3312 ppb	00:23:58
2	Sn 189.927†	7.3	1.1	0.2110 ug/L	0.2110 ppb	00:23:58
2	Ti 334.940†	-1191.4	204.2	0.3486 ug/L	0.3486 ppb	00:23:38
2	Tl 190.801†	-33.4	10.8	3.4491 ug/L	3.4491 ppb	00:23:58
2	U 409.014†	-2054.6	1.2	0.0355 ug/L	0.0355 ppb	00:23:38
2	V 292.402†	-1357.8	59.2	0.4338 ug/L	0.4338 ppb	00:23:38
2	Zn 213.857†	829.8	-36.6	-0.3717 ug/L	-0.3717 ppb	00:23:58
2	SiO2†	636.4	175.5	12.564 ug/L	12.564 ppb	00:24:33
3	Sc Radial	4943.3	4943.3	103 %		00:22:46
3	Y RADIAL	5298.4	5298.4	103.3 %		00:22:46
3	Al 396.153Radial†	-22.4	-18.5	-14.822 ug/L	-14.822 ppb	00:22:46
3	Ca 317.933Radial†	12.7	-2.9	-4.8025 ug/L	-4.8025 ppb	00:23:06
3	Fe 238.204 Radial†	11.3	1.1	10.047 ug/L	10.047 ppb	00:23:06
3	K 766.490 Radial†	2875.5	-0.4	-0.0766 ug/L	-0.0766 ppb	00:22:46
3	Mg 279.077 IEC†	1.5	-0.1	-2.6843 ug/L	-2.6843 ppb	00:23:06
3	Na 589.592 Radial†	-1557.1	57.7	18.693 ug/L	18.693 ppb	00:22:46
3	Sr 421.552†	-10.7	-27.6	-0.1965 ug/L	-0.1965 ppb	00:22:46
3	Sc 361.383	830742.8	830742.8	102.07 %		00:24:03
3	Y 371.029	702703.1	702703.1	102.44 %		00:24:03
3	Ag 328.068†	355.9	67.1	0.3361 ug/L	0.3361 ppb	00:24:03
3	As 188.979†	-33.6	-14.1	-6.3221 ug/L	-6.3221 ppb	00:24:23
3	B 249.677†	-351.9	173.8	4.2296 ug/L	4.2296 ppb	00:24:23
3	Ba 233.527†	-8.0	-9.3	-0.0743 ug/L	-0.0743 ppb	00:24:23
3	Be 313.107†	-4294.5	104.9	0.0418 ug/L	0.0418 ppb	00:24:03
3	Cd 226.502†	-187.4	14.0	0.1637 ug/L	0.1637 ppb	00:24:23
3	Co 228.616†	-86.5	-12.1	-0.2626 ug/L	-0.2626 ppb	00:24:23
3	Cr 267.716†	83.1	-14.3	-0.1677 ug/L	-0.1677 ppb	00:24:23
3	Cu 324.752†	6274.0	-151.5	-0.4838 ug/L	-0.4838 ppb	00:24:03
3	Mn 257.610†	418.2	5.4	0.0074 ug/L	0.0074 ppb	00:24:23
3	Mo 202.031†	21.9	2.2	0.1633 ug/L	0.1633 ppb	00:24:23
3	Ni 231.604†	102.0	24.8	0.6536 ug/L	0.6536 ppb	00:24:23
3	P 214.914†	208.3	-23.8	-15.089 ug/L	-15.089 ppb	00:24:23
3	Pb 220.353†	-54.3	11.4	1.4562 ug/L	1.4562 ppb	00:24:23
3	S 181.975 Axial†	39.5	-7.8	-11.601 ug/L	-11.601 ppb	00:24:23
3	Sb 206.836†	40.9	7.4	2.7134 ug/L	2.7134 ppb	00:24:23
3	Se 196.026†	-24.7	6.2	4.1906 ug/L	4.1906 ppb	00:24:23
3	Si 251.611†	616.2	157.8	5.3182 ug/L	5.3182 ppb	00:24:23
3	Sn 189.927†	9.4	3.1	0.5669 ug/L	0.5669 ppb	00:24:23
3	Ti 334.940†	-1395.0	20.4	0.0340 ug/L	0.0340 ppb	00:24:03
3	Tl 190.801†	-36.8	7.8	2.5083 ug/L	2.5083 ppb	00:24:23
3	U 409.014†	-2039.7	42.7	1.3627 ug/L	1.3627 ppb	00:24:03
3	V 292.402†	-1292.3	141.1	1.0213 ug/L	1.0213 ppb	00:24:03
3	Zn 213.857†	866.3	-11.7	-0.1209 ug/L	-0.1209 ppb	00:24:23
3	SiO2†	634.5	165.4	11.856 ug/L	11.856 ppb	00:24:38

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	826668.1	101.57	%	0.736				0.72%
Sc Radial	4968.4	104	%	0.7				0.64%
Y 371.029	698363.5	101.81	%	0.791				0.78%
Y RADIAL	5330.6	103.9	%	1.01				0.97%
Ag 328.068†	53.8	0.2713	ug/L	0.11356	0.2713	ppb	0.11356	41.87%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-12.0	-9.6599	ug/L	6.60498	-9.6599	ppb	6.60498	68.38%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	-6.6	-2.9625	ug/L	4.07581	-2.9625	ppb	4.07581	137.58%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	154.4	3.7546	ug/L	0.43087	3.7546	ppb	0.43087	11.48%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-7.7	-0.0621	ug/L	0.02490	-0.0621	ppb	0.02490	40.11%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	64.2	0.0259	ug/L	0.01550	0.0259	ppb	0.01550	59.89%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.4	2.3545	ug/L	6.20555	2.3545	ppb	6.20555	263.57%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              23.3      0.2723 ug/L       0.09447      0.2723 ppb       0.09447  34.69%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              -7.4     -0.1610 ug/L       0.09996     -0.1610 ppb       0.09996  62.09%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†             -12.6     -0.1478 ug/L       0.18078     -0.1478 ppb       0.18078 122.35%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†            -139.0     -0.4437 ug/L       0.05998     -0.4437 ppb       0.05998  13.52%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.8      16.829 ug/L       10.5866      16.829 ppb       10.5866  62.91%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       -33.8     -6.7905 ug/L       5.91615     -6.7905 ppb       5.91615  87.12%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.3     -8.8438 ug/L      43.01307     -8.8438 ppb      43.01307 486.36%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              13.1      0.0174 ug/L       0.00927      0.0174 ppb       0.00927  53.38%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               6.0      0.4436 ug/L       0.29622      0.4436 ppb       0.29622  66.78%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       99.8      32.341 ug/L       12.7684      32.341 ppb       12.7684  39.48%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†              21.5      0.5662 ug/L       0.22432      0.5662 ppb       0.22432  39.62%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†              -16.0     -10.144 ug/L        4.2855     -10.144 ppb        4.2855  42.24%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              15.1      1.9271 ug/L       0.49332      1.9271 ppb       0.49332  25.60%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -7.9     -11.808 ug/L        6.5730     -11.808 ppb        6.5730  55.67%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               3.5      1.2865 ug/L       1.93610      1.2865 ppb       1.93610 150.50%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -3.7     -2.4446 ug/L       5.76662     -2.4446 ppb       5.76662 235.89%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             171.5      5.7757 ug/L       0.51355      5.7757 ppb       0.51355   8.89%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†              -1.2     -0.2254 ug/L       1.07893     -0.2254 ppb       1.07893 478.61%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†              -2.7     -0.0196 ug/L       0.29969     -0.0196 ppb       0.29969 >999.9%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              96.3      0.1656 ug/L       0.16346      0.1656 ppb       0.16346  98.68%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               7.0      2.2433 ug/L       1.35777      2.2433 ppb       1.35777  60.52%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†               42.6      1.3574 ug/L       1.31918      1.3574 ppb       1.31918  97.19%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†               98.4      0.7160 ug/L       0.29444      0.7160 ppb       0.29444  41.12%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†             -22.7     -0.2312 ug/L       0.12809     -0.2312 ppb       0.12809  55.42%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   171.0      12.246 ug/L        0.3599      12.246 ppb        0.3599   2.94%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Monday, January 11, 2010 23:20:35
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\091212\Sample.251
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	2768.1	2768.068	71.036	2.6
	Mg	24.0	69802.7	69802.742	915.546	1.3
	Co	58.9	48113.1	48113.089	408.939	0.8
	Rh	102.9	83606.7	83606.743	372.541	0.4
	In	114.9	99581.9	99581.885	627.615	0.6
	Pb	208.0	61853.2	61853.224	599.487	1.0
⌈>	Ba	137.9	96105.6	96105.580	872.981	0.9
⌊	Ba++	69.0	2358.6	0.025	0.000	1.1
⌈>	Ce	139.9	118452.7	118452.685	971.257	0.8
⌊	CeO	155.9	2554.5	0.022	0.000	1.6
	Bkgd	220.0	25.6	25.600	2.275	8.9

Current Optimization File Data

Current Value	Description
0.83	Nebulizer Gas Flow
13.25	Lens Voltage
1450.00	ICP RF Power
-1781.25	Analog Stage Voltage
900.00	Pulse Stage Voltage
30.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	9.8	4729.4
Co	59	17	10.5	70359.8
In	115	17	11.8	118105.5

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	578	2080	0.651
Be	9.0	9.0	2028	2080	0.663
Mg	24.0	24.0	5686	2120	0.623
Mg	25.0	24.9	5905	2080	0.697
Mg	26.0	26.0	6162	2120	0.691
Co	58.9	59.0	14181	2170	0.632
Rh	102.9	102.8	24853	2230	0.695
In	114.9	114.8	27774	2260	0.682
Ce	139.9	139.9	33843	2280	0.733
Pb	206.0	206.0	49948	2430	0.679
Pb	207.0	207.0	50135	2385	0.643
Pb	208.0	208.0	50451	2430	0.689
U	238.1	238.0	57731	2470	0.673

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Tuesday, January 12, 2010 11:19:58
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\Blank.113

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7		ug/L		106	
|	Be	9		ug/L		12	
|	B	11		ug/L		791	
|	Na	23		ug/L		20682	
|	Mg	24		ug/L		3334	
|	Al	27		ug/L		7335	
|	P	31		ug/L		6990	
|	K	39		ug/L		618456	
|	Ca	43		ug/L		473	
\>	Sc	45		ug/L		1187102	
|	V	51		ug/L		1868	
|	Cr	52		ug/L		2071	
|	Cr	53		ug/L		115098	
|	Mn	55		ug/L		1646	
|	Fe	57		ug/L		4399	
|	Co	59		ug/L		193	
|	Ni	60		ug/L		73	
|	Cu	63		ug/L		349	
⌊	Cu	65		ug/L		96	
⌈	Zn	66		ug/L		184	
|	Zn	67		ug/L		10133	
|	Zn	68		ug/L		924	
\>	Ge	74		ug/L		260902	
|	As	75		ug/L		366	
|	Se	77		ug/L		5122	
|	Se	82		ug/L		-23	
⌊	Kr	83		ug/L		93	
⌈	Sr	88		ug/L		162	
|	Y	89		ug/L		84	
|	Ag	107		ug/L		55	
|	Cd	111		ug/L		22	
|	Cd	114		ug/L		31	
\>	In	115		ug/L		135688	
|	Sn	120		ug/L		217	
|	Sb	121		ug/L		360	
⌊	Sb	123		ug/L		297	
⌈	Ba	135		ug/L		32	
|	Ba	137		ug/L		50	
|	Ho	165		ug/L		17	
\>	Lu	175		ug/L		195997	
|	Tl	205		ug/L		649	
|	Pb	208		ug/L		516	
|	Bi	209		ug/L		18	
⌊	U	238		ug/L		171	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	0.9999
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Tuesday, January 12, 2010 11:25:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\Standard 1.114

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	0.957	13060	0.011
	Be	9	**10.000**	**ug/L**	1.492	4958	0.004
	B	11	**20.000**	**ug/L**	1.280	9061	0.007
	Na	23	**1000.000**	**ug/L**	5.635	4865431	4.058
	Mg	24	**1000.000**	**ug/L**	6.867	3173090	2.654
	Al	27	**1000.000**	**ug/L**	6.859	4307709	3.601
	P	31	**1000.000**	**ug/L**	0.972	219306	0.178
	K	39	**1000.000**	**ug/L**	2.975	5923646	4.440
	Ca	43	**1000.000**	**ug/L**	2.769	11198	0.009
>	Sc	45		**ug/L**		1194003	1194003.004
	V	51	**10.000**	**ug/L**	2.027	44708	0.036
	Cr	52	**10.000**	**ug/L**	0.806	40664	0.032
	Cr	53		**ug/L**		100158	-0.013
	Mn	55	**10.000**	**ug/L**	0.189	63469	0.052
	Fe	57	**1000.000**	**ug/L**	1.260	126731	0.102
	Co	59	**10.000**	**ug/L**	0.404	45240	0.038
	Ni	60	**10.000**	**ug/L**	0.673	9476	0.008
	Cu	63		**ug/L**		21996	0.018
	Cu	65	**10.000**	**ug/L**	1.331	10357	0.009
	Zn	66	**10.000**	**ug/L**	0.492	7181	0.027
	Zn	67		**ug/L**		8733	-0.005
	Zn	68		**ug/L**		5633	0.018
>	Ge	74		**ug/L**		257434	257434.138
	As	75	**10.000**	**ug/L**	3.745	7842	0.029
	Se	77		**ug/L**		4602	-0.002
	Se	82	**10.000**	**ug/L**	0.638	655	0.003
	Kr	83		**ug/L**		92	0.000
	Sr	88	**10.000**	**ug/L**	0.127	85888	0.628
	Y	89		**ug/L**		75	-0.000
	Ag	107	**10.000**	**ug/L**	2.072	31778	0.233
	Cd	111	**10.000**	**ug/L**	1.912	7582	0.055
	Cd	114		**ug/L**		17638	0.129
>	In	115		**ug/L**		136427	136427.297
	Sn	120	**10.000**	**ug/L**	1.172	31202	0.227
	Sb	121	**10.000**	**ug/L**	12.039	24313	0.176
	Sb	123		**ug/L**		19048	0.137
	Ba	135		**ug/L**		7675	0.039
	Ba	137	**10.000**	**ug/L**	0.744	13510	0.069
	Ho	165		**ug/L**		14	-0.000
>	Lu	175		**ug/L**		193768	193768.251
	Tl	205	**10.000**	**ug/L**	1.052	67358	0.344
	Pb	208	**10.000**	**ug/L**	0.162	102482	0.526
	Bi	209		**ug/L**		56	0.000
	U	238	**10.000**	**ug/L**	1.383	102749	0.529

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Tuesday, January 12, 2010 11:31:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\Standard 2.115

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.964**	**ug/L**	2.001	120305	0.105
	Be	9	**99.993**	**ug/L**	0.337	47246	0.041
	B	11	**200.033**	**ug/L**	1.571	81615	0.070
	Na	23	**9999.518**	**ug/L**	2.151	46414989	40.385
	Mg	24	**9998.827**	**ug/L**	3.853	30136326	26.231
	Al	27	**9998.664**	**ug/L**	9.289	40830540	35.531
	P	31	**10002.139**	**ug/L**	4.136	2094378	1.817
	K	39	**10008.168**	**ug/L**	6.611	56178716	48.387
	Ca	43	**10001.746**	**ug/L**	0.613	105461	0.091
>	Sc	45		**ug/L**		1148663	1148663.372
	V	51	**100.059**	**ug/L**	0.406	439841	0.381
	Cr	52	**100.029**	**ug/L**	1.968	384134	0.333
	Cr	53		**ug/L**		139049	0.024
	Mn	55	**100.005**	**ug/L**	1.509	599497	0.521
	Fe	57	**9996.812**	**ug/L**	0.859	1144123	0.992
	Co	59	**99.996**	**ug/L**	0.928	431832	0.376
	Ni	60	**99.999**	**ug/L**	1.780	90392	0.079
	Cu	63		**ug/L**		208815	0.182
	Cu	65	**100.006**	**ug/L**	2.260	99428	0.086
	Zn	66	**100.004**	**ug/L**	0.642	68541	0.273
	Zn	67		**ug/L**		17900	0.033
	Zn	68		**ug/L**		49060	0.193
>	Ge	74		**ug/L**		250317	250316.774
	As	75	**100.012**	**ug/L**	2.660	74006	0.294
	Se	77		**ug/L**		9426	0.018
	Se	82	**100.053**	**ug/L**	3.528	6939	0.028
	Kr	83		**ug/L**		130	0.000
	Sr	88	**100.002**	**ug/L**	1.142	824533	6.296
	Y	89		**ug/L**		145	0.000
	Ag	107	**100.013**	**ug/L**	1.000	308784	2.358
	Cd	111	**100.020**	**ug/L**	1.314	74101	0.566
	Cd	114		**ug/L**		170540	1.302
>	In	115		**ug/L**		130947	130946.869
	Sn	120	**100.020**	**ug/L**	2.192	303771	2.319
	Sb	121	**100.129**	**ug/L**	4.869	264441	2.017
	Sb	123		**ug/L**		206304	1.574
	Ba	135		**ug/L**		75938	0.405
	Ba	137	**100.024**	**ug/L**	2.559	133524	0.712
	Ho	165		**ug/L**		26	0.000
>	Lu	175		**ug/L**		187561	187561.454
	Tl	205	**99.993**	**ug/L**	0.667	641814	3.419
	Pb	208	**99.988**	**ug/L**	1.910	975853	5.200
	Bi	209		**ug/L**		305	0.002
	U	238	**99.982**	**ug/L**	1.260	975913	5.202

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Tuesday, January 12, 2010 11:37:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 1.116

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.604**	**ug/L**	1.320	58259	0.050
	Be	9	**49.223**	**ug/L**	0.490	23634	0.020
	B	11	**100.125**	**ug/L**	3.189	41888	0.035
	Na	23	**4394.238**	**ug/L**	7.927	20723885	17.747
	Mg	24	**4996.178**	**ug/L**	4.524	15295577	13.107
	Al	27	**4744.259**	**ug/L**	4.539	19679142	16.859
	P	31	**4724.570**	**ug/L**	1.140	1008491	0.858
	K	39	**4178.677**	**ug/L**	1.680	24182891	20.203
	Ca	43	**4726.275**	**ug/L**	2.064	50875	0.043
>	Sc	45		**ug/L**		1166977	1166977.181
	V	51	**48.959**	**ug/L**	1.146	219601	0.187
	Cr	52	**49.841**	**ug/L**	1.113	195498	0.166
	Cr	53		**ug/L**		131387	0.016
	Mn	55	**49.571**	**ug/L**	0.650	302734	0.258
	Fe	57	**4908.803**	**ug/L**	1.670	572969	0.487
	Co	59	**48.139**	**ug/L**	0.373	211315	0.181
	Ni	60	**49.905**	**ug/L**	0.697	45871	0.039
	Cu	63		**ug/L**		105121	0.090
	Cu	65	**49.706**	**ug/L**	0.376	50259	0.043
	Zn	66	**49.511**	**ug/L**	2.109	34302	0.135
	Zn	67		**ug/L**		13766	0.016
	Zn	68		**ug/L**		24604	0.094
>	Ge	74		**ug/L**		252364	252364.128
	As	75	**46.175**	**ug/L**	1.274	34651	0.136
	Se	77		**ug/L**		8037	0.012
	Se	82	**47.956**	**ug/L**	3.879	3344	0.013
	Kr	83		**ug/L**		104	0.000
	Sr	88	**50.393**	**ug/L**	1.065	424337	3.173
	Y	89		**ug/L**		82	-0.000
	Ag	107	**48.002**	**ug/L**	0.889	151355	1.132
	Cd	111	**48.546**	**ug/L**	0.648	36735	0.275
	Cd	114		**ug/L**		85402	0.639
>	In	115		**ug/L**		133696	133696.149
	Sn	120	**49.171**	**ug/L**	0.368	152602	1.140
	Sb	121	**49.575**	**ug/L**	5.481	133878	0.999
	Sb	123		**ug/L**		104646	0.781
	Ba	135		**ug/L**		37895	0.199
	Ba	137	**49.212**	**ug/L**	2.616	66733	0.350
	Ho	165		**ug/L**		24	0.000
>	Lu	175		**ug/L**		190544	190544.372
	Tl	205	**46.805**	**ug/L**	2.603	305369	1.600
	Pb	208	**49.255**	**ug/L**	3.669	488278	2.562
	Bi	209		**ug/L**		115	0.001
	U	238	**52.168**	**ug/L**	2.814	517120	2.714

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	95.209				
|	Be	9	98.446				
|	B	11	100.125				
|	Na	23	87.885				
|	Mg	24	99.924				
|	Al	27	93.946				
|	P	31	94.491				
|	K	39	83.574				
|	Ca	43	94.526				
|>	Sc	45			98.3		
|	V	51	97.919				
|	Cr	52	99.681				
|	Cr	53					
|	Mn	55	99.143				
|	Fe	57	98.176				
|	Co	59	96.278				
|	Ni	60	99.810				
|	Cu	63					
⌊	Cu	65	99.413				
⌈	Zn	66	99.022				
|	Zn	67					
|	Zn	68					
|>	Ge	74			96.7		
|	As	75	92.350				
|	Se	77					
|	Se	82	95.911				
⌊	Kr	83					
⌈	Sr	88	100.786				
|	Y	89					
|	Ag	107	96.003				
|	Cd	111	97.093				
|	Cd	114					
|>	In	115			98.5		
|	Sn	120	98.342				
|	Sb	121	99.150				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	98.425				
|	Ho	165					
|>	Lu	175			97.2		
|	Tl	205	93.610				
|	Pb	208	98.511				
|	Bi	209					
⌊	U	238	104.336				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	ICV is out of limits (+/- 10%)
QC Std 1	K	39	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, January 12, 2010 11:43:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 2.117

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**-0.004**	**ug/L**	60.170	103	-0.000
|	Be	9	**0.002**	**ug/L**	108.179	13	0.000
|	B	11	**2.102**	**ug/L**	22.384	1691	0.001
|	Na	23	**1.256**	**ug/L**	91.902	27026	0.005
|	Mg	24	**0.624**	**ug/L**	147.955	5335	0.002
|	Al	27	**-0.335**	**ug/L**	251.151	6002	-0.001
|	P	31	**-1.015**	**ug/L**	188.726	6859	-0.000
|	K	39	**-7.924**	**ug/L**	98.297	580606	-0.038
|	Ca	43	**-2.690**	**ug/L**	97.485	450	-0.000
\>	Sc	45		**ug/L**		1203147	1203147.454
|	V	51	**-0.205**	**ug/L**	172.463	943	-0.001
|	Cr	52	**0.589**	**ug/L**	2.247	4456	0.002
|	Cr	53		**ug/L**		123796	0.006
|	Mn	55	**-0.039**	**ug/L**	22.408	1425	-0.000
|	Fe	57	**5.207**	**ug/L**	41.551	5079	0.001
|	Co	59	**0.007**	**ug/L**	47.631	226	0.000
|	Ni	60	**0.002**	**ug/L**	281.268	76	0.000
|	Cu	63		**ug/L**		362	0.000
⌊	Cu	65	**0.006**	**ug/L**	41.419	104	0.000
⌈	Zn	66	**-0.001**	**ug/L**	1118.168	186	-0.000
|	Zn	67		**ug/L**		9742	-0.002
|	Zn	68		**ug/L**		897	-0.000
\>	Ge	74		**ug/L**		265322	265321.914
|	As	75	**-0.440**	**ug/L**	26.493	28	-0.001
|	Se	77		**ug/L**		6422	0.005
|	Se	82	**0.015**	**ug/L**	998.557	-22	0.000
⌊	Kr	83		**ug/L**		87	-0.000
⌈	Sr	88	**0.002**	**ug/L**	71.523	186	0.000
|	Y	89		**ug/L**		57	-0.000
|	Ag	107	**-0.001**	**ug/L**	139.348	52	-0.000
|	Cd	111	**-0.001**	**ug/L**	2781.754	22	-0.000
|	Cd	114		**ug/L**		41	0.000
\>	In	115		**ug/L**		140571	140570.953
|	Sn	120	**0.092**	**ug/L**	11.819	524	0.002
|	Sb	121	**0.937**	**ug/L**	21.441	3029	0.019
⌊	Sb	123		**ug/L**		2443	0.015
⌈	Ba	135		**ug/L**		28	-0.000
|	Ba	137	**-0.003**	**ug/L**	87.758	47	-0.000
|	Ho	165		**ug/L**		18	0.000
\>	Lu	175		**ug/L**		199711	199711.060
|	Tl	205	**0.232**	**ug/L**	15.049	2241	0.008
|	Pb	208	**-0.001**	**ug/L**	195.980	512	-0.000
|	Bi	209		**ug/L**		18	-0.000
⌊	U	238	**0.065**	**ug/L**	26.405	847	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		101.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		103.6			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		101.9			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Tuesday, January 12, 2010 11:49:27
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 3.118

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.917**	**ug/L**	1.548	13524	0.011
	Be	9	**0.528**	**ug/L**	6.214	267	0.000
	B	11	**16.601**	**ug/L**	1.217	7643	0.006
	Na	23	**269.611**	**ug/L**	6.294	1298940	1.089
	Mg	24	**17.689**	**ug/L**	11.268	57784	0.046
	Al	27	**32.774**	**ug/L**	16.031	144068	0.116
	P	31	**49.337**	**ug/L**	1.693	17439	0.009
	K	39	**298.743**	**ug/L**	4.575	2307838	1.444
	Ca	43	**209.698**	**ug/L**	1.419	2719	0.002
>	Sc	45		**ug/L**		1174276	1174276.068
	V	51	**10.888**	**ug/L**	0.553	50577	0.041
	Cr	52	**11.246**	**ug/L**	1.171	45974	0.037
	Cr	53		**ug/L**		105839	-0.007
	Mn	55	**5.697**	**ug/L**	0.843	36451	0.030
	Fe	57	**115.752**	**ug/L**	2.361	17846	0.011
	Co	59	**1.121**	**ug/L**	2.198	5136	0.004
	Ni	60	**2.277**	**ug/L**	3.738	2175	0.002
	Cu	63		**ug/L**		2861	0.002
	Cu	65	**1.232**	**ug/L**	2.405	1346	0.001
	Zn	66	**11.278**	**ug/L**	1.053	8075	0.031
	Zn	67		**ug/L**		8500	-0.006
	Zn	68		**ug/L**		6288	0.021
>	Ge	74		**ug/L**		256309	256309.466
	As	75	**5.339**	**ug/L**	10.027	4388	0.016
	Se	77		**ug/L**		4997	-0.000
	Se	82	**5.414**	**ug/L**	7.674	363	0.002
	Kr	83		**ug/L**		89	-0.000
	Sr	88	**11.513**	**ug/L**	1.484	99088	0.725
	Y	89		**ug/L**		53	-0.000
	Ag	107	**1.018**	**ug/L**	1.483	3330	0.024
	Cd	111	**1.119**	**ug/L**	3.824	886	0.006
	Cd	114		**ug/L**		1960	0.014
>	In	115		**ug/L**		136492	136491.799
	Sn	120	**5.133**	**ug/L**	1.481	16458	0.119
	Sb	121	**2.697**	**ug/L**	12.405	7776	0.054
	Sb	123		**ug/L**		5912	0.041
	Ba	135		**ug/L**		1721	0.009
	Ba	137	**2.162**	**ug/L**	2.782	3007	0.015
	Ho	165		**ug/L**		18	0.000
>	Lu	175		**ug/L**		192363	192363.071
	Tl	205	**1.134**	**ug/L**	0.966	8097	0.039
	Pb	208	**2.221**	**ug/L**	0.837	22727	0.116
	Bi	209		**ug/L**		26	0.000
	U	238	**0.237**	**ug/L**	2.102	2545	0.012

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	109.167				
|	Be	9	105.514				
|	B	11	110.675				
|	Na	23	107.844				
|	Mg	24	117.925				
|	Al	27	109.245				
|	P	31	98.673				
|	K	39	99.581				
|	Ca	43	104.849				
|>	Sc	45			98.9		
|	V	51	108.880				
|	Cr	52	112.464				
|	Cr	53					
|	Mn	55	113.936				
|	Fe	57	115.752				
|	Co	59	112.051				
|	Ni	60	113.852				
|	Cu	63					
⌊	Cu	65	123.205				
⌈	Zn	66	112.777				
|	Zn	67					
|	Zn	68					
|>	Ge	74			98.2		
|	As	75	106.786				
|	Se	77					
|	Se	82	108.282				
⌊	Kr	83					
⌈	Sr	88	115.126				
|	Y	89					
|	Ag	107	101.777				
|	Cd	111	111.927				
|	Cd	114					
|>	In	115			100.6		
|	Sn	120	102.657				
|	Sb	121	89.891				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	108.088				
|	Ho	165					
|>	Lu	175			98.1		
|	Tl	205	113.433				
|	Pb	208	111.050				
|	Bi	209					
⌊	U	238	118.720				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, January 12, 2010 11:55:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 4.119

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.208**	**ug/L**	5.965	342	0.000
	Be	9	**0.061**	**ug/L**	17.987	39	0.000
	B	11	**0.843**	**ug/L**	9.726	1071	0.000
	Na	23	**89556.240**	**ug/L**	1.548	402100375	361.687
	Mg	24	**99503.451**	**ug/L**	2.238	290233366	261.039
	Al	27	**95157.848**	**ug/L**	5.522	375850355	338.152
	P	31	**95373.888**	**ug/L**	2.218	19267668	17.327
	K	39	**83428.559**	**ug/L**	5.774	448871661	403.353
	Ca	43	**88252.325**	**ug/L**	1.210	897191	0.807
>	Sc	45		**ug/L**		1111747	1111747.407
	V	51	**0.104**	**ug/L**	267.185	2190	0.000
	Cr	52	**2.760**	**ug/L**	1.833	12148	0.009
	Cr	53		**ug/L**		84601	-0.021
	Mn	55	**5.534**	**ug/L**	2.370	33569	0.029
	Fe	57	**92073.055**	**ug/L**	1.006	10165595	9.140
	Co	59	**0.295**	**ug/L**	3.424	1415	0.001
	Ni	60	**3.052**	**ug/L**	2.305	2736	0.002
	Cu	63		**ug/L**		5500	0.005
	Cu	65	**3.500**	**ug/L**	2.254	3455	0.003
	Zn	66	**4.053**	**ug/L**	2.732	2812	0.011
	Zn	67		**ug/L**		6811	-0.010
	Zn	68		**ug/L**		1119	0.001
>	Ge	74		**ug/L**		238791	238790.640
	As	75	**-0.611**	**ug/L**	54.335	-95	-0.002
	Se	77		**ug/L**		6166	0.006
	Se	82	**-1.463**	**ug/L**	8.887	-118	-0.000
	Kr	83		**ug/L**		236	0.001
	Sr	88	**1.121**	**ug/L**	2.059	9184	0.071
	Y	89		**ug/L**		300	0.002
	Ag	107	**0.256**	**ug/L**	36.396	825	0.006
	Cd	111	**1.071**	**ug/L**	36.936	798	0.006
	Cd	114		**ug/L**		5072	0.039
>	In	115		**ug/L**		127915	127915.499
	Sn	120	**0.115**	**ug/L**	1.827	546	0.003
	Sb	121	**0.226**	**ug/L**	26.507	922	0.005
	Sb	123		**ug/L**		726	0.003
	Ba	135		**ug/L**		611	0.003
	Ba	137	**0.757**	**ug/L**	4.512	1011	0.005
	Ho	165		**ug/L**		447	0.002
>	Lu	175		**ug/L**		179109	179108.758
	Tl	205	**0.024**	**ug/L**	11.065	737	0.001
	Pb	208	**0.176**	**ug/L**	3.918	2109	0.009
	Bi	209		**ug/L**		300	0.002
	U	238	**-0.005**	**ug/L**	23.332	112	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23	89.556				
|	Mg	24	99.503				
|	Al	27	95.158				
|	P	31	95.374				
|	K	39	83.429				
|	Ca	43	88.252				
>	Sc	45			93.7		
|	V	51					
|	Cr	52	74.607				
|	Cr	53					
|	Mn	55	95.420				
|	Fe	57	92.073				
|	Co	59	118.135				
|	Ni	60	113.031				
|	Cu	63					
⌊	Cu	65	120.694				
⌈	Zn	66	112.579				
|	Zn	67					
|	Zn	68					
>	Ge	74			91.5		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88	93.445				
|	Y	89					
|	Ag	107					
|	Cd	111	267.862				
|	Cd	114					
>	In	115			94.3		
|	Sn	120					
|	Sb	121	225.713				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	113.048				
|	Ho	165					
>	Lu	175			91.4		
|	Tl	205					
|	Pb	208	87.893				
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Tuesday, January 12, 2010 12:01:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 5.120

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**18.165**	**ug/L**	0.990	20795	0.019
	Be	9	**18.614**	**ug/L**	1.086	8344	0.008
	B	11	**18.637**	**ug/L**	2.805	7864	0.007
	Na	23	**88774.817**	**ug/L**	2.939	390374483	358.531
	Mg	24	**99736.947**	**ug/L**	4.762	284754034	261.651
	Al	27	**93618.042**	**ug/L**	3.835	362065686	332.680
	P	31	**97094.749**	**ug/L**	0.923	19207237	17.639
	K	39	**84186.030**	**ug/L**	6.794	443663039	407.015
	Ca	43	**89401.314**	**ug/L**	0.855	889872	0.817
>	Sc	45		**ug/L**		1088563	1088563.402
	V	51	**20.606**	**ug/L**	0.539	87200	0.079
	Cr	52	**22.716**	**ug/L**	0.622	84144	0.076
	Cr	53		**ug/L**		88587	-0.016
	Mn	55	**25.345**	**ug/L**	0.542	145118	0.132
	Fe	57	**94516.573**	**ug/L**	3.778	10215425	9.383
	Co	59	**19.867**	**ug/L**	2.303	81442	0.075
	Ni	60	**22.450**	**ug/L**	2.440	19283	0.018
	Cu	63		**ug/L**		41581	0.038
	Cu	65	**22.632**	**ug/L**	1.647	21393	0.020
	Zn	66	**22.987**	**ug/L**	1.471	14845	0.063
	Zn	67		**ug/L**		8619	-0.002
	Zn	68		**ug/L**		9644	0.038
>	Ge	74		**ug/L**		233841	233840.891
	As	75	**20.752**	**ug/L**	1.959	14613	0.061
	Se	77		**ug/L**		6772	0.009
	Se	82	**19.368**	**ug/L**	3.423	1239	0.005
	Kr	83		**ug/L**		218	0.001
	Sr	88	**21.524**	**ug/L**	0.821	170654	1.355
	Y	89		**ug/L**		287	0.002
	Ag	107	**19.066**	**ug/L**	1.237	56604	0.449
	Cd	111	**19.224**	**ug/L**	1.499	13703	0.109
	Cd	114		**ug/L**		35856	0.285
>	In	115		**ug/L**		125818	125818.331
	Sn	120	**19.984**	**ug/L**	0.459	58483	0.463
	Sb	121	**20.873**	**ug/L**	0.431	53243	0.421
	Sb	123		**ug/L**		41404	0.327
	Ba	135		**ug/L**		14822	0.083
	Ba	137	**20.563**	**ug/L**	1.506	25998	0.146
	Ho	165		**ug/L**		437	0.002
>	Lu	175		**ug/L**		177409	177408.986
	Tl	205	**17.325**	**ug/L**	2.489	105683	0.592
	Pb	208	**19.072**	**ug/L**	1.230	176432	0.992
	Bi	209		**ug/L**		416	0.002
	U	238	**21.448**	**ug/L**	1.566	198128	1.116

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	90.826				
|	Be	9	93.070				
|	B	11	93.184				
|	Na	23	88.775				
|	Mg	24	99.737				
|	Al	27	93.618				
|	P	31	97.095				
|	K	39	84.186				
|	Ca	43	89.401				
|>	Sc	45			91.7		
|	V	51	103.028				
|	Cr	52	95.847				
|	Cr	53					
|	Mn	55	98.235				
|	Fe	57	94.517				
|	Co	59	98.107				
|	Ni	60	98.899				
|	Cu	63					
⌊	Cu	65	98.832				
⌈	Zn	66	97.404				
|	Zn	67					
|	Zn	68					
|>	Ge	74			89.6		
|	As	75	103.758				
|	Se	77					
|	Se	82	96.839				
⌊	Kr	83					
⌈	Sr	88	101.530				
|	Y	89					
|	Ag	107	95.328				
|	Cd	111	94.237				
|	Cd	114					
|>	In	115			92.7		
|	Sn	120	99.918				
|	Sb	121	103.844				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	99.481				
|	Ho	165					
|>	Lu	175			90.5		
|	Tl	205	86.624				
|	Pb	208	94.417				
|	Bi	209					
⌊	U	238	107.241				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, January 12, 2010 12:07:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 6.121

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**44.341**	**ug/L**	2.474	53670	0.046
	Be	9	**46.622**	**ug/L**	0.969	22138	0.019
	B	11	**91.597**	**ug/L**	0.266	37968	0.032
	Na	23	**4373.197**	**ug/L**	17.548	20400711	17.662
	Mg	24	**4850.085**	**ug/L**	2.351	14688248	12.724
	Al	27	**4620.320**	**ug/L**	2.805	18956647	16.419
	P	31	**4743.946**	**ug/L**	0.297	1001453	0.862
	K	39	**3997.264**	**ug/L**	6.337	22906895	19.326
	Ca	43	**4696.906**	**ug/L**	1.537	50005	0.043
>	Sc	45		**ug/L**		1154101	1154100.799
	V	51	**49.703**	**ug/L**	2.287	220441	0.189
	Cr	52	**50.181**	**ug/L**	1.432	194646	0.167
	Cr	53		**ug/L**		128807	0.015
	Mn	55	**49.351**	**ug/L**	0.687	298076	0.257
	Fe	57	**4949.525**	**ug/L**	1.774	571333	0.491
	Co	59	**48.731**	**ug/L**	0.768	211552	0.183
	Ni	60	**50.152**	**ug/L**	0.738	45588	0.039
	Cu	63		**ug/L**		104278	0.090
	Cu	65	**50.105**	**ug/L**	0.410	50103	0.043
	Zn	66	**48.744**	**ug/L**	0.643	33738	0.133
	Zn	67		**ug/L**		13297	0.014
	Zn	68		**ug/L**		24263	0.093
>	Ge	74		**ug/L**		252087	252086.897
	As	75	**46.240**	**ug/L**	1.921	34664	0.136
	Se	77		**ug/L**		8584	0.014
	Se	82	**47.547**	**ug/L**	2.123	3311	0.013
	Kr	83		**ug/L**		82	-0.000
	Sr	88	**50.151**	**ug/L**	2.190	418647	3.157
	Y	89		**ug/L**		84	0.000
	Ag	107	**48.923**	**ug/L**	0.196	152933	1.153
	Cd	111	**47.732**	**ug/L**	0.935	35809	0.270
	Cd	114		**ug/L**		83323	0.628
>	In	115		**ug/L**		132547	132547.343
	Sn	120	**49.187**	**ug/L**	1.968	151339	1.140
	Sb	121	**48.206**	**ug/L**	5.981	129069	0.971
	Sb	123		**ug/L**		101073	0.760
	Ba	135		**ug/L**		37637	0.203
	Ba	137	**50.639**	**ug/L**	2.260	66676	0.360
	Ho	165		**ug/L**		22	0.000
>	Lu	175		**ug/L**		184958	184957.589
	Tl	205	**47.616**	**ug/L**	1.657	301663	1.628
	Pb	208	**49.762**	**ug/L**	1.051	479133	2.588
	Bi	209		**ug/L**		107	0.000
	U	238	**52.564**	**ug/L**	1.838	505939	2.735

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	88.682				
|	Be	9	93.243				
|	B	11	91.597				
|	Na	23	87.464				
|	Mg	24	97.002				
|	Al	27	91.491				
|	P	31	94.879				
|	K	39	79.945				
|	Ca	43	93.938				
| >	Sc	45			97.2		
|	V	51	99.405				
|	Cr	52	100.361				
|	Cr	53					
|	Mn	55	98.702				
|	Fe	57	98.991				
|	Co	59	97.463				
|	Ni	60	100.303				
|	Cu	63					
⌊	Cu	65	100.210				
⌈	Zn	66	97.488				
|	Zn	67					
|	Zn	68					
| >	Ge	74			96.6		
|	As	75	92.481				
|	Se	77					
|	Se	82	95.094				
⌊	Kr	83					
⌈	Sr	88	100.302				
|	Y	89					
|	Ag	107	97.846				
|	Cd	111	95.465				
|	Cd	114					
| >	In	115			97.7		
|	Sn	120	98.375				
|	Sb	121	96.412				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	101.277				
|	Ho	165					
| >	Lu	175			94.4		
|	Tl	205	95.233				
|	Pb	208	99.525				
|	Bi	209					
⌊	U	238	105.128				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Na	23	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, January 12, 2010 12:13:03
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 7.122

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.040**	**ug/L**	35.888	157	0.000
	Be	9	**0.004**	**ug/L**	53.352	14	0.000
	B	11	**1.256**	**ug/L**	35.686	1330	0.000
	Na	23	**2.921**	**ug/L**	28.361	35043	0.012
	Mg	24	**0.731**	**ug/L**	50.411	5668	0.002
	Al	27	**0.530**	**ug/L**	128.137	9670	0.002
	P	31	**-2.011**	**ug/L**	53.828	6624	-0.000
	K	39	**2.084**	**ug/L**	367.027	636934	0.010
	Ca	43	**-1.661**	**ug/L**	69.219	460	-0.000
>	Sc	45		**ug/L**		1199294	1199293.648
	V	51	**-0.353**	**ug/L**	85.293	275	-0.001
	Cr	52	**0.304**	**ug/L**	8.229	3303	0.001
	Cr	53		**ug/L**		125572	0.008
	Mn	55	**-0.068**	**ug/L**	8.115	1238	-0.000
	Fe	57	**10.980**	**ug/L**	7.504	5752	0.001
	Co	59	**0.002**	**ug/L**	112.149	203	0.000
	Ni	60	**0.009**	**ug/L**	34.578	82	0.000
	Cu	63		**ug/L**		308	-0.000
	Cu	65	**0.023**	**ug/L**	10.954	121	0.000
	Zn	66	**-0.016**	**ug/L**	123.050	176	-0.000
	Zn	67		**ug/L**		8947	-0.005
	Zn	68		**ug/L**		824	-0.000
>	Ge	74		**ug/L**		267511	267511.234
	As	75	**-0.417**	**ug/L**	75.776	48	-0.001
	Se	77		**ug/L**		7417	0.008
	Se	82	**0.070**	**ug/L**	456.610	-18	0.000
	Kr	83		**ug/L**		86	-0.000
	Sr	88	**-0.001**	**ug/L**	102.113	156	-0.000
	Y	89		**ug/L**		50	-0.000
	Ag	107	**0.003**	**ug/L**	41.549	64	0.000
	Cd	111	**-0.008**	**ug/L**	72.653	16	-0.000
	Cd	114		**ug/L**		43	0.000
>	In	115		**ug/L**		138831	138831.097
	Sn	120	**0.067**	**ug/L**	9.240	438	0.002
	Sb	121	**0.722**	**ug/L**	26.006	2391	0.015
	Sb	123		**ug/L**		1946	0.012
	Ba	135		**ug/L**		39	0.000
	Ba	137	**0.007**	**ug/L**	100.712	59	0.000
	Ho	165		**ug/L**		20	0.000
>	Lu	175		**ug/L**		196177	196177.411
	Tl	205	**0.253**	**ug/L**	15.048	2347	0.009
	Pb	208	**-0.003**	**ug/L**	61.892	485	-0.000
	Bi	209		**ug/L**		26	0.000
	U	238	**0.048**	**ug/L**	17.027	665	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		102.3			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1202004420
Sample Date/Time: Tuesday, January 12, 2010 12:18:59
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\1202004420.123

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.019**	**ug/L**	39.427	93	-0.000
	Be	9	**-0.002**	**ug/L**	324.920	12	-0.000
	B	11	**0.012**	**ug/L**	816.647	901	0.000
	Na	23	**6.089**	**ug/L**	8.330	56445	0.025
	Mg	24	**1.581**	**ug/L**	42.214	9337	0.004
	Al	27	**2.037**	**ug/L**	45.784	18012	0.007
	P	31	**21.662**	**ug/L**	10.508	13199	0.004
	K	39	**-15.176**	**ug/L**	39.565	601077	-0.073
	Ca	43	**-0.651**	**ug/L**	859.096	527	-0.000
>	Sc	45		**ug/L**		1343330	1343329.559
	V	51	**0.204**	**ug/L**	110.147	3160	0.001
	Cr	52	**0.464**	**ug/L**	9.081	4416	0.002
	Cr	53		**ug/L**		96320	-0.025
	Mn	55	**0.127**	**ug/L**	5.574	2750	0.001
	Fe	57	**17.175**	**ug/L**	11.723	7267	0.002
	Co	59	**-0.004**	**ug/L**	88.239	201	-0.000
	Ni	60	**0.128**	**ug/L**	9.842	218	0.000
	Cu	63		**ug/L**		592	0.000
	Cu	65	**0.143**	**ug/L**	3.861	275	0.000
	Zn	66	**0.960**	**ug/L**	3.653	966	0.003
	Zn	67		**ug/L**		7037	-0.015
	Zn	68		**ug/L**		1265	0.001
>	Ge	74		**ug/L**		290427	290427.104
	As	75	**-0.646**	**ug/L**	55.248	-146	-0.002
	Se	77		**ug/L**		5053	-0.002
	Se	82	**0.216**	**ug/L**	47.609	-8	0.000
	Kr	83		**ug/L**		73	-0.000
	Sr	88	**0.021**	**ug/L**	11.289	390	0.001
	Y	89		**ug/L**		69	-0.000
	Ag	107	**0.023**	**ug/L**	20.703	147	0.001
	Cd	111	**0.086**	**ug/L**	45.495	101	0.000
	Cd	114		**ug/L**		28	-0.000
>	In	115		**ug/L**		156316	156315.806
	Sn	120	**0.088**	**ug/L**	11.560	568	0.002
	Sb	121	**0.071**	**ug/L**	44.290	638	0.001
	Sb	123		**ug/L**		506	0.001
	Ba	135		**ug/L**		253	0.001
	Ba	137	**0.248**	**ug/L**	5.546	437	0.002
	Ho	165		**ug/L**		18	-0.000
>	Lu	175		**ug/L**		216644	216643.889
	Tl	205	**0.171**	**ug/L**	25.014	1983	0.006
	Pb	208	**0.035**	**ug/L**	5.918	965	0.002
	Bi	209		**ug/L**		46	0.000
	U	238	**0.006**	**ug/L**	32.283	252	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		113.2			
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		111.3			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		115.2			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		110.5			
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1202004421
Sample Date/Time: Tuesday, January 12, 2010 12:30:51
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 936805|40|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\1202004421.125

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**2.272**	**ug/L**	1.163	2960	0.002
	Be	9	**18.754**	**ug/L**	0.659	9261	0.008
	B	11	**38.728**	**ug/L**	3.192	17144	0.014
	Na	23	**230.464**	**ug/L**	4.208	1137259	0.931
	Mg	24	**1113.832**	**ug/L**	3.056	3507522	2.922
	Al	27	**3014.261**	**ug/L**	5.387	12854968	10.711
	P	31	**197.526**	**ug/L**	1.574	50098	0.036
	K	39	**991.067**	**ug/L**	10.183	6371262	4.792
	Ca	43	**2455.795**	**ug/L**	0.928	27396	0.022
>	Sc	45		**ug/L**		1199238	1199238.300
	V	51	**27.739**	**ug/L**	0.093	128670	0.106
	Cr	52	**62.757**	**ug/L**	0.730	252417	0.209
	Cr	53		**ug/L**		148785	0.027
	Mn	55	**137.459**	**ug/L**	1.526	859713	0.716
	Fe	57	**4190.036**	**ug/L**	0.477	503262	0.416
	Co	59	**24.137**	**ug/L**	0.763	108979	0.091
	Ni	60	**35.955**	**ug/L**	2.358	33979	0.028
	Cu	63		**ug/L**		96579	0.080
	Cu	65	**44.238**	**ug/L**	2.585	45973	0.038
	Zn	66	**145.235**	**ug/L**	1.754	103991	0.397
	Zn	67		**ug/L**		24506	0.055
	Zn	68		**ug/L**		73503	0.277
>	Ge	74		**ug/L**		261698	261697.653
	As	75	**25.349**	**ug/L**	3.501	19892	0.075
	Se	77		**ug/L**		10469	0.020
	Se	82	**67.867**	**ug/L**	2.070	4916	0.019
	Kr	83		**ug/L**		88	-0.000
	Sr	88	**58.585**	**ug/L**	0.266	507781	3.688
	Y	89		**ug/L**		27976	0.203
	Ag	107	**5.149**	**ug/L**	1.834	16762	0.121
	Cd	111	**14.950**	**ug/L**	2.037	11660	0.085
	Cd	114		**ug/L**		27278	0.198
>	In	115		**ug/L**		137622	137622.306
	Sn	120	**8.141**	**ug/L**	0.373	26192	0.189
	Sb	121	**16.893**	**ug/L**	0.957	47204	0.340
	Sb	123		**ug/L**		36403	0.262
	Ba	135		**ug/L**		38621	0.196
	Ba	137	**48.856**	**ug/L**	1.732	68396	0.348
	Ho	165		**ug/L**		1397	0.007
>	Lu	175		**ug/L**		196609	196608.970
	Tl	205	**27.593**	**ug/L**	3.336	186114	0.943
	Pb	208	**20.517**	**ug/L**	0.692	210318	1.067
	Bi	209		**ug/L**		1729	0.009
	U	238	**0.500**	**ug/L**	3.102	5283	0.026

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		101.0			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		101.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		100.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, January 12, 2010 12:36:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtlmozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 6.126

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**43.431**	**ug/L**	1.219	54469	0.045
	Be	9	**45.882**	**ug/L**	2.211	22573	0.019
	B	11	**93.786**	**ug/L**	3.538	40254	0.033
	Na	23	**4471.712**	**ug/L**	10.354	21604345	18.060
	Mg	24	**4854.918**	**ug/L**	0.409	15234041	12.736
	Al	27	**4685.487**	**ug/L**	0.888	19919066	16.650
	P	31	**4579.902**	**ug/L**	0.868	1002030	0.832
	K	39	**4332.219**	**ug/L**	4.188	25671069	20.945
	Ca	43	**4547.905**	**ug/L**	1.495	50183	0.042
>	Sc	45		**ug/L**		1195851	1195850.933
	V	51	**47.984**	**ug/L**	0.378	220573	0.183
	Cr	52	**48.545**	**ug/L**	1.245	195166	0.161
	Cr	53		**ug/L**		133996	0.015
	Mn	55	**47.840**	**ug/L**	1.445	299464	0.249
	Fe	57	**4867.292**	**ug/L**	0.230	582248	0.483
	Co	59	**47.769**	**ug/L**	0.433	214875	0.180
	Ni	60	**49.549**	**ug/L**	1.509	46668	0.039
	Cu	63		**ug/L**		104615	0.087
	Cu	65	**47.953**	**ug/L**	1.467	49687	0.041
	Zn	66	**47.303**	**ug/L**	0.507	33754	0.129
	Zn	67		**ug/L**		13536	0.013
	Zn	68		**ug/L**		24344	0.090
>	Ge	74		**ug/L**		259847	259846.685
	As	75	**45.936**	**ug/L**	2.404	35491	0.135
	Se	77		**ug/L**		8697	0.014
	Se	82	**45.741**	**ug/L**	1.559	3282	0.013
	Kr	83		**ug/L**		91	-0.000
	Sr	88	**47.163**	**ug/L**	0.979	413526	2.969
	Y	89		**ug/L**		77	-0.000
	Ag	107	**46.500**	**ug/L**	2.037	152659	1.096
	Cd	111	**45.031**	**ug/L**	1.398	35482	0.255
	Cd	114		**ug/L**		83546	0.600
>	In	115		**ug/L**		139215	139215.046
	Sn	120	**46.448**	**ug/L**	1.270	150104	1.077
	Sb	121	**47.313**	**ug/L**	6.739	133075	0.953
	Sb	123		**ug/L**		102991	0.738
	Ba	135		**ug/L**		37347	0.191
	Ba	137	**47.108**	**ug/L**	1.322	65471	0.335
	Ho	165		**ug/L**		29	0.000
>	Lu	175		**ug/L**		195200	195199.981
	Tl	205	**45.700**	**ug/L**	1.627	305587	1.562
	Pb	208	**46.582**	**ug/L**	2.544	473338	2.423
	Bi	209		**ug/L**		104	0.000
	U	238	**49.267**	**ug/L**	1.988	500475	2.563

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	86.861				
|	Be	9	91.765				
|	B	11	93.786				
|	Na	23	89.434				
|	Mg	24	97.098				
|	Al	27	92.782				
|	P	31	91.598				
|	K	39	86.644				
|	Ca	43	90.958				
|>	Sc	45		100.7			
|	V	51	95.968				
|	Cr	52	97.090				
|	Cr	53					
|	Mn	55	95.681				
|	Fe	57	97.346				
|	Co	59	95.538				
|	Ni	60	99.099				
|	Cu	63					
⌊	Cu	65	95.907				
⌈	Zn	66	94.606				
|	Zn	67					
|	Zn	68					
|>	Ge	74		99.6			
|	As	75	91.871				
|	Se	77					
|	Se	82	91.482				
⌊	Kr	83					
⌈	Sr	88	94.326				
|	Y	89					
|	Ag	107	93.001				
|	Cd	111	90.062				
|	Cd	114					
|>	In	115		102.6			
|	Sn	120	92.895				
|	Sb	121	94.627				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	94.217				
|	Ho	165					
|>	Lu	175		99.6			
|	Tl	205	91.400				
|	Pb	208	93.164				
|	Bi	209					
⌊	U	238	98.534				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Na	23	CCV is out of limits (+/- 10%)
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, January 12, 2010 12:42:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 7.127

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**-0.009**	**ug/L**	72.532	99	-0.000
|	Be	9	**0.005**	**ug/L**	165.642	15	0.000
|	B	11	**1.392**	**ug/L**	37.685	1434	0.000
|	Na	23	**0.080**	**ug/L**	882.628	22017	0.000
|	Mg	24	**0.876**	**ug/L**	21.317	6335	0.002
|	Al	27	**0.981**	**ug/L**	79.152	12005	0.003
|	P	31	**-2.568**	**ug/L**	10.817	6729	-0.000
|	K	39	**-9.905**	**ug/L**	8.736	587157	-0.048
|	Ca	43	**-4.350**	**ug/L**	82.847	445	-0.000
|>	Sc	45		**ug/L**		1241149	1241148.836
|	V	51	**0.022**	**ug/L**	2279.535	2064	0.000
|	Cr	52	**0.537**	**ug/L**	4.079	4383	0.002
|	Cr	53		**ug/L**		126388	0.005
|	Mn	55	**-0.073**	**ug/L**	2.883	1250	-0.000
|	Fe	57	**3.331**	**ug/L**	55.403	5009	0.000
|	Co	59	**0.001**	**ug/L**	173.836	207	0.000
|	Ni	60	**0.002**	**ug/L**	341.058	78	0.000
|	Cu	63		**ug/L**		256	-0.000
⌊	Cu	65	**0.009**	**ug/L**	85.161	110	0.000
⌈	Zn	66	**-0.031**	**ug/L**	6.778	167	-0.000
|	Zn	67		**ug/L**		9032	-0.005
|	Zn	68		**ug/L**		810	-0.001
|>	Ge	74		**ug/L**		270038	270037.729
|	As	75	**-0.715**	**ug/L**	23.637	-189	-0.002
|	Se	77		**ug/L**		7516	0.008
|	Se	82	**0.435**	**ug/L**	56.788	9	0.000
⌊	Kr	83		**ug/L**		74	-0.000
⌈	Sr	88	**0.000**	**ug/L**	181.507	171	0.000
|	Y	89		**ug/L**		48	-0.000
|	Ag	107	**0.001**	**ug/L**	706.899	59	0.000
|	Cd	111	**-0.003**	**ug/L**	400.600	21	-0.000
|	Cd	114		**ug/L**		39	0.000
|>	In	115		**ug/L**		142231	142231.295
|	Sn	120	**0.053**	**ug/L**	21.811	403	0.001
|	Sb	121	**0.477**	**ug/L**	33.077	1741	0.010
⌊	Sb	123		**ug/L**		1342	0.007
⌈	Ba	135		**ug/L**		36	0.000
|	Ba	137	**0.001**	**ug/L**	961.775	52	0.000
|	Ho	165		**ug/L**		21	0.000
|>	Lu	175		**ug/L**		196854	196853.554
|	Tl	205	**0.556**	**ug/L**	10.915	4390	0.019
|	Pb	208	**-0.006**	**ug/L**	48.816	457	-0.000
|	Bi	209		**ug/L**		25	0.000
⌊	U	238	**0.046**	**ug/L**	30.127	640	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		104.6			
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		103.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		104.8			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		100.4			
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 243492001
Sample Date/Time: Tuesday, January 12, 2010 13:30:12
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\243492001.135

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**81.154**	**ug/L**	1.251	117124	0.085
	Be	9	**4.858**	**ug/L**	3.072	2766	0.002
	B	11	**23.498**	**ug/L**	2.065	12307	0.008
	Na	23	**915.468**	**ug/L**	5.049	5117354	3.697
	Mg	24	**11750.348**	**ug/L**	1.850	42464823	30.826
	Al	27	**92434.018**	**ug/L**	6.749	452276751	328.472
	P	31	**474.123**	**ug/L**	0.540	126751	0.086
	K	39	**11821.373**	**ug/L**	5.423	79431496	57.153
	Ca	43	**8707.213**	**ug/L**	1.027	110166	0.080
>	Sc	45		**ug/L**		1377383	1377383.026
	V	51	**100.111**	**ug/L**	1.088	527661	0.382
	Cr	52	**46.471**	**ug/L**	2.203	215271	0.155
	Cr	53		**ug/L**		95566	-0.028
	Mn	55	**1476.360**	**ug/L**	0.889	10587723	7.685
	Fe	57	**54758.358**	**ug/L**	0.127	7492527	5.436
	Co	59	**25.712**	**ug/L**	1.124	133327	0.097
	Ni	60	**37.275**	**ug/L**	2.208	40453	0.029
	Cu	63		**ug/L**		79892	0.058
	Cu	65	**33.296**	**ug/L**	1.440	39773	0.029
	Zn	66	**135.073**	**ug/L**	0.140	98915	0.369
	Zn	67		**ug/L**		23757	0.050
	Zn	68		**ug/L**		75007	0.277
>	Ge	74		**ug/L**		267608	267607.610
	As	75	**9.921**	**ug/L**	4.839	8189	0.029
	Se	77		**ug/L**		3085	-0.008
	Se	82	**-1.979**	**ug/L**	8.529	-171	-0.001
	Kr	83		**ug/L**		342	0.001
	Sr	88	**117.033**	**ug/L**	0.931	1042884	7.368
	Y	89		**ug/L**		531538	3.756
	Ag	107	**0.458**	**ug/L**	1.359	1586	0.011
	Cd	111	**1.701**	**ug/L**	7.885	1384	0.010
	Cd	114		**ug/L**		768	0.005
>	In	115		**ug/L**		141521	141521.130
	Sn	120	**0.779**	**ug/L**	1.135	2782	0.018
	Sb	121	**0.215**	**ug/L**	4.802	990	0.004
	Sb	123		**ug/L**		736	0.003
	Ba	135		**ug/L**		502822	2.381
	Ba	137	**584.595**	**ug/L**	1.453	878421	4.159
	Ho	165		**ug/L**		27451	0.130
>	Lu	175		**ug/L**		211194	211194.221
	Tl	205	**0.961**	**ug/L**	3.444	7637	0.033
	Pb	208	**63.842**	**ug/L**	0.816	701763	3.320
	Bi	209		**ug/L**		9727	0.046
	U	238	**10.975**	**ug/L**	0.771	120778	0.571

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		116.0			
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		102.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		104.3			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		107.8			
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
V 51 Upper, S, EEE	V	51	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)
Fe 57 Upper, S, EEE	Fe	57	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, January 12, 2010 13:36:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 6.136

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.379**	**ug/L**	3.202	60987	0.052
	Be	9	**49.803**	**ug/L**	1.097	24132	0.020
	B	11	**98.899**	**ug/L**	1.428	41767	0.035
	Na	23	**4865.003**	**ug/L**	8.386	23146422	19.648
	Mg	24	**5009.716**	**ug/L**	1.893	15480183	13.143
	Al	27	**5106.414**	**ug/L**	3.771	21374962	18.146
	P	31	**4735.820**	**ug/L**	0.989	1020103	0.860
	K	39	**4369.646**	**ug/L**	7.706	25485047	21.126
	Ca	43	**4693.277**	**ug/L**	0.234	50986	0.043
>	Sc	45		**ug/L**		1177638	1177638.214
	V	51	**49.684**	**ug/L**	0.754	224853	0.189
	Cr	52	**50.616**	**ug/L**	0.629	200317	0.168
	Cr	53		**ug/L**		123613	0.008
	Mn	55	**49.870**	**ug/L**	1.171	307342	0.260
	Fe	57	**4978.289**	**ug/L**	1.703	586297	0.494
	Co	59	**49.270**	**ug/L**	2.360	218218	0.185
	Ni	60	**50.844**	**ug/L**	1.519	47155	0.040
	Cu	63		**ug/L**		105735	0.089
	Cu	65	**49.065**	**ug/L**	1.142	50065	0.042
	Zn	66	**49.025**	**ug/L**	2.045	34714	0.134
	Zn	67		**ug/L**		13736	0.014
	Zn	68		**ug/L**		25000	0.093
>	Ge	74		**ug/L**		257922	257922.150
	As	75	**47.309**	**ug/L**	1.297	36275	0.139
	Se	77		**ug/L**		7351	0.009
	Se	82	**46.751**	**ug/L**	1.313	3331	0.013
	Kr	83		**ug/L**		128	0.000
	Sr	88	**49.885**	**ug/L**	2.231	419510	3.141
	Y	89		**ug/L**		152	0.001
	Ag	107	**48.445**	**ug/L**	0.466	152569	1.142
	Cd	111	**48.101**	**ug/L**	0.539	36357	0.272
	Cd	114		**ug/L**		84610	0.633
>	In	115		**ug/L**		133542	133542.476
	Sn	120	**48.653**	**ug/L**	1.232	150814	1.128
	Sb	121	**50.360**	**ug/L**	6.596	135777	1.015
	Sb	123		**ug/L**		104947	0.784
	Ba	135		**ug/L**		37441	0.199
	Ba	137	**49.297**	**ug/L**	1.947	65856	0.351
	Ho	165		**ug/L**		28	0.000
>	Lu	175		**ug/L**		187651	187651.440
	Tl	205	**46.862**	**ug/L**	1.984	301240	1.602
	Pb	208	**48.739**	**ug/L**	1.121	476160	2.535
	Bi	209		**ug/L**		124	0.001
	U	238	**51.816**	**ug/L**	1.969	506047	2.696

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	98.758				
|	Be	9	99.605				
|	B	11	98.899				
|	Na	23	97.300				
|	Mg	24	100.194				
|	Al	27	101.117				
|	P	31	94.716				
|	K	39	87.393				
|	Ca	43	93.866				
\>	Sc	45			99.2		
|	V	51	99.367				
|	Cr	52	101.232				
|	Cr	53					
|	Mn	55	99.739				
|	Fe	57	99.566				
|	Co	59	98.540				
|	Ni	60	101.688				
|	Cu	63					
⌊	Cu	65	98.131				
⌈	Zn	66	98.050				
|	Zn	67					
|	Zn	68					
\>	Ge	74			98.9		
|	As	75	94.619				
|	Se	77					
|	Se	82	93.503				
⌊	Kr	83					
⌈	Sr	88	99.770				
|	Y	89					
|	Ag	107	96.890				
|	Cd	111	96.202				
|	Cd	114					
\>	In	115			98.4		
|	Sn	120	97.307				
|	Sb	121	100.720				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	98.593				
|	Ho	165					
\>	Lu	175			95.7		
|	Tl	205	93.724				
|	Pb	208	97.477				
|	Bi	209					
⌊	U	238	103.632				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, January 12, 2010 13:42:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 7.137

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.046**	**ug/L**	11.846	164	0.000
	Be	9	**0.005**	**ug/L**	160.812	14	0.000
	B	11	**1.312**	**ug/L**	26.396	1344	0.000
	Na	23	**0.675**	**ug/L**	129.417	24021	0.003
	Mg	24	**0.322**	**ug/L**	256.163	4334	0.001
	Al	27	**0.777**	**ug/L**	73.031	10671	0.003
	P	31	**-0.154**	**ug/L**	331.001	6982	-0.000
	K	39	**5.562**	**ug/L**	79.536	652579	0.027
	Ca	43	**0.876**	**ug/L**	442.494	485	0.000
>	Sc	45		**ug/L**		1191505	1191504.696
	V	51	**-0.547**	**ug/L**	16.610	-612	-0.002
	Cr	52	**0.432**	**ug/L**	4.551	3790	0.001
	Cr	53		**ug/L**		116972	0.001
	Mn	55	**0.080**	**ug/L**	15.976	2150	0.000
	Fe	57	**9.380**	**ug/L**	17.224	5524	0.001
	Co	59	**0.001**	**ug/L**	312.559	200	0.000
	Ni	60	**0.001**	**ug/L**	2000.622	74	0.000
	Cu	63		**ug/L**		501	0.000
	Cu	65	**0.008**	**ug/L**	197.842	105	0.000
	Zn	66	**0.022**	**ug/L**	191.846	198	0.000
	Zn	67		**ug/L**		9761	-0.001
	Zn	68		**ug/L**		881	-0.000
>	Ge	74		**ug/L**		259668	259668.102
	As	75	**-0.436**	**ug/L**	140.194	33	-0.001
	Se	77		**ug/L**		5690	0.002
	Se	82	**0.200**	**ug/L**	109.614	-9	0.000
	Kr	83		**ug/L**		98	0.000
	Sr	88	**0.004**	**ug/L**	40.476	194	0.000
	Y	89		**ug/L**		84	0.000
	Ag	107	**0.003**	**ug/L**	126.507	65	0.000
	Cd	111	**0.024**	**ug/L**	21.935	40	0.000
	Cd	114		**ug/L**		32	0.000
>	In	115		**ug/L**		134374	134373.566
	Sn	120	**0.057**	**ug/L**	26.183	392	0.001
	Sb	121	**0.471**	**ug/L**	29.314	1630	0.009
	Sb	123		**ug/L**		1247	0.007
	Ba	135		**ug/L**		34	0.000
	Ba	137	**-0.001**	**ug/L**	193.934	46	-0.000
	Ho	165		**ug/L**		20	0.000
>	Lu	175		**ug/L**		188692	188691.594
	Tl	205	**0.206**	**ug/L**	20.750	1952	0.007
	Pb	208	**-0.000**	**ug/L**	634.842	496	-0.000
	Bi	209		**ug/L**		23	0.000
	U	238	**0.043**	**ug/L**	38.046	588	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		100.4			
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		99.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		99.0			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		96.3			
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 243492002
Sample Date/Time: Tuesday, January 12, 2010 13:47:58
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\243492002.138

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**35.405**	**ug/L**	1.890	49120	0.037
|	Be	9	**2.052**	**ug/L**	4.588	1129	0.001
|	B	11	**8.438**	**ug/L**	6.118	4805	0.003
|	Na	23	**1875.536**	**ug/L**	4.755	10033679	7.575
|	Mg	24	**4664.452**	**ug/L**	5.861	16173126	12.237
|	Al	27	**26550.074**	**ug/L**	5.393	124759983	94.348
|	P	31	**313.027**	**ug/L**	3.565	82960	0.057
|	K	39	**3821.620**	**ug/L**	6.762	25113002	18.476
|	Ca	43	**6857.580**	**ug/L**	1.780	83401	0.063
|>	Sc	45		**ug/L**		1322649	1322649.070
|	V	51	**32.928**	**ug/L**	2.306	168028	0.125
|	Cr	52	**20.344**	**ug/L**	2.647	91778	0.068
|	Cr	53		**ug/L**		85908	-0.032
|	Mn	55	**445.551**	**ug/L**	1.204	3068838	2.319
|	Fe	57	**17673.381**	**ug/L**	0.415	2325546	1.754
|	Co	59	**19.465**	**ug/L**	0.649	96980	0.073
|	Ni	60	**16.976**	**ug/L**	2.164	17732	0.013
|	Cu	63		**ug/L**		27583	0.021
⌊	Cu	65	**11.720**	**ug/L**	2.300	13511	0.010
⌈	Zn	66	**75.319**	**ug/L**	0.746	55183	0.206
|	Zn	67		**ug/L**		16055	0.021
|	Zn	68		**ug/L**		40530	0.148
|>	Ge	74		**ug/L**		267330	267329.881
|	As	75	**4.814**	**ug/L**	6.587	4158	0.014
|	Se	77		**ug/L**		3224	-0.008
|	Se	82	**-0.092**	**ug/L**	355.110	-31	-0.000
⌊	Kr	83		**ug/L**		228	0.000
⌈	Sr	88	**49.807**	**ug/L**	2.248	448923	3.136
|	Y	89		**ug/L**		965853	6.749
|	Ag	107	**0.267**	**ug/L**	4.023	959	0.006
|	Cd	111	**1.243**	**ug/L**	0.997	1029	0.007
|	Cd	114		**ug/L**		180	0.001
|>	In	115		**ug/L**		143108	143108.240
|	Sn	120	**1.414**	**ug/L**	1.544	4918	0.033
|	Sb	121	**0.253**	**ug/L**	8.564	1108	0.005
⌊	Sb	123		**ug/L**		832	0.004
⌈	Ba	135		**ug/L**		168669	0.780
|	Ba	137	**188.984**	**ug/L**	0.926	290603	1.345
|	Ho	165		**ug/L**		48630	0.225
|>	Lu	175		**ug/L**		216095	216094.628
|	Tl	205	**0.431**	**ug/L**	6.125	3902	0.015
|	Pb	208	**17.752**	**ug/L**	0.784	200064	0.923
|	Bi	209		**ug/L**		63088	0.292
⌊	U	238	**3.344**	**ug/L**	1.603	37783	0.174

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		111.4			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		102.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		105.5			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		110.3			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 243492003
Sample Date/Time: Tuesday, January 12, 2010 13:53:55
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\243492003.139

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**59.933**	**ug/L**	1.728	82466	0.063
	Be	9	**4.088**	**ug/L**	2.329	2220	0.002
	B	11	**19.045**	**ug/L**	3.292	9668	0.007
	Na	23	**1648.643**	**ug/L**	13.086	8751159	6.658
	Mg	24	**10385.802**	**ug/L**	5.126	35786887	27.246
	Al	27	**71100.220**	**ug/L**	3.766	331530025	252.661
	P	31	**291.307**	**ug/L**	0.785	77189	0.053
	K	39	**8739.411**	**ug/L**	5.732	56178716	42.252
	Ca	43	**8996.188**	**ug/L**	0.961	108454	0.082
>	Sc	45		**ug/L**		1312598	1312598.361
	V	51	**83.917**	**ug/L**	0.817	421836	0.320
	Cr	52	**38.265**	**ug/L**	1.941	169328	0.127
	Cr	53		**ug/L**		91516	-0.027
	Mn	55	**899.642**	**ug/L**	1.323	6147932	4.683
	Fe	57	**42581.477**	**ug/L**	1.786	5553300	4.227
	Co	59	**25.150**	**ug/L**	0.563	124280	0.095
	Ni	60	**30.000**	**ug/L**	0.977	31046	0.024
	Cu	63		**ug/L**		55576	0.042
	Cu	65	**23.498**	**ug/L**	1.634	26776	0.020
	Zn	66	**102.085**	**ug/L**	0.411	71938	0.279
	Zn	67		**ug/L**		19775	0.038
	Zn	68		**ug/L**		56673	0.217
>	Ge	74		**ug/L**		257363	257362.957
	As	75	**8.564**	**ug/L**	7.043	6846	0.025
	Se	77		**ug/L**		3095	-0.008
	Se	82	**-1.416**	**ug/L**	38.528	-124	-0.000
	Kr	83		**ug/L**		254	0.001
	Sr	88	**105.585**	**ug/L**	0.619	938176	6.648
	Y	89		**ug/L**		359597	2.548
	Ag	107	**0.333**	**ug/L**	3.168	1163	0.008
	Cd	111	**0.976**	**ug/L**	4.428	802	0.006
	Cd	114		**ug/L**		296	0.002
>	In	115		**ug/L**		141112	141112.293
	Sn	120	**0.415**	**ug/L**	0.301	1584	0.010
	Sb	121	**0.167**	**ug/L**	2.862	849	0.003
	Sb	123		**ug/L**		660	0.002
	Ba	135		**ug/L**		454005	2.174
	Ba	137	**530.401**	**ug/L**	0.733	788187	3.774
	Ho	165		**ug/L**		17855	0.085
>	Lu	175		**ug/L**		208839	208839.314
	Tl	205	**0.799**	**ug/L**	1.022	6395	0.027
	Pb	208	**40.965**	**ug/L**	0.733	445489	2.131
	Bi	209		**ug/L**		9440	0.045
	U	238	**3.632**	**ug/L**	0.407	39649	0.189

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		110.6			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		98.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		104.0			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		106.6			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492004
Sample Date/Time: Tuesday, January 12, 2010 13:59:52
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rm|
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\243492004.140

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**62.731**	**ug/L**	0.946	88237	0.066
	Be	9	**4.138**	**ug/L**	2.160	2297	0.002
	B	11	**22.343**	**ug/L**	2.460	11444	0.008
	Na	23	**472.759**	**ug/L**	3.240	2585396	1.909
	Mg	24	**9920.621**	**ug/L**	3.600	34930741	26.026
	Al	27	**67414.237**	**ug/L**	5.307	321409635	239.562
	P	31	**460.338**	**ug/L**	2.353	120115	0.084
	K	39	**10159.248**	**ug/L**	5.042	66595961	49.117
	Ca	43	**9847.879**	**ug/L**	1.143	121314	0.090
>	Sc	45		**ug/L**		1341937	1341937.287
	V	51	**83.001**	**ug/L**	1.689	426645	0.316
	Cr	52	**42.293**	**ug/L**	0.714	191124	0.141
	Cr	53		**ug/L**		91247	-0.029
	Mn	55	**1131.846**	**ug/L**	1.616	7907611	5.892
	Fe	57	**44122.431**	**ug/L**	1.033	5882492	4.380
	Co	59	**21.541**	**ug/L**	0.419	108854	0.081
	Ni	60	**31.838**	**ug/L**	0.379	33681	0.025
	Cu	63		**ug/L**		61831	0.046
	Cu	65	**26.259**	**ug/L**	1.498	30581	0.023
	Zn	66	**114.997**	**ug/L**	1.186	83529	0.314
	Zn	67		**ug/L**		20909	0.040
	Zn	68		**ug/L**		63450	0.236
>	Ge	74		**ug/L**		265359	265358.642
	As	75	**8.658**	**ug/L**	4.350	7132	0.025
	Se	77		**ug/L**		2952	-0.009
	Se	82	**-1.643**	**ug/L**	10.114	-145	-0.000
	Kr	83		**ug/L**		296	0.001
	Sr	88	**108.870**	**ug/L**	1.165	980813	6.854
	Y	89		**ug/L**		499836	3.493
	Ag	107	**0.462**	**ug/L**	2.614	1616	0.011
	Cd	111	**1.628**	**ug/L**	2.283	1340	0.009
	Cd	114		**ug/L**		584	0.004
>	In	115		**ug/L**		143075	143075.050
	Sn	120	**0.655**	**ug/L**	3.403	2401	0.015
	Sb	121	**0.216**	**ug/L**	3.124	1001	0.004
	Sb	123		**ug/L**		790	0.003
	Ba	135		**ug/L**		427122	1.988
	Ba	137	**484.163**	**ug/L**	1.878	740114	3.445
	Ho	165		**ug/L**		25376	0.118
>	Lu	175		**ug/L**		214857	214856.921
	Tl	205	**0.770**	**ug/L**	1.057	6364	0.026
	Pb	208	**47.323**	**ug/L**	0.637	529361	2.461
	Bi	209		**ug/L**		13793	0.064
	U	238	**7.091**	**ug/L**	1.145	79463	0.369

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		113.0			
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		101.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		105.4			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		109.6			
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492005
Sample Date/Time: Tuesday, January 12, 2010 14:05:50
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rm|
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\243492005.141

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**42.958**	**ug/L**	1.591	59678	0.045
	Be	9	**3.251**	**ug/L**	3.844	1784	0.001
	B	11	**14.436**	**ug/L**	4.088	7610	0.005
	Na	23	**996.463**	**ug/L**	1.137	5354010	4.024
	Mg	24	**8032.421**	**ug/L**	3.800	27910347	21.072
	Al	27	**46233.966**	**ug/L**	5.899	217588390	164.296
	P	31	**271.293**	**ug/L**	2.800	73077	0.049
	K	39	**6687.299**	**ug/L**	4.830	43529204	32.331
	Ca	43	**11619.458**	**ug/L**	2.901	141189	0.106
>	Sc	45		**ug/L**		1324651	1324651.433
	V	51	**53.582**	**ug/L**	0.598	272589	0.204
	Cr	52	**28.655**	**ug/L**	0.802	128570	0.095
	Cr	53		**ug/L**		85455	-0.032
	Mn	55	**672.769**	**ug/L**	0.950	4641028	3.502
	Fe	57	**30772.127**	**ug/L**	0.851	4051652	3.055
	Co	59	**27.788**	**ug/L**	0.764	138555	0.104
	Ni	60	**23.972**	**ug/L**	1.214	25052	0.019
	Cu	63		**ug/L**		40912	0.031
	Cu	65	**17.051**	**ug/L**	0.203	19641	0.015
	Zn	66	**89.252**	**ug/L**	2.126	63779	0.244
	Zn	67		**ug/L**		18372	0.032
	Zn	68		**ug/L**		52138	0.196
>	Ge	74		**ug/L**		260893	260892.991
	As	75	**8.388**	**ug/L**	2.237	6806	0.025
	Se	77		**ug/L**		3159	-0.008
	Se	82	**-0.412**	**ug/L**	73.677	-53	-0.000
	Kr	83		**ug/L**		237	0.001
	Sr	88	**100.110**	**ug/L**	0.965	880346	6.303
	Y	89		**ug/L**		672868	4.818
	Ag	107	**0.346**	**ug/L**	2.301	1196	0.008
	Cd	111	**1.410**	**ug/L**	4.622	1136	0.008
	Cd	114		**ug/L**		257	0.002
>	In	115		**ug/L**		139643	139643.436
	Sn	120	**0.666**	**ug/L**	4.021	2381	0.015
	Sb	121	**0.140**	**ug/L**	6.927	766	0.003
	Sb	123		**ug/L**		630	0.002
	Ba	135		**ug/L**		472880	2.227
	Ba	137	**542.213**	**ug/L**	1.187	819204	3.858
	Ho	165		**ug/L**		34584	0.163
>	Lu	175		**ug/L**		212354	212353.995
	Tl	205	**0.549**	**ug/L**	3.536	4691	0.019
	Pb	208	**30.685**	**ug/L**	1.436	339410	1.596
	Bi	209		**ug/L**		44324	0.209
	U	238	**3.427**	**ug/L**	1.312	38051	0.178

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45			111.6		
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74			100.0		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115			102.9		
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175			108.3		
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 243492006
Sample Date/Time: Tuesday, January 12, 2010 14:11:46
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 noirs thtlmozr.mth
Dataset File: C:\elandata\Dataset\100111\243492006.142

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**31.985**	**ug/L**	2.907	42590	0.033
	Be	9	**1.783**	**ug/L**	1.916	943	0.001
	B	11	**5.635**	**ug/L**	3.507	3362	0.002
	Na	23	**1252.223**	**ug/L**	0.047	6438044	5.057
	Mg	24	**2953.322**	**ug/L**	2.202	9832297	7.748
	Al	27	**16525.668**	**ug/L**	0.954	74507011	58.725
	P	31	**251.035**	**ug/L**	0.108	65328	0.046
	K	39	**2783.531**	**ug/L**	1.053	17733151	13.458
	Ca	43	**4433.338**	**ug/L**	0.769	51911	0.041
>	Sc	45		**ug/L**		1268650	1268649.592
	V	51	**18.652**	**ug/L**	0.100	92182	0.071
	Cr	52	**11.138**	**ug/L**	0.617	49212	0.037
	Cr	53		**ug/L**		74441	-0.038
	Mn	55	**380.328**	**ug/L**	1.251	2513262	1.980
	Fe	57	**13172.331**	**ug/L**	0.503	1663653	1.308
	Co	59	**31.501**	**ug/L**	0.829	150397	0.118
	Ni	60	**11.614**	**ug/L**	1.352	11666	0.009
	Cu	63		**ug/L**		24514	0.019
	Cu	65	**10.690**	**ug/L**	0.941	11832	0.009
	Zn	66	**58.939**	**ug/L**	0.787	42365	0.161
	Zn	67		**ug/L**		13159	0.011
	Zn	68		**ug/L**		31686	0.117
>	Ge	74		**ug/L**		262036	262036.405
	As	75	**4.051**	**ug/L**	10.055	3491	0.012
	Se	77		**ug/L**		2996	-0.008
	Se	82	**0.281**	**ug/L**	29.781	-3	0.000
	Kr	83		**ug/L**		206	0.000
	Sr	88	**32.852**	**ug/L**	1.770	297429	2.068
	Y	89		**ug/L**		988131	6.874
	Ag	107	**0.261**	**ug/L**	3.288	943	0.006
	Cd	111	**1.220**	**ug/L**	7.183	1015	0.007
	Cd	114		**ug/L**		170	0.001
>	In	115		**ug/L**		143729	143728.742
	Sn	120	**1.506**	**ug/L**	0.867	5246	0.035
	Sb	121	**0.106**	**ug/L**	12.000	688	0.002
	Sb	123		**ug/L**		533	0.002
	Ba	135		**ug/L**		136552	0.622
	Ba	137	**152.960**	**ug/L**	1.131	239071	1.088
	Ho	165		**ug/L**		51165	0.233
>	Lu	175		**ug/L**		219632	219632.442
	Tl	205	**0.348**	**ug/L**	4.189	3337	0.012
	Pb	208	**15.890**	**ug/L**	1.974	182063	0.826
	Bi	209		**ug/L**		29500	0.134
	U	238	**4.405**	**ug/L**	1.238	50527	0.229

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45			106.9		
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74			100.4		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115			105.9		
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175			112.1		
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 243492007
Sample Date/Time: Tuesday, January 12, 2010 14:17:42
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\243492007.143

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**73.087**	**ug/L**	0.571	101046	0.077
|	Be	9	**4.018**	**ug/L**	1.586	2194	0.002
|	B	11	**22.519**	**ug/L**	1.675	11332	0.008
|	Na	23	**590.231**	**ug/L**	8.146	3165584	2.384
|	Mg	24	**9993.292**	**ug/L**	0.908	34588283	26.217
|	Al	27	**69905.961**	**ug/L**	7.867	327516767	248.417
|	P	31	**433.489**	**ug/L**	1.096	111664	0.079
|	K	39	**9873.086**	**ug/L**	9.881	63619606	47.733
|	Ca	43	**9539.918**	**ug/L**	0.753	115552	0.087
|>	Sc	45		**ug/L**		1319271	1319271.240
|	V	51	**83.034**	**ug/L**	1.931	419512	0.316
|	Cr	52	**42.266**	**ug/L**	2.685	187733	0.141
|	Cr	53		**ug/L**		86705	-0.031
|	Mn	55	**1102.953**	**ug/L**	0.945	7575779	5.741
|	Fe	57	**44146.574**	**ug/L**	2.413	5785559	4.382
|	Co	59	**20.999**	**ug/L**	2.458	104304	0.079
|	Ni	60	**31.109**	**ug/L**	1.473	32352	0.024
|	Cu	63		**ug/L**		58146	0.044
⌊	Cu	65	**24.967**	**ug/L**	2.292	28588	0.022
⌈	Zn	66	**120.095**	**ug/L**	0.545	85107	0.328
|	Zn	67		**ug/L**		21071	0.043
|	Zn	68		**ug/L**		65984	0.251
|>	Ge	74		**ug/L**		258910	258910.395
|	As	75	**8.631**	**ug/L**	2.952	6941	0.025
|	Se	77		**ug/L**		2755	-0.009
|	Se	82	**-1.209**	**ug/L**	25.978	-110	-0.000
⌊	Kr	83		**ug/L**		278	0.001
⌈	Sr	88	**107.586**	**ug/L**	1.409	959910	6.774
|	Y	89		**ug/L**		500681	3.533
|	Ag	107	**0.427**	**ug/L**	2.437	1482	0.010
|	Cd	111	**1.543**	**ug/L**	4.551	1260	0.009
|	Cd	114		**ug/L**		565	0.004
|>	In	115		**ug/L**		141698	141698.325
|	Sn	120	**0.680**	**ug/L**	2.594	2460	0.016
|	Sb	121	**0.184**	**ug/L**	4.803	902	0.004
⌊	Sb	123		**ug/L**		718	0.003
⌈	Ba	135		**ug/L**		513212	2.421
|	Ba	137	**585.088**	**ug/L**	0.906	882303	4.163
|	Ho	165		**ug/L**		25441	0.120
|>	Lu	175		**ug/L**		211928	211927.833
|	Tl	205	**0.710**	**ug/L**	2.383	5843	0.024
|	Pb	208	**47.481**	**ug/L**	0.471	523905	2.469
|	Bi	209		**ug/L**		14900	0.070
⌊	U	238	**5.713**	**ug/L**	1.069	63179	0.297

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		111.1			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		104.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		108.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Al 27 Upper, S, EEE	Al	27	Sample is out of limits (over linear range)
Mn 55 Upper, S, EEE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, January 12, 2010 14:35:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 6.146

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.503**	**ug/L**	1.583	65615	0.057
	Be	9	**53.312**	**ug/L**	1.923	25185	0.022
	B	11	**103.791**	**ug/L**	1.735	42703	0.037
	Na	23	**4701.779**	**ug/L**	3.002	21823188	18.989
	Mg	24	**5306.178**	**ug/L**	1.288	15988519	13.920
	Al	27	**5103.325**	**ug/L**	6.101	20832409	18.135
	P	31	**4769.153**	**ug/L**	0.231	1001678	0.866
	K	39	**5152.109**	**ug/L**	7.598	29205491	24.909
	Ca	43	**4926.888**	**ug/L**	0.814	52166	0.045
>	Sc	45		**ug/L**		1148303	1148303.429
	V	51	**50.018**	**ug/L**	1.463	220712	0.191
	Cr	52	**50.788**	**ug/L**	0.899	195985	0.169
	Cr	53		**ug/L**		115769	0.004
	Mn	55	**51.703**	**ug/L**	1.097	310630	0.269
	Fe	57	**5137.370**	**ug/L**	1.462	589865	0.510
	Co	59	**49.943**	**ug/L**	0.610	215711	0.188
	Ni	60	**50.875**	**ug/L**	1.594	46010	0.040
	Cu	63		**ug/L**		103247	0.090
	Cu	65	**49.676**	**ug/L**	1.028	49426	0.043
	Zn	66	**49.520**	**ug/L**	1.140	33950	0.135
	Zn	67		**ug/L**		13291	0.014
	Zn	68		**ug/L**		24779	0.096
>	Ge	74		**ug/L**		249715	249715.222
	As	75	**47.421**	**ug/L**	1.132	35203	0.140
	Se	77		**ug/L**		6833	0.008
	Se	82	**47.055**	**ug/L**	2.909	3245	0.013
	Kr	83		**ug/L**		120	0.000
	Sr	88	**51.189**	**ug/L**	1.017	419770	3.223
	Y	89		**ug/L**		238	0.001
	Ag	107	**48.946**	**ug/L**	0.489	150300	1.154
	Cd	111	**49.587**	**ug/L**	1.608	36540	0.280
	Cd	114		**ug/L**		84116	0.646
>	In	115		**ug/L**		130205	130204.635
	Sn	120	**50.272**	**ug/L**	1.645	151930	1.165
	Sb	121	**50.654**	**ug/L**	6.241	133185	1.021
	Sb	123		**ug/L**		104633	0.802
	Ba	135		**ug/L**		36728	0.196
	Ba	137	**48.625**	**ug/L**	1.264	64715	0.346
	Ho	165		**ug/L**		40	0.000
>	Lu	175		**ug/L**		186929	186929.024
	Tl	205	**46.753**	**ug/L**	0.276	299406	1.598
	Pb	208	**49.410**	**ug/L**	0.879	480834	2.570
	Bi	209		**ug/L**		102	0.000
	U	238	**51.969**	**ug/L**	2.368	505551	2.704

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	109.007				
|	Be	9	106.623				
|	B	11	103.791				
|	Na	23	94.036				
|	Mg	24	106.124				
|	Al	27	101.056				
|	P	31	95.383				
|	K	39	103.042				
|	Ca	43	98.538				
|>	Sc	45			96.7		
|	V	51	100.036				
|	Cr	52	101.576				
|	Cr	53					
|	Mn	55	103.406				
|	Fe	57	102.747				
|	Co	59	99.885				
|	Ni	60	101.749				
|	Cu	63					
⌊	Cu	65	99.352				
⌈	Zn	66	99.041				
|	Zn	67					
|	Zn	68					
|>	Ge	74			95.7		
|	As	75	94.842				
|	Se	77					
|	Se	82	94.110				
⌊	Kr	83					
⌈	Sr	88	102.377				
|	Y	89					
|	Ag	107	97.893				
|	Cd	111	99.174				
|	Cd	114					
|>	In	115			96.0		
|	Sn	120	100.544				
|	Sb	121	101.308				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	97.250				
|	Ho	165					
|>	Lu	175			95.4		
|	Tl	205	93.506				
|	Pb	208	98.821				
|	Bi	209					
⌊	U	238	103.939				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, January 12, 2010 14:41:17
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 7.147

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.070**	**ug/L**	20.607	197	0.000
	Be	9	**0.007**	**ug/L**	84.124	16	0.000
	B	11	**1.151**	**ug/L**	34.736	1300	0.000
	Na	23	**0.248**	**ug/L**	263.258	22351	0.001
	Mg	24	**1.336**	**ug/L**	118.021	7669	0.004
	Al	27	**1.511**	**ug/L**	41.060	14007	0.005
	P	31	**-1.959**	**ug/L**	73.505	6712	-0.000
	K	39	**-14.607**	**ug/L**	51.307	546290	-0.071
	Ca	43	**-7.553**	**ug/L**	38.579	400	-0.000
>	Sc	45		**ug/L**		1213114	1213113.997
	V	51	**-0.705**	**ug/L**	70.672	-1345	-0.003
	Cr	52	**0.224**	**ug/L**	17.159	3019	0.001
	Cr	53		**ug/L**		107970	-0.008
	Mn	55	**0.033**	**ug/L**	22.532	1889	0.000
	Fe	57	**3.370**	**ug/L**	38.969	4902	0.000
	Co	59	**0.002**	**ug/L**	154.231	207	0.000
	Ni	60	**0.001**	**ug/L**	397.783	76	0.000
	Cu	63		**ug/L**		391	0.000
	Cu	65	**0.007**	**ug/L**	214.310	106	0.000
	Zn	66	**-0.008**	**ug/L**	159.912	181	-0.000
	Zn	67		**ug/L**		9435	-0.003
	Zn	68		**ug/L**		813	-0.000
>	Ge	74		**ug/L**		265000	265000.058
	As	75	**-0.295**	**ug/L**	131.579	142	-0.001
	Se	77		**ug/L**		5265	0.000
	Se	82	**0.156**	**ug/L**	142.244	-12	0.000
	Kr	83		**ug/L**		84	-0.000
	Sr	88	**0.002**	**ug/L**	21.382	182	0.000
	Y	89		**ug/L**		91	0.000
	Ag	107	**-0.001**	**ug/L**	228.838	53	-0.000
	Cd	111	**-0.006**	**ug/L**	274.898	18	-0.000
	Cd	114		**ug/L**		36	0.000
>	In	115		**ug/L**		138382	138381.719
	Sn	120	**0.048**	**ug/L**	23.840	376	0.001
	Sb	121	**0.523**	**ug/L**	37.170	1819	0.011
	Sb	123		**ug/L**		1403	0.008
	Ba	135		**ug/L**		36	0.000
	Ba	137	**0.001**	**ug/L**	205.115	51	0.000
	Ho	165		**ug/L**		17	0.000
>	Lu	175		**ug/L**		196655	196655.142
	Tl	205	**0.142**	**ug/L**	28.106	1600	0.005
	Pb	208	**-0.003**	**ug/L**	109.445	486	-0.000
	Bi	209		**ug/L**		27	0.000
	U	238	**0.042**	**ug/L**	21.767	606	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		102.2			
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		101.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		102.0			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		100.3			
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1202004422
Sample Date/Time: Tuesday, January 12, 2010 14:53:05
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 noirs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\1202004422.149

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**37.134**	**ug/L**	1.314	51030	0.039
	Be	9	**3.426**	**ug/L**	1.697	1858	0.001
	B	11	**8.635**	**ug/L**	2.812	4853	0.003
	Na	23	**994.257**	**ug/L**	7.007	5282759	4.015
	Mg	24	**5529.701**	**ug/L**	5.551	19003757	14.507
	Al	27	**37181.088**	**ug/L**	5.109	173093571	132.126
	P	31	**272.217**	**ug/L**	1.960	72487	0.049
	K	39	**3652.546**	**ug/L**	13.405	23810847	17.659
	Ca	43	**4080.599**	**ug/L**	1.276	49373	0.037
>	Sc	45		**ug/L**		1309834	1309834.483
	V	51	**38.365**	**ug/L**	1.410	193581	0.146
	Cr	52	**37.539**	**ug/L**	1.521	165830	0.125
	Cr	53		**ug/L**		83840	-0.033
	Mn	55	**771.846**	**ug/L**	0.476	5264394	4.018
	Fe	57	**26342.833**	**ug/L**	0.878	3430176	2.615
	Co	59	**8.169**	**ug/L**	0.498	40425	0.031
	Ni	60	**17.813**	**ug/L**	0.864	18429	0.014
	Cu	63		**ug/L**		35320	0.027
	Cu	65	**15.061**	**ug/L**	1.146	17167	0.013
	Zn	66	**98.003**	**ug/L**	2.569	70250	0.268
	Zn	67		**ug/L**		17432	0.028
	Zn	68		**ug/L**		51609	0.194
>	Ge	74		**ug/L**		261809	261809.416
	As	75	**4.989**	**ug/L**	4.979	4213	0.015
	Se	77		**ug/L**		2681	-0.009
	Se	82	**-0.183**	**ug/L**	71.066	-36	-0.000
	Kr	83		**ug/L**		209	0.000
	Sr	88	**31.986**	**ug/L**	1.027	290279	2.014
	Y	89		**ug/L**		808559	5.612
	Ag	107	**0.186**	**ug/L**	4.829	688	0.004
	Cd	111	**0.858**	**ug/L**	6.822	722	0.005
	Cd	114		**ug/L**		192	0.001
>	In	115		**ug/L**		144061	144060.647
	Sn	120	**0.733**	**ug/L**	3.250	2680	0.017
	Sb	121	**0.181**	**ug/L**	3.756	908	0.004
	Sb	123		**ug/L**		738	0.003
	Ba	135		**ug/L**		150358	0.678
	Ba	137	**166.448**	**ug/L**	1.825	262619	1.184
	Ho	165		**ug/L**		41390	0.187
>	Lu	175		**ug/L**		221737	221736.675
	Tl	205	**0.344**	**ug/L**	1.672	3343	0.012
	Pb	208	**23.558**	**ug/L**	0.836	272246	1.225
	Bi	209		**ug/L**		2895	0.013
	U	238	**2.594**	**ug/L**	1.389	30113	0.135

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		110.3			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		100.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		106.2			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		113.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1202004423
Sample Date/Time: Tuesday, January 12, 2010 14:58:59
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\1202004423.150

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**72.047**	**ug/L**	2.445	98485	0.075
	Be	9	**30.147**	**ug/L**	0.604	16186	0.012
	B	11	**64.013**	**ug/L**	2.090	30251	0.023
	Na	23	**1904.537**	**ug/L**	0.805	10056581	7.692
	Mg	24	**6077.558**	**ug/L**	5.023	20809690	15.944
	Al	27	**38201.254**	**ug/L**	2.185	177106829	135.751
	P	31	**1281.651**	**ug/L**	0.491	311429	0.233
	K	39	**5173.842**	**ug/L**	7.347	33297981	25.014
	Ca	43	**4614.193**	**ug/L**	1.162	55533	0.042
>	Sc	45		**ug/L**		1304542	1304541.998
	V	51	**65.794**	**ug/L**	1.039	329198	0.251
	Cr	52	**70.154**	**ug/L**	0.375	306687	0.233
	Cr	53		**ug/L**		98460	-0.021
	Mn	55	**1008.028**	**ug/L**	1.385	6846522	5.247
	Fe	57	**26479.419**	**ug/L**	1.109	3433781	2.629
	Co	59	**33.097**	**ug/L**	0.524	162471	0.124
	Ni	60	**40.797**	**ug/L**	0.316	41933	0.032
	Cu	63		**ug/L**		87134	0.067
	Cu	65	**36.801**	**ug/L**	0.597	41623	0.032
	Zn	66	**125.654**	**ug/L**	0.461	89059	0.343
	Zn	67		**ug/L**		21035	0.042
	Zn	68		**ug/L**		66776	0.254
>	Ge	74		**ug/L**		258968	258968.101
	As	75	**41.660**	**ug/L**	1.581	32118	0.123
	Se	77		**ug/L**		2959	-0.008
	Se	82	**8.257**	**ug/L**	3.657	572	0.002
	Kr	83		**ug/L**		225	0.001
	Sr	88	**59.171**	**ug/L**	0.920	537994	3.725
	Y	89		**ug/L**		843912	5.845
	Ag	107	**23.510**	**ug/L**	1.728	80074	0.554
	Cd	111	**6.490**	**ug/L**	4.274	5325	0.037
	Cd	114		**ug/L**		9297	0.064
>	In	115		**ug/L**		144375	144374.777
	Sn	120	**13.592**	**ug/L**	1.065	45717	0.315
	Sb	121	**54.327**	**ug/L**	0.654	158402	1.095
	Sb	123		**ug/L**		124310	0.859
	Ba	135		**ug/L**		280666	1.266
	Ba	137	**306.479**	**ug/L**	0.877	483294	2.181
	Ho	165		**ug/L**		43326	0.195
>	Lu	175		**ug/L**		221603	221602.764
	Tl	205	**42.510**	**ug/L**	3.175	322767	1.453
	Pb	208	**115.484**	**ug/L**	0.722	1331564	6.006
	Bi	209		**ug/L**		2942	0.013
	U	238	**27.519**	**ug/L**	1.627	317483	1.432

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		109.9			
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		106.4			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		113.1			
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Mn 55 Upper, S, EE	Mn	55	Sample is out of limits (over linear range)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004425
Sample Date/Time: Tuesday, January 12, 2010 15:04:53
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\6020 nolrs thtlmozr.mth
Dataset File: C:\elandata\Dataset\100111\1202004425.151

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**62.920**	**ug/L**	1.656	84026	0.066
	Be	9	**27.178**	**ug/L**	0.924	14253	0.011
	B	11	**60.368**	**ug/L**	3.322	27916	0.021
	Na	23	**1552.832**	**ug/L**	14.095	8013202	6.271
	Mg	24	**5962.483**	**ug/L**	1.557	19932140	15.642
	Al	27	**40112.278**	**ug/L**	7.675	181643556	142.542
	P	31	**1175.728**	**ug/L**	0.978	279648	0.214
	K	39	**4784.133**	**ug/L**	3.418	30135603	23.130
	Ca	43	**4093.572**	**ug/L**	1.247	48178	0.037
>	Sc	45		**ug/L**		1274083	1274083.328
	V	51	**63.611**	**ug/L**	1.195	310885	0.242
	Cr	52	**55.157**	**ug/L**	1.379	235968	0.183
	Cr	53		**ug/L**		91236	-0.025
	Mn	55	**632.497**	**ug/L**	0.256	4196570	3.292
	Fe	57	**24383.478**	**ug/L**	0.287	3088752	2.421
	Co	59	**31.883**	**ug/L**	1.399	152875	0.120
	Ni	60	**37.303**	**ug/L**	0.456	37454	0.029
	Cu	63		**ug/L**		78466	0.061
	Cu	65	**33.693**	**ug/L**	1.629	37226	0.029
	Zn	66	**103.952**	**ug/L**	0.658	74179	0.284
	Zn	67		**ug/L**		18292	0.031
	Zn	68		**ug/L**		54698	0.206
>	Ge	74		**ug/L**		260628	260627.911
	As	75	**36.653**	**ug/L**	0.976	28482	0.108
	Se	77		**ug/L**		3013	-0.008
	Se	82	**6.744**	**ug/L**	2.003	466	0.002
	Kr	83		**ug/L**		227	0.001
	Sr	88	**55.927**	**ug/L**	0.405	498099	3.521
	Y	89		**ug/L**		663039	4.688
	Ag	107	**21.854**	**ug/L**	2.214	72905	0.515
	Cd	111	**5.560**	**ug/L**	1.613	4470	0.031
	Cd	114		**ug/L**		8421	0.059
>	In	115		**ug/L**		141413	141413.454
	Sn	120	**12.221**	**ug/L**	0.541	40286	0.283
	Sb	121	**46.691**	**ug/L**	1.423	133384	0.941
	Sb	123		**ug/L**		105400	0.743
	Ba	135		**ug/L**		182419	0.833
	Ba	137	**204.117**	**ug/L**	0.697	318003	1.452
	Ho	165		**ug/L**		34572	0.158
>	Lu	175		**ug/L**		218923	218923.212
	Tl	205	**38.814**	**ug/L**	2.564	291234	1.327
	Pb	208	**105.814**	**ug/L**	1.268	1205396	5.503
	Bi	209		**ug/L**		2889	0.013
	U	238	**24.883**	**ug/L**	0.167	283630	1.295

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			107.3		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			99.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			104.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			111.7		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: 1202004424
Sample Date/Time: Tuesday, January 12, 2010 15:10:47
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 936805|10|rmj
Method File: c:\elandata\Method\6020 noirs thtlmozr.mth
Dataset File: C:\elandata\Dataset\100111\1202004424.152

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**8.044**	**ug/L**	0.605	9876	0.008
	Be	9	**0.598**	**ug/L**	11.021	297	0.000
	B	11	**2.135**	**ug/L**	9.534	1646	0.001
	Na	23	**168.420**	**ug/L**	2.021	809653	0.680
	Mg	24	**912.761**	**ug/L**	4.096	2782473	2.395
	Al	27	**5258.253**	**ug/L**	8.426	21702130	18.686
	P	31	**64.774**	**ug/L**	1.067	20491	0.012
	K	39	**612.941**	**ug/L**	4.336	4043077	2.963
	Ca	43	**602.717**	**ug/L**	3.286	6855	0.006
>	Sc	45		**ug/L**		1160567	1160567.441
	V	51	**5.844**	**ug/L**	12.344	27665	0.022
	Cr	52	**7.913**	**ug/L**	0.339	32570	0.026
	Cr	53		**ug/L**		87052	-0.022
	Mn	55	**186.201**	**ug/L**	0.139	1126496	0.969
	Fe	57	**4498.015**	**ug/L**	0.932	522536	0.447
	Co	59	**1.130**	**ug/L**	1.393	5118	0.004
	Ni	60	**2.968**	**ug/L**	2.794	2780	0.002
	Cu	63		**ug/L**		5906	0.005
	Cu	65	**2.676**	**ug/L**	1.436	2781	0.002
	Zn	66	**26.417**	**ug/L**	0.585	18275	0.072
	Zn	67		**ug/L**		10984	0.005
	Zn	68		**ug/L**		13642	0.051
>	Ge	74		**ug/L**		250829	250828.686
	As	75	**0.705**	**ug/L**	33.659	872	0.002
	Se	77		**ug/L**		3406	-0.006
	Se	82	**-0.144**	**ug/L**	165.701	-32	-0.000
	Kr	83		**ug/L**		111	0.000
	Sr	88	**4.635**	**ug/L**	0.792	39670	0.292
	Y	89		**ug/L**		159753	1.179
	Ag	107	**0.026**	**ug/L**	15.305	138	0.001
	Cd	111	**0.111**	**ug/L**	17.139	106	0.001
	Cd	114		**ug/L**		42	0.000
>	In	115		**ug/L**		135384	135384.182
	Sn	120	**0.185**	**ug/L**	8.413	798	0.004
	Sb	121	**0.025**	**ug/L**	30.280	427	0.001
	Sb	123		**ug/L**		360	0.000
	Ba	135		**ug/L**		20769	0.105
	Ba	137	**25.513**	**ug/L**	2.139	36056	0.182
	Ho	165		**ug/L**		7977	0.040
>	Lu	175		**ug/L**		198385	198385.098
	Tl	205	**0.786**	**ug/L**	16.562	5990	0.027
	Pb	208	**4.301**	**ug/L**	1.611	44896	0.224
	Bi	209		**ug/L**		376	0.002
	U	238	**0.483**	**ug/L**	2.139	5163	0.025

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.8		
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			96.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			99.8		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.2		
	Tl	205					
	Pb	208					
	Bi	209					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, January 12, 2010 15:16:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 nolrs thtimozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 6.153

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**54.688**	**ug/L**	1.883	64367	0.057
|	Be	9	**53.142**	**ug/L**	1.417	24546	0.022
|	B	11	**102.116**	**ug/L**	0.580	41095	0.036
|	Na	23	**4813.144**	**ug/L**	1.571	21843545	19.439
|	Mg	24	**5257.160**	**ug/L**	1.474	15488209	13.792
|	Al	27	**4719.780**	**ug/L**	4.604	18844865	16.772
|	P	31	**4641.138**	**ug/L**	1.283	953230	0.843
|	K	39	**4210.019**	**ug/L**	2.139	23438802	20.354
|	Ca	43	**4732.492**	**ug/L**	1.147	49010	0.043
|>	Sc	45		**ug/L**		1122801	1122800.715
|	V	51	**48.172**	**ug/L**	0.369	207912	0.184
|	Cr	52	**48.744**	**ug/L**	0.422	184004	0.162
|	Cr	53		**ug/L**		108582	-0.000
|	Mn	55	**48.918**	**ug/L**	0.633	287456	0.255
|	Fe	57	**4901.436**	**ug/L**	1.226	550461	0.487
|	Co	59	**48.086**	**ug/L**	1.056	203081	0.181
|	Ni	60	**49.348**	**ug/L**	0.545	43643	0.039
|	Cu	63		**ug/L**		99116	0.088
⌊	Cu	65	**47.651**	**ug/L**	0.644	46362	0.041
⌈	Zn	66	**46.799**	**ug/L**	1.553	31958	0.128
|	Zn	67		**ug/L**		12909	0.013
|	Zn	68		**ug/L**		23551	0.091
|>	Ge	74		**ug/L**		248659	248659.066
|	As	75	**44.591**	**ug/L**	1.676	32982	0.131
|	Se	77		**ug/L**		6057	0.005
|	Se	82	**46.184**	**ug/L**	3.006	3171	0.013
⌊	Kr	83		**ug/L**		115	0.000
⌈	Sr	88	**49.081**	**ug/L**	1.098	397526	3.090
|	Y	89		**ug/L**		187	0.001
|	Ag	107	**47.630**	**ug/L**	0.788	144451	1.123
|	Cd	111	**48.221**	**ug/L**	0.836	35098	0.273
|	Cd	114		**ug/L**		80487	0.626
|>	In	115		**ug/L**		128597	128596.775
|	Sn	120	**48.778**	**ug/L**	1.405	145602	1.131
|	Sb	121	**48.492**	**ug/L**	6.246	125943	0.977
⌊	Sb	123		**ug/L**		97471	0.756
⌈	Ba	135		**ug/L**		36377	0.194
|	Ba	137	**47.543**	**ug/L**	1.469	63483	0.338
|	Ho	165		**ug/L**		31	0.000
|>	Lu	175		**ug/L**		187535	187535.464
|	Tl	205	**45.581**	**ug/L**	1.878	292848	1.558
|	Pb	208	**48.484**	**ug/L**	0.913	473373	2.522
|	Bi	209		**ug/L**		96	0.000
⌊	U	238	**50.732**	**ug/L**	0.748	495181	2.640

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	109.375				
|	Be	9	106.284				
|	B	11	102.116				
|	Na	23	96.263				
|	Mg	24	105.143				
|	Al	27	93.461				
|	P	31	92.823				
|	K	39	84.200				
|	Ca	43	94.650				
|>	Sc	45		94.6			
|	V	51	96.344				
|	Cr	52	97.488				
|	Cr	53					
|	Mn	55	97.837				
|	Fe	57	98.029				
|	Co	59	96.173				
|	Ni	60	98.696				
|	Cu	63					
⌊	Cu	65	95.301				
⌈	Zn	66	93.598				
|	Zn	67					
|	Zn	68					
|>	Ge	74		95.3			
|	As	75	89.181				
|	Se	77					
|	Se	82	92.369				
⌊	Kr	83					
⌈	Sr	88	98.163				
|	Y	89					
|	Ag	107	95.259				
|	Cd	111	96.443				
|	Cd	114					
|>	In	115		94.8			
|	Sn	120	97.557				
|	Sb	121	96.985				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	95.086				
|	Ho	165					
|>	Lu	175		95.7			
|	Tl	205	91.161				
|	Pb	208	96.968				
|	Bi	209					
⌊	U	238	101.464				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	K	39	CCV is out of limits (+/- 10%)
QC Std 6	As	75	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Tuesday, January 12, 2010 15:22:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 noirs thtlmozr.mth
Dataset File: C:\elandata\Dataset\100111\QC Std 7.154

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.033**	**ug/L**	34.671	142	0.000
	Be	9	**0.011**	**ug/L**	40.946	17	0.000
	B	11	**1.467**	**ug/L**	28.855	1357	0.001
	Na	23	**-0.065**	**ug/L**	2213.643	19681	-0.000
	Mg	24	**0.812**	**ug/L**	46.530	5668	0.002
	Al	27	**0.388**	**ug/L**	71.488	8669	0.001
	P	31	**0.284**	**ug/L**	693.680	6812	0.000
	K	39	**-6.677**	**ug/L**	189.224	560563	-0.032
	Ca	43	**-7.062**	**ug/L**	33.276	383	-0.000
>	Sc	45		**ug/L**		1146956	1146955.730
	V	51	**0.115**	**ug/L**	358.140	2305	0.000
	Cr	52	**0.199**	**ug/L**	38.236	2762	0.001
	Cr	53		**ug/L**		97981	-0.012
	Mn	55	**0.010**	**ug/L**	82.259	1648	0.000
	Fe	57	**1.641**	**ug/L**	56.923	4437	0.000
	Co	59	**0.003**	**ug/L**	73.573	200	0.000
	Ni	60	**-0.004**	**ug/L**	207.311	67	-0.000
	Cu	63		**ug/L**		351	0.000
	Cu	65	**-0.004**	**ug/L**	181.222	89	-0.000
	Zn	66	**-0.007**	**ug/L**	50.876	171	-0.000
	Zn	67		**ug/L**		9208	-0.002
	Zn	68		**ug/L**		815	-0.000
>	Ge	74		**ug/L**		249258	249257.916
	As	75	**0.073**	**ug/L**	698.456	402	0.000
	Se	77		**ug/L**		4408	-0.002
	Se	82	**0.059**	**ug/L**	308.016	-18	0.000
	Kr	83		**ug/L**		84	-0.000
	Sr	88	**0.004**	**ug/L**	31.638	194	0.000
	Y	89		**ug/L**		76	-0.000
	Ag	107	**0.000**	**ug/L**	810.754	54	0.000
	Cd	111	**-0.001**	**ug/L**	2722.216	21	-0.000
	Cd	114		**ug/L**		38	0.000
>	In	115		**ug/L**		132035	132035.497
	Sn	120	**0.053**	**ug/L**	28.320	373	0.001
	Sb	121	**0.595**	**ug/L**	22.792	1937	0.012
	Sb	123		**ug/L**		1514	0.009
	Ba	135		**ug/L**		34	0.000
	Ba	137	**0.005**	**ug/L**	165.824	56	0.000
	Ho	165		**ug/L**		13	-0.000
>	Lu	175		**ug/L**		193171	193170.996
	Tl	205	**0.306**	**ug/L**	11.274	2661	0.010
	Pb	208	**-0.002**	**ug/L**	75.434	492	-0.000
	Bi	209		**ug/L**		24	0.000
	U	238	**0.041**	**ug/L**	31.020	580	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	0.9999
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45			96.6		
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74			95.5		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115			97.3		
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175			98.6		
|	Tl	205					
|	Pb	208					
|	Bi	209					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #6 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Wednesday, January 13, 2010 20:57:07
Sample Description:
Method File: C:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\091212\Sample.253
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse

Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1350.3	1350.264	59.715	4.4
	Mg	24.0	21710.1	21710.085	198.441	0.9
	Co	58.9	35532.9	35532.939	346.878	1.0
	Rh	102.9	71212.3	71212.257	487.557	0.7
	In	114.9	79251.2	79251.233	730.355	0.9
	Pb	208.0	47871.9	47871.877	217.644	0.5
⌈>	Ba	137.9	74019.4	74019.382	314.317	0.4
⌊	Ba++	69.0	2339.2	0.032	0.000	1.0
⌈>	Ce	139.9	94879.4	94879.437	473.097	0.5
⌊	CeO	155.9	1513.3	0.016	0.000	1.5
	Bkgd	220.0	23.1	23.100	1.517	6.6

Current Optimization File Data

Current Value	Description
0.84	Nebulizer Gas Flow
13.25	Lens Voltage
1450.00	ICP RF Power
-1781.25	Analog Stage Voltage
900.00	Pulse Stage Voltage
30.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	25	11.3	2876.6
Co	59	25	12.5	34989.5
In	115	25	14.0	76766.4

ICPMS #6 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	588	2080	0.658
Be	9.0	9.0	2039	2080	0.673
Mg	24.0	24.0	5686	2120	0.635
Mg	25.0	25.0	5929	2080	0.698
Mg	26.0	26.0	6162	2120	0.689
Co	58.9	59.0	14181	2170	0.640
Rh	102.9	102.8	24853	2230	0.702
In	114.9	114.9	27786	2260	0.690
Ce	139.9	139.9	33855	2280	0.747
Pb	206.0	206.0	49948	2430	0.693
Pb	207.0	207.0	50135	2385	0.676
Pb	208.0	208.0	50463	2430	0.715
U	238.1	238.0	57731	2470	0.711

Report Date/Time: Wednesday, January 13, 2010 20:56:04

ICPMS#6 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, January 13, 2010 21:04:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\Blank.001

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		107	
>	Sc	45		ug/L		1244138	
>	Ge	74		ug/L		311061	
	As	75		ug/L		900	
	Se	77		ug/L		6448	
	Se	82		ug/L		-20	
	Kr	83		ug/L		114	
>	Lu	175		ug/L		213630	
	Tl	205		ug/L		740	
	U	238		ug/L		977	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Simple Linear	
Sc	45	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Lu	175	Simple Linear	
Tl	205	Simple Linear	
U	238	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
⌊>	Sc	45					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
|	Tl	205					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, January 13, 2010 21:08:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\Standard 1.002

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**10.000**	**ug/L**	6.334	7134	0.006
⌊>	Sc	45		**ug/L**		1269930	1269929.783
⌈>	Ge	74		**ug/L**		327042	327042.387
|	As	75	**10.000**	**ug/L**	4.522	9644	0.027
|	Se	77		**ug/L**		6905	0.000
|	Se	82	**10.000**	**ug/L**	2.762	703	0.002
⌊	Kr	83		**ug/L**		113	-0.000
⌈>	Lu	175		**ug/L**		221759	221758.845
|	Tl	205	**10.000**	**ug/L**	0.981	66470	0.296
⌊	U	238	**10.000**	**ug/L**	1.403	114801	0.513

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, January 13, 2010 21:12:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\Standard 2.003

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**99.978**	**ug/L**	4.404	72714	0.054
⌊>	Sc	45		**ug/L**		1340170	1340169.764
⌈>	Ge	74		**ug/L**		327000	326999.807
|	As	75	**99.981**	**ug/L**	1.312	86311	0.261
|	Se	77		**ug/L**		11689	0.015
|	Se	82	**99.994**	**ug/L**	1.050	7176	0.022
⌊	Kr	83		**ug/L**		135	0.000
⌈>	Lu	175		**ug/L**		220314	220313.691
|	Tl	205	**99.979**	**ug/L**	1.056	639922	2.901
⌊	U	238	**99.943**	**ug/L**	1.875	1070038	4.853

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175					
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, January 13, 2010 21:16:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 1.004

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.970**	**ug/L**	6.913	37733	0.028
>	Sc	45		**ug/L**		1337586	1337585.616
>	Ge	74		**ug/L**		326070	326069.928
	As	75	**46.431**	**ug/L**	0.289	40474	0.121
	Se	77		**ug/L**		9208	0.008
	Se	82	**50.393**	**ug/L**	1.102	3595	0.011
	Kr	83		**ug/L**		125	0.000
>	Lu	175		**ug/L**		219508	219508.438
	Tl	205	**49.446**	**ug/L**	1.338	315737	1.435
	U	238	**54.095**	**ug/L**	3.403	577542	2.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	103.940				
⌊>	Sc	45		107.5			
⌈>	Ge	74		104.8			
|	As	75	92.862				
|	Se	77					
|	Se	82	100.785				
⌊	Kr	83					
⌈>	Lu	175		102.8			
|	Tl	205	98.893				
⌊	U	238	108.191				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, January 13, 2010 21:20:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 2.005

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**-0.043**	**ug/L**	30.644	87	-0.000
⌊>	Sc	45		**ug/L**		1385670	1385669.946
⌈>	Ge	74		**ug/L**		332328	332328.334
|	As	75	**0.214**	**ug/L**	253.235	1149	0.001
|	Se	77		**ug/L**		7346	0.001
|	Se	82	**-0.257**	**ug/L**	58.493	-41	-0.000
⌊	Kr	83		**ug/L**		134	0.000
⌈>	Lu	175		**ug/L**		224163	224163.432
|	Tl	205	**0.096**	**ug/L**	5.380	1398	0.003
⌊	U	238	**-0.000**	**ug/L**	1681.503	1022	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		111.4			
>	Ge	74		106.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		104.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, January 13, 2010 21:24:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 3.006

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**10.960**	**ug/L**	4.821	8289	0.006
⌊>	Sc	45		**ug/L**		1376511	1376510.611
⌈>	Ge	74		**ug/L**		329375	329374.593
|	As	75	**5.574**	**ug/L**	5.628	5749	0.015
|	Se	77		**ug/L**		7314	0.001
|	Se	82	**5.440**	**ug/L**	6.303	373	0.001
⌊	Kr	83		**ug/L**		127	0.000
⌈>	Lu	175		**ug/L**		218470	218469.827
|	Tl	205	**1.063**	**ug/L**	3.792	7499	0.031
⌊	U	238	**0.175**	**ug/L**	4.822	2853	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	109.604				
⌊>	Sc	45		110.6			
⌈>	Ge	74		105.9			
|	As	75	111.479				
|	Se	77					
|	Se	82	108.796				
⌊	Kr	83					
⌈>	Lu	175		102.3			
|	Tl	205	106.339				
⌊	U	238	87.417				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, January 13, 2010 21:28:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 4.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.367**	**ug/L**	3.747	397	0.000
>	Sc	45		**ug/L**		1396175	1396175.131
>	Ge	74		**ug/L**		315800	315800.414
	As	75	**-0.074**	**ug/L**	418.489	854	-0.000
	Se	77		**ug/L**		6837	0.001
	Se	82	**-1.489**	**ug/L**	12.412	-124	-0.000
	Kr	83		**ug/L**		254	0.000
>	Lu	175		**ug/L**		217203	217203.050
	Tl	205	**-0.001**	**ug/L**	54.328	743	-0.000
	U	238	**-0.067**	**ug/L**	3.176	286	-0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		112.2			
>	Ge	74		101.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		101.7			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, January 13, 2010 21:32:48
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 5.008

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**22.634**	**ug/L**	2.036	17206	0.012
⌊>	Sc	45		**ug/L**		1394265	1394265.362
⌈>	Ge	74		**ug/L**		313041	313040.732
|	As	75	**19.627**	**ug/L**	3.664	16948	0.051
|	Se	77		**ug/L**		7718	0.004
|	Se	82	**18.417**	**ug/L**	3.823	1249	0.004
⌊	Kr	83		**ug/L**		249	0.000
⌈>	Lu	175		**ug/L**		215632	215632.092
|	Tl	205	**17.901**	**ug/L**	0.384	112765	0.519
⌊	U	238	**20.879**	**ug/L**	2.307	219572	1.014

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	113.171				
⌊>	Sc	45		112.1			
⌈>	Ge	74		100.6			
|	As	75	98.134				
|	Se	77					
|	Se	82	92.084				
⌊	Kr	83					
⌈>	Lu	175		100.9			
|	Tl	205	89.505				
⌊	U	238	104.394				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, January 13, 2010 21:36:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 6.009

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**52.050**	**ug/L**	3.890	41178	0.028
⌊>	Sc	45		**ug/L**		1456247	1456247.116
⌈>	Ge	74		**ug/L**		327225	327225.208
|	As	75	**45.481**	**ug/L**	2.725	39800	0.119
|	Se	77		**ug/L**		8932	0.007
|	Se	82	**50.525**	**ug/L**	0.224	3618	0.011
⌊	Kr	83		**ug/L**		121	0.000
⌈>	Lu	175		**ug/L**		215715	215714.607
|	Tl	205	**48.286**	**ug/L**	1.795	302965	1.401
⌊	U	238	**52.917**	**ug/L**	3.195	555042	2.569

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	104.100				
⌊>	Sc	45		117.0			
⌈>	Ge	74		105.2			
|	As	75	90.962				
|	Se	77					
|	Se	82	101.051				
⌊	Kr	83					
⌈>	Lu	175		101.0			
|	Tl	205	96.573				
⌊	U	238	105.834				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, January 13, 2010 21:40:52
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 7.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**-0.048**	**ug/L**	22.569	90	-0.000
⌊>	Sc	45		**ug/L**		1512322	1512322.247
⌈>	Ge	74		**ug/L**		335466	335466.258
|	As	75	**0.029**	**ug/L**	2037.103	994	0.000
|	Se	77		**ug/L**		7348	0.001
|	Se	82	**-0.663**	**ug/L**	160.386	-71	-0.000
⌊	Kr	83		**ug/L**		160	0.000
⌈>	Lu	175		**ug/L**		221381	221381.360
|	Tl	205	**0.061**	**ug/L**	3.924	1156	0.002
⌊	U	238	**-0.025**	**ug/L**	17.641	745	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		121.6			
>	Ge	74		107.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.6			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC Sc		45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004420
Sample Date/Time: Wednesday, January 13, 2010 21:44:56
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\1202004420.011

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**-0.076**	**ug/L**	11.877	72	-0.000
⌊>	Sc	45		**ug/L**		1628251	1628251.353
⌈>	Ge	74		**ug/L**		351418	351417.913
|	As	75	**-0.377**	**ug/L**	93.174	673	-0.001
|	Se	77		**ug/L**		5551	-0.005
|	Se	82	**0.041**	**ug/L**	600.561	-20	0.000
⌊	Kr	83		**ug/L**		113	-0.000
⌈>	Lu	175		**ug/L**		237573	237572.511
|	Tl	205	**0.075**	**ug/L**	11.457	1340	0.002
⌊	U	238	**-0.031**	**ug/L**	3.668	734	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		130.9			
>	Ge	74		113.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		111.2			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004421
Sample Date/Time: Wednesday, January 13, 2010 21:53:05
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 936805|40|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\1202004421.013

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**2.631**	**ug/L**	5.112	2341	0.001
⌊>	Sc	45		**ug/L**		1550093	1550093.242
⌈>	Ge	74		**ug/L**		334221	334221.204
|	As	75	**27.172**	**ug/L**	0.429	24678	0.071
|	Se	77		**ug/L**		11786	0.015
|	Se	82	**75.970**	**ug/L**	2.537	5566	0.017
⌊	Kr	83		**ug/L**		128	0.000
⌈>	Lu	175		**ug/L**		219829	219828.991
|	Tl	205	**29.974**	**ug/L**	3.374	191910	0.870
⌊	U	238	**0.495**	**ug/L**	1.993	6286	0.024

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		124.6			
>	Ge	74		107.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		102.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, January 13, 2010 21:57:07
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 6.014

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**52.667**	**ug/L**	3.758	43105	0.029
⌊>	Sc	45		**ug/L**		1506154	1506154.012
⌈>	Ge	74		**ug/L**		326972	326971.559
|	As	75	**47.609**	**ug/L**	1.956	41593	0.124
|	Se	77		**ug/L**		9489	0.008
|	Se	82	**51.358**	**ug/L**	2.834	3675	0.011
⌊	Kr	83		**ug/L**		111	-0.000
⌈>	Lu	175		**ug/L**		215418	215418.100
|	Tl	205	**50.045**	**ug/L**	1.664	313572	1.452
⌊	U	238	**53.971**	**ug/L**	1.349	565446	2.621

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	105.334				
>	Sc	45		121.1			
>	Ge	74		105.1			
	As	75	95.217				
	Se	77					
	Se	82	102.716				
	Kr	83					
>	Lu	175		100.8			
	Tl	205	100.089				
	U	238	107.941				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC Sc		45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, January 13, 2010 22:01:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 7.015

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**-0.071**	**ug/L**	4.147	75	-0.000
⌊>	Sc	45		**ug/L**		1574534	1574533.639
⌈>	Ge	74		**ug/L**		336734	336733.777
|	As	75	**-0.430**	**ug/L**	27.183	597	-0.001
|	Se	77		**ug/L**		7716	0.002
|	Se	82	**-0.062**	**ug/L**	357.047	-27	-0.000
⌊	Kr	83		**ug/L**		123	-0.000
⌈>	Lu	175		**ug/L**		221932	221931.725
|	Tl	205	**0.312**	**ug/L**	2.673	2778	0.009
⌊	U	238	**-0.031**	**ug/L**	17.127	676	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		126.6			
>	Ge	74		108.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		103.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492001
Sample Date/Time: Wednesday, January 13, 2010 22:33:47
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492001.023

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.676**	**ug/L**	3.681	95217	0.054
>	Sc	45		**ug/L**		1761706	1761705.573
>	Ge	74		**ug/L**		332114	332114.160
	As	75	**10.633**	**ug/L**	3.256	10181	0.028
	Se	77		**ug/L**		3949	-0.009
	Se	82	**-1.510**	**ug/L**	9.901	-132	-0.000
	Kr	83		**ug/L**		354	0.001
>	Lu	175		**ug/L**		232453	232453.408
	Tl	205	**1.012**	**ug/L**	3.488	7634	0.029
	U	238	**12.010**	**ug/L**	2.254	136601	0.583

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		141.6			
>	Ge	74		106.8			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		108.8			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, January 13, 2010 22:37:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 6.024

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**56.829**	**ug/L**	1.873	48166	0.031
⌊>	Sc	45		**ug/L**		1560264	1560264.145
⌈>	Ge	74		**ug/L**		323821	323820.851
|	As	75	**46.388**	**ug/L**	2.707	40158	0.121
|	Se	77		**ug/L**		8477	0.005
|	Se	82	**51.039**	**ug/L**	3.875	3617	0.011
⌊	Kr	83		**ug/L**		131	0.000
⌈>	Lu	175		**ug/L**		211394	211393.508
|	Tl	205	**48.718**	**ug/L**	0.940	299567	1.414
⌊	U	238	**53.835**	**ug/L**	1.870	553404	2.614

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	113.659				
⌊>	Sc	45		125.4			
⌈>	Ge	74		104.1			
|	As	75	92.775				
|	Se	77					
|	Se	82	102.078				
⌊	Kr	83					
⌈>	Lu	175		99.0			
|	Tl	205	97.435				
⌊	U	238	107.670				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, January 13, 2010 22:41:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 7.025

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**-0.003**	**ug/L**	352.396	133	-0.000
>	Sc	45		**ug/L**		1586082	1586082.366
>	Ge	74		**ug/L**		334249	334249.273
	As	75	**-0.565**	**ug/L**	50.820	473	-0.001
	Se	77		**ug/L**		6641	-0.001
	Se	82	**-0.017**	**ug/L**	954.753	-23	-0.000
	Kr	83		**ug/L**		119	-0.000
>	Lu	175		**ug/L**		218570	218569.540
	Tl	205	**0.024**	**ug/L**	1.700	907	0.001
	U	238	**-0.044**	**ug/L**	11.214	537	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		127.5			
>	Ge	74		107.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		102.3			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC Sc		45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492002
Sample Date/Time: Wednesday, January 13, 2010 22:45:58
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492002.026

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**42.420**	**ug/L**	1.454	40128	0.023
>	Sc	45		**ug/L**		1739594	1739593.524
>	Ge	74		**ug/L**		334820	334820.230
	As	75	**4.459**	**ug/L**	4.907	4868	0.012
	Se	77		**ug/L**		4260	-0.008
	Se	82	**0.706**	**ug/L**	30.317	30	0.000
	Kr	83		**ug/L**		236	0.000
>	Lu	175		**ug/L**		237209	237209.296
	Tl	205	**0.354**	**ug/L**	4.681	3256	0.010
	U	238	**3.562**	**ug/L**	3.255	42086	0.173

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		139.8			
>	Ge	74		107.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		111.0			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492003
Sample Date/Time: Wednesday, January 13, 2010 22:50:03
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492003.027

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**70.603**	**ug/L**	1.008	66318	0.038
⌊>	Sc	45		**ug/L**		1729946	1729945.846
⌈>	Ge	74		**ug/L**		326676	326676.113
|	As	75	**8.594**	**ug/L**	4.336	8278	0.022
|	Se	77		**ug/L**		4076	-0.008
|	Se	82	**-0.960**	**ug/L**	20.791	-90	-0.000
⌊	Kr	83		**ug/L**		256	0.000
⌈>	Lu	175		**ug/L**		227400	227400.267
|	Tl	205	**0.794**	**ug/L**	1.683	6024	0.023
⌊	U	238	**3.802**	**ug/L**	1.801	43018	0.185

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		139.0			
>	Ge	74		105.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		106.4			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492004
Sample Date/Time: Wednesday, January 13, 2010 22:54:08
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492004.028

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**74.454**	**ug/L**	2.570	71255	0.040
⌊>	Sc	45		**ug/L**		1762700	1762699.699
⌈>	Ge	74		**ug/L**		326215	326215.179
|	As	75	**9.009**	**ug/L**	2.797	8617	0.024
|	Se	77		**ug/L**		3903	-0.009
|	Se	82	**-0.812**	**ug/L**	44.323	-79	-0.000
⌊	Kr	83		**ug/L**		272	0.000
⌈>	Lu	175		**ug/L**		230114	230114.194
|	Tl	205	**0.799**	**ug/L**	1.218	6135	0.023
⌊	U	238	**7.789**	**ug/L**	3.917	88044	0.378

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		141.7			
>	Ge	74		104.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		107.7			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492005
Sample Date/Time: Wednesday, January 13, 2010 22:58:13
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492005.029

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.012**	**ug/L**	1.539	48483	0.028
>	Sc	45		**ug/L**		1715316	1715315.908
>	Ge	74		**ug/L**		331150	331149.894
	As	75	**8.541**	**ug/L**	1.616	8343	0.022
	Se	77		**ug/L**		4179	-0.008
	Se	82	**0.283**	**ug/L**	159.960	-1	0.000
	Kr	83		**ug/L**		228	0.000
>	Lu	175		**ug/L**		233240	233239.755
	Tl	205	**0.541**	**ug/L**	0.635	4471	0.016
	U	238	**3.595**	**ug/L**	0.405	41783	0.175

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		137.9			
>	Ge	74		106.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		109.2			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492006
Sample Date/Time: Wednesday, January 13, 2010 23:02:18
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rm|
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492006.030

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**35.666**	**ug/L**	0.884	32630	0.019
|>	Sc	45		**ug/L**		1681504	1681503.979
⌈>	Ge	74		**ug/L**		327453	327452.664
|	As	75	**3.816**	**ug/L**	9.558	4210	0.010
|	Se	77		**ug/L**		4008	-0.008
|	Se	82	**1.137**	**ug/L**	15.193	60	0.000
⌊	Kr	83		**ug/L**		217	0.000
⌈>	Lu	175		**ug/L**		236436	236435.579
|	Tl	205	**0.323**	**ug/L**	2.197	3035	0.009
⌊	U	238	**4.617**	**ug/L**	1.099	54088	0.224

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		135.2			
>	Ge	74		105.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		110.7			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 243492007
Sample Date/Time: Wednesday, January 13, 2010 23:06:23
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\243492007.031

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**84.165**	**ug/L**	3.149	79184	0.046
⌊>	Sc	45		**ug/L**		1734309	1734308.957
⌈>	Ge	74		**ug/L**		324318	324318.218
|	As	75	**8.818**	**ug/L**	1.174	8406	0.023
|	Se	77		**ug/L**		3789	-0.009
|	Se	82	**-0.776**	**ug/L**	19.898	-77	-0.000
⌊	Kr	83		**ug/L**		275	0.000
⌈>	Lu	175		**ug/L**		229289	229288.999
|	Tl	205	**0.761**	**ug/L**	0.319	5855	0.022
⌊	U	238	**6.076**	**ug/L**	3.094	68677	0.295

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		139.4			
>	Ge	74		104.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		107.3			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, January 13, 2010 23:14:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 6.033

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**61.350**	**ug/L**	5.999	50740	0.033
>	Sc	45		**ug/L**		1523592	1523591.922
>	Ge	74		**ug/L**		311484	311484.123
	As	75	**47.020**	**ug/L**	1.338	39139	0.123
	Se	77		**ug/L**		8002	0.005
	Se	82	**51.325**	**ug/L**	3.599	3500	0.011
	Kr	83		**ug/L**		126	0.000
>	Lu	175		**ug/L**		207084	207084.416
	Tl	205	**48.479**	**ug/L**	1.529	292020	1.407
	U	238	**53.303**	**ug/L**	2.228	536803	2.588

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	122.699				
>	Sc	45		122.5			
>	Ge	74		100.1			
	As	75	94.041				
	Se	77					
	Se	82	102.650				
	Kr	83					
>	Lu	175		96.9			
	Tl	205	96.957				
	U	238	106.605				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, January 13, 2010 23:18:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 7.034

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**0.013**	**ug/L**	125.113	145	0.000
⌊>	Sc	45		**ug/L**		1568889	1568888.628
⌈>	Ge	74		**ug/L**		322341	322340.982
|	As	75	**-0.468**	**ug/L**	56.145	539	-0.001
|	Se	77		**ug/L**		5958	-0.002
|	Se	82	**0.071**	**ug/L**	280.400	-16	0.000
⌊	Kr	83		**ug/L**		110	-0.000
⌈>	Lu	175		**ug/L**		209245	209244.769
|	Tl	205	**0.019**	**ug/L**	28.032	842	0.001
⌊	U	238	**-0.038**	**ug/L**	5.315	566	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		126.1			
>	Ge	74		103.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		97.9			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004422
Sample Date/Time: Wednesday, January 13, 2010 23:30:35
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\1202004422.037

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**42.117**	**ug/L**	4.341	39625	0.023
⌊>	Sc	45		**ug/L**		1731289	1731288.789
⌈>	Ge	74		**ug/L**		321355	321354.936
|	As	75	**4.933**	**ug/L**	5.903	5068	0.013
|	Se	77		**ug/L**		3705	-0.009
|	Se	82	**0.294**	**ug/L**	150.007	-0	0.000
⌊	Kr	83		**ug/L**		225	0.000
⌈>	Lu	175		**ug/L**		226928	226927.515
|	Tl	205	**0.343**	**ug/L**	1.274	3041	0.010
⌊	U	238	**2.780**	**ug/L**	2.871	31669	0.135

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		139.2			
>	Ge	74		103.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		106.2			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004423
Sample Date/Time: Wednesday, January 13, 2010 23:34:37
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\1202004423.038

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**83.154**	**ug/L**	3.670	77330	0.045
|>	Sc	45		**ug/L**		1713168	1713167.781
⌈>	Ge	74		**ug/L**		317769	317769.020
|	As	75	**45.030**	**ug/L**	1.111	38279	0.118
|	Se	77		**ug/L**		4062	-0.008
|	Se	82	**9.754**	**ug/L**	5.910	661	0.002
⌊	Kr	83		**ug/L**		241	0.000
⌈>	Lu	175		**ug/L**		226977	226977.096
|	Tl	205	**47.368**	**ug/L**	0.960	312808	1.375
⌊	U	238	**30.047**	**ug/L**	1.695	332163	1.459

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		137.7			
>	Ge	74		102.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		106.2			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sarr	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004425
Sample Date/Time: Wednesday, January 13, 2010 23:38:39
Sample Type:
Sample Description: LANL 6020 MSD
Number of Replicates: 3
Batch ID: 936805|2|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\1202004425.039

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**76.414**	**ug/L**	3.730	70035	0.041
>	Sc	45		**ug/L**		1688538	1688538.442
>	Ge	74		**ug/L**		317704	317704.044
	As	75	**40.013**	**ug/L**	0.687	34111	0.104
	Se	77		**ug/L**		4189	-0.008
	Se	82	**8.923**	**ug/L**	3.421	603	0.002
	Kr	83		**ug/L**		214	0.000
>	Lu	175		**ug/L**		224292	224292.476
	Tl	205	**43.465**	**ug/L**	2.194	283682	1.261
	U	238	**27.859**	**ug/L**	2.881	304359	1.353

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		135.7			
>	Ge	74		102.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		105.0			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: 1202004424
Sample Date/Time: Wednesday, January 13, 2010 23:42:41
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 936805|10|rmj
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\1202004424.040

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**9.330**	**ug/L**	5.475	7968	0.005
⌊>	Sc	45		**ug/L**		1551347	1551347.211
⌈>	Ge	74		**ug/L**		310211	310210.808
|	As	75	**0.271**	**ug/L**	113.490	1120	0.001
|	Se	77		**ug/L**		5028	-0.005
|	Se	82	**-0.004**	**ug/L**	7078.913	-20	-0.000
⌊	Kr	83		**ug/L**		131	0.000
⌈>	Lu	175		**ug/L**		209282	209282.407
|	Tl	205	**0.581**	**ug/L**	8.345	4256	0.017
⌊	U	238	**0.455**	**ug/L**	3.262	5577	0.022

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		124.7			
>	Ge	74		99.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		98.0			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for sam	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, January 13, 2010 23:46:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 6.041

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**64.921**	**ug/L**	5.851	52900	0.035
>	Sc	45		**ug/L**		1501387	1501386.856
>	Ge	74		**ug/L**		304339	304338.929
	As	75	**45.871**	**ug/L**	0.843	37334	0.120
	Se	77		**ug/L**		7450	0.004
	Se	82	**51.487**	**ug/L**	3.481	3428	0.011
	Kr	83		**ug/L**		115	0.000
>	Lu	175		**ug/L**		200410	200410.067
	Tl	205	**48.623**	**ug/L**	1.088	283471	1.411
	U	238	**52.903**	**ug/L**	2.436	515636	2.569

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	129.841				
>	Sc	45		120.7			
>	Ge	74		97.8			
	As	75	91.741				
	Se	77					
	Se	82	102.973				
	Kr	83					
>	Lu	175		93.8			
	Tl	205	97.247				
	U	238	105.805				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#6 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, January 13, 2010 23:50:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\936805.mth
Dataset File: C:\elandata\Dataset\100113\QC Std 7.042

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**0.010**	**ug/L**	46.713	140	0.000
⌊>	Sc	45		**ug/L**		1534583	1534582.543
⌈>	Ge	74		**ug/L**		311057	311056.993
|	As	75	**-0.384**	**ug/L**	84.094	587	-0.001
|	Se	77		**ug/L**		5528	-0.003
|	Se	82	**-0.131**	**ug/L**	32.782	-29	-0.000
⌊	Kr	83		**ug/L**		111	-0.000
⌈>	Lu	175		**ug/L**		204010	204009.854
|	Tl	205	**0.128**	**ug/L**	3.132	1465	0.004
⌊	U	238	**-0.035**	**ug/L**	16.701	585	-0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
>	Sc	45		123.3			
>	Ge	74		100.0			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		95.5			
	Tl	205					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC Sc		45	

QC Action

QC Action Line: Continue

==========

Analysis Begun

Logged In Analyst: Administrator **Technique: AA FIMS-MHS**
Spectrometer Model: FIMS-100, S/N B050-9550 **Autosampler Model: S10**

Sample Information File: C:\data-AA\Administrator\Sample Information\010710S1.SIF
Batch ID:
Results Data Set: 010710S1
Results Library: C:\data-AA\Administrator\Results\Results.mdb

==========

Method Loaded
Method Name: SOIL **Method Last Saved: 1/4/2010 13:53:20**
Method Description: 7471A, ILM04 ANALYST JXL

==========

Sequence No.: 1 **Autosampler Location: 1**
Sample ID: Calib Blank **Date Collected: 1/7/2010 09:24:46**
Analyst: **Data Type: Original**

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0003	0.0001	09:25:39	Yes
2		[0.00]	0.0001	-0.0003	0.0001	09:26:09	Yes
Mean:		[0.00]	0.0001				
SD:		0.00	0.0000				
%RSD:		0.00	15.84				

Auto-zero performed.

==========

Sequence No.: 2 **Autosampler Location: 2**
Sample ID: S0.2 **Date Collected: 1/7/2010 09:26:27**
Analyst: **Data Type: Original**

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0022	0.0088	0.0023	09:27:18	Yes
2		[0.2]	0.0022	0.0092	0.0023	09:27:47	Yes
Mean:		[0.2]	0.0022				
SD:		0.0	0.0000				
%RSD:		0.0	0.62				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01118 Intercept: 0.00000

==========

Sequence No.: 3 **Autosampler Location: 3**
Sample ID: S0.5 **Date Collected: 1/7/2010 09:28:06**
Analyst: **Data Type: Original**

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0055	0.0224	0.0056	09:28:58	Yes
2		[0.5]	0.0055	0.0225	0.0056	09:29:27	Yes
Mean:		[0.5]	0.0055				
SD:		0.0	0.0000				
%RSD:		0.0	0.17				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999961 Slope: 0.01096 Intercept: 0.00002

==========

Sequence No.: 4 **Autosampler Location: 4**
Sample ID: S2.0 **Date Collected: 1/7/2010 09:29:47**
Analyst: **Data Type: Original**

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0224	0.0923	0.0225	09:30:39	Yes
2		[2.0]	0.0223	0.0914	0.0224	09:31:08	Yes
Mean:		[2.0]	0.0224				
SD:		0.0	0.0001				
%RSD:		0.0	0.33				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999985 Slope: 0.01120 Intercept: -0.00003

Sequence No.: 5 **Autosampler Location: 5**
Sample ID: S5.0 **Date Collected: 1/7/2010 09:31:28**
Analyst: **Data Type: Original**

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0550	0.2263	0.0551	09:32:20	Yes
2		[5.0]	0.0545	0.2240	0.0546	09:32:50	Yes
Mean:		[5.0]	0.0548				
SD:		0.0	0.0003				
%RSD:		0.0	0.61				

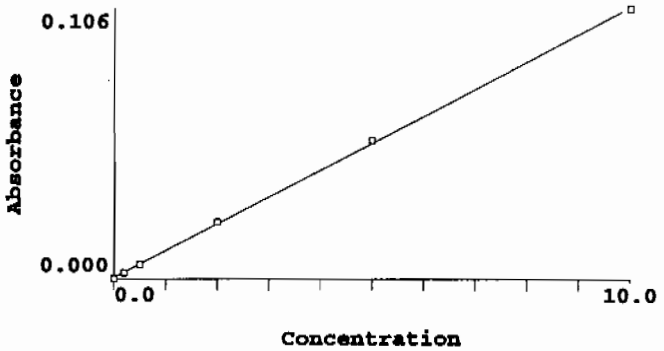
Standard number 4 applied. [5.0]
Correlation Coef.: 0.999958 Slope: 0.01096 Intercept: 0.00009

Sequence No.: 6 **Autosampler Location: 6**
Sample ID: S10.0 **Date Collected: 1/7/2010 09:33:10**
Analyst: **Data Type: Original**

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.1063	0.4385	0.1064	09:34:00	Yes
2		[10.0]	0.1057	0.4366	0.1058	09:34:30	Yes
Mean:		[10.0]	0.1060				
SD:		0.0	0.0004				
%RSD:		0.0	0.39				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999841 Slope: 0.01062 Intercept: 0.00048



Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.045	0.00	15.8
S0.2	0.0022	0.2	0.166	0.00	0.6
S0.5	0.0055	0.5	0.471	0.00	0.2
S2.0	0.0224	2.0	2.063	0.00	0.3

S5.0	0.0548	5.0	5.110	0.00	0.6
S10.0	0.1060	10.0	9.934	0.00	0.4

Correlation Coef.: 0.999841 Slope: 0.01062 Intercept: 0.00048

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 1/7/2010 09:34:48**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.143	5.143	0.0551	0.2257	0.0552	09:35:40	Yes
2	5.137	5.137	0.0550	0.2251	0.0551	09:36:10	Yes
Mean:	5.140	5.140	0.0551				
SD:	0.004	0.004	0.0000				
%RSD:	0.085	0.085	0.08				

QC value within limits for Hg 253.7 Recovery = 102.80%
All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 1/7/2010 09:36:29**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.036	-0.036	0.0001	-0.0001	0.0002	09:37:21	Yes
2	-0.039	-0.039	0.0001	-0.0001	0.0001	09:37:51	Yes
Mean:	-0.037	-0.037	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	6.413	6.413	31.72				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 1/7/2010 09:38:10**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.180	0.180	0.0024	0.0095	0.0025	09:39:02	Yes
2	0.172	0.172	0.0023	0.0088	0.0024	09:39:32	Yes
Mean:	0.176	0.176	0.0023				
SD:	0.006	0.006	0.0001				
%RSD:	3.224	3.224	2.57				

QC value within limits for Hg 253.7 Recovery = 87.83%
All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/7/2010 09:39:52**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.122	5.122	0.0549	0.2244	0.0550	09:40:42	Yes
2	5.061	5.061	0.0542	0.2214	0.0543	09:41:12	Yes
Mean:	5.091	5.091	0.0546				
SD:	0.043	0.043	0.0005				
%RSD:	0.849	0.849	0.84				

QC value within limits for Hg 253.7 Recovery = 101.83%
All analyte(s) passed QC.

Sequence No.: 11 Autosampler Location: 8
Sample ID: CCB Date Collected: 1/7/2010 09:41:31
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.032	-0.032	0.0001	0.0004	0.0002	09:42:22	Yes
2	-0.031	-0.031	0.0001	-0.0001	0.0002	09:42:52	Yes
Mean:	-0.031	-0.031	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	1.693	1.693	3.99				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12 Autosampler Location: 12
Sample ID: 1202000277|934922|1 Date Collected: 1/7/2010 09:43:11
Analyst: JXL Data Type: Original

Replicate Data: 1202000277|934922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.033	-0.033	0.0001	0.0001	0.0002	09:44:02	Yes
2	-0.029	-0.029	0.0002	0.0004	0.0003	09:44:32	Yes
Mean:	-0.031	-0.031	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	9.715	9.715	21.20				

Sequence No.: 13 Autosampler Location: 13
Sample ID: 1202000278|934922|1 Date Collected: 1/7/2010 09:44:52
Analyst: JXL Data Type: Original

Replicate Data: 1202000278|934922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.101	2.101	0.0228	0.0931	0.0229	09:45:44	Yes
2	2.096	2.096	0.0227	0.0935	0.0228	09:46:14	Yes
Mean:	2.098	2.098	0.0228				
SD:	0.004	0.004	0.0000				
%RSD:	0.177	0.177	0.17				

Sequence No.: 14 Autosampler Location: 14
Sample ID: 243264001|934922|1 Date Collected: 1/7/2010 09:46:34
Analyst: JXL Data Type: Original

Replicate Data: 243264001|934922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.302	0.302	0.0037	0.0151	0.0038	09:47:25	Yes
2	0.303	0.303	0.0037	0.0149	0.0038	09:47:55	Yes
Mean:	0.303	0.303	0.0037				
SD:	0.001	0.001	0.0000				
%RSD:	0.403	0.403	0.35				

Sequence No.: 15 Autosampler Location: 15
Sample ID: 1202000279|934922|1 Date Collected: 1/7/2010 09:48:14
Analyst: JXL Data Type: Original

Replicate Data: 1202000279|934922|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Replicate Data: 243264003|934922|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.371	0.371	0.0044	0.0177	0.0045	09:57:22	Yes
2	0.371	0.371	0.0044	0.0176	0.0045	09:57:51	Yes
Mean:	0.371	0.371	0.0044				
SD:	0.000	0.000	0.0000				
%RSD:	0.107	0.107	0.10				

Sequence No.: 21 **Autosampler Location: 21**
Sample ID: 1202009335|938979|1 **Date Collected: 1/7/2010 09:58:11**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202009335|938979|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.043	-0.043	0.0000	-0.0002	0.0001	09:59:02	Yes
2	-0.046	-0.046	-0.0000	-0.0004	0.0001	09:59:32	Yes
Mean:	-0.045	-0.045	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	5.341	5.341	>999.9%				

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/7/2010 09:59:52**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.245	5.245	0.0562	0.2278	0.0563	10:00:42	Yes
2	5.234	5.234	0.0561	0.2271	0.0562	10:01:12	Yes
Mean:	5.240	5.240	0.0561				
SD:	0.008	0.008	0.0001				
%RSD:	0.156	0.156	0.15				

QC value within limits for Hg 253.7 Recovery = 104.79%
All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/7/2010 10:01:31**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.037	-0.037	0.0001	0.0001	0.0002	10:02:22	Yes
2	-0.042	-0.042	0.0000	-0.0002	0.0001	10:02:52	Yes
Mean:	-0.039	-0.039	0.0001				
SD:	0.003	0.003	0.0000				
%RSD:	8.723	8.723	64.62				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24 **Autosampler Location: 22**
Sample ID: 1202009336|938979|10 **Date Collected: 1/7/2010 10:03:11**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202009336|938979|10

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.000	4.000	0.0430	0.1741	0.0430	10:04:02	Yes
2	3.995	3.995	0.0429	0.1741	0.0430	10:04:32	Yes

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000	0.000	0.0005	0.0017	0.0006	10:12:27	Yes
2	-0.003	-0.003	0.0004	0.0016	0.0005	10:12:57	Yes
Mean:	-0.001	-0.001	0.0005				
SD:	0.002	0.002	0.0000				
%RSD:	144.7	144.7	4.96				

Sequence No.: 30 **Autosampler Location: 28**
Sample ID: 243611002|938979|1 **Date Collected: 1/7/2010 10:13:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 243611002|938979|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.341	0.341	0.0041	0.0164	0.0042	10:14:07	Yes
2	0.336	0.336	0.0040	0.0163	0.0041	10:14:37	Yes
Mean:	0.339	0.339	0.0041				
SD:	0.003	0.003	0.0000				
%RSD:	0.871	0.871	0.77				

Sequence No.: 31 **Autosampler Location: 29**
Sample ID: 243611003|938979|1 **Date Collected: 1/7/2010 10:14:56**
Analyst: JXL **Data Type: Original**

Replicate Data: 243611003|938979|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.437	0.437	0.0051	0.0205	0.0052	10:15:47	Yes
2	0.434	0.434	0.0051	0.0202	0.0052	10:16:17	Yes
Mean:	0.436	0.436	0.0051				
SD:	0.002	0.002	0.0000				
%RSD:	0.475	0.475	0.43				

Sequence No.: 32 **Autosampler Location: 30**
Sample ID: 1202006441|937635|1 **Date Collected: 1/7/2010 10:16:36**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202006441|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.042	-0.042	0.0000	0.0001	0.0001	10:17:27	Yes
2	-0.042	-0.042	0.0000	0.0001	0.0001	10:17:57	Yes
Mean:	-0.042	-0.042	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.460	0.460	8.03				

Sequence No.: 33 **Autosampler Location: 31**
Sample ID: 1202006446|937635|10 **Date Collected: 1/7/2010 10:18:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202006446|937635|10

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	3.736	3.736	0.0402	0.1631	0.0402	10:19:06	Yes
2	3.730	3.730	0.0401	0.1616	0.0402	10:19:36	Yes
Mean:	3.733	3.733	0.0401				
SD:	0.004	0.004	0.0000				
%RSD:	0.114	0.114	0.11				

Sequence No.: 34 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/7/2010 10:19:56**

Analyst: Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.367	5.367	0.0575	0.2323	0.0576	10:20:46	Yes
2	5.345	5.345	0.0573	0.2315	0.0573	10:21:16	Yes
Mean:	5.356	5.356	0.0574				
SD:	0.016	0.016	0.0002				
%RSD:	0.290	0.290	0.29				

QC value within limits for Hg 253.7 Recovery = 107.11%
All analyte(s) passed QC.

Sequence No.: 35 Autosampler Location: 8
Sample ID: CCB Date Collected: 1/7/2010 10:21:35
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.034	-0.034	0.0001	0.0009	0.0002	10:22:26	Yes
2	-0.037	-0.037	0.0001	0.0007	0.0002	10:22:56	Yes
Mean:	-0.035	-0.035	0.0001				
SD:	0.002	0.002	0.0000				
%RSD:	5.901	5.901	21.77				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 36 Autosampler Location: 32
Sample ID: 243492001|937635|1 Date Collected: 1/7/2010 10:23:15
Analyst: JXL Data Type: Original

Replicate Data: 243492001|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.209	0.209	0.0027	0.0115	0.0028	10:24:05	Yes
2	0.209	0.209	0.0027	0.0111	0.0028	10:24:36	Yes
Mean:	0.209	0.209	0.0027				
SD:	0.000	0.000	0.0000				
%RSD:	0.013	0.013	0.01				

Sequence No.: 37 Autosampler Location: 33
Sample ID: 1202006442|937635|1 Date Collected: 1/7/2010 10:24:55
Analyst: JXL Data Type: Original

Replicate Data: 1202006442|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.268	0.268	0.0033	0.0136	0.0034	10:25:46	Yes
2	0.262	0.262	0.0033	0.0137	0.0033	10:26:16	Yes
Mean:	0.265	0.265	0.0033				
SD:	0.004	0.004	0.0000				
%RSD:	1.596	1.596	1.37				

Sequence No.: 38 Autosampler Location: 34
Sample ID: 1202006444|937635|1 Date Collected: 1/7/2010 10:26:35
Analyst: JXL Data Type: Original

Replicate Data: 1202006444|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.432	2.432	0.0263	0.1070	0.0264	10:27:26	Yes

2	2.424	2.424	0.0262	0.1054	0.0263	10:27:56	Yes
Mean:	2.428	2.428	0.0263				
SD:	0.006	0.006	0.0001				
%RSD:	0.239	0.239	0.23				

Sequence No.: 39 **Autosampler Location: 35**
Sample ID: 1202006445|937635|1 **Date Collected: 1/7/2010 10:28:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202006445|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.464	2.464	0.0266	0.1071	0.0267	10:29:07	Yes
2	2.458	2.458	0.0266	0.1076	0.0267	10:29:37	Yes
Mean:	2.461	2.461	0.0266				
SD:	0.004	0.004	0.0000				
%RSD:	0.161	0.161	0.16				

Sequence No.: 40 **Autosampler Location: 36**
Sample ID: 1202006443|937635|5 **Date Collected: 1/7/2010 10:29:57**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202006443|937635|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.010	0.010	0.0006	0.0027	0.0007	10:30:49	Yes
2	0.008	0.008	0.0006	0.0027	0.0006	10:31:19	Yes
Mean:	0.009	0.009	0.0006				
SD:	0.002	0.002	0.0000				
%RSD:	18.75	18.75	3.21				

Sequence No.: 41 **Autosampler Location: 37**
Sample ID: 243492002|937635|1 **Date Collected: 1/7/2010 10:31:39**
Analyst: JXL **Data Type: Original**

Replicate Data: 243492002|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.128	0.128	0.0018	0.0077	0.0019	10:32:31	Yes
2	0.127	0.127	0.0018	0.0074	0.0019	10:33:01	Yes
Mean:	0.128	0.128	0.0018				
SD:	0.001	0.001	0.0000				
%RSD:	0.401	0.401	0.30				

Sequence No.: 42 **Autosampler Location: 38**
Sample ID: 243492003|937635|1 **Date Collected: 1/7/2010 10:33:21**
Analyst: JXL **Data Type: Original**

Replicate Data: 243492003|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.224	0.224	0.0029	0.0122	0.0029	10:34:12	Yes
2	0.223	0.223	0.0028	0.0117	0.0029	10:34:42	Yes
Mean:	0.224	0.224	0.0029				
SD:	0.000	0.000	0.0000				
%RSD:	0.203	0.203	0.17				

Sequence No.: 43 **Autosampler Location: 39**
Sample ID: 243492004|937635|1 **Date Collected: 1/7/2010 10:35:02**
Analyst: JXL **Data Type: Original**

Replicate Data: 243492004|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.219	0.219	0.0028	0.0114	0.0029	10:35:53	Yes
2	0.218	0.218	0.0028	0.0115	0.0029	10:36:23	Yes
Mean:	0.219	0.219	0.0028				
SD:	0.001	0.001	0.0000				
%RSD:	0.366	0.366	0.30				

Sequence No.: 44 **Autosampler Location: 40**
Sample ID: 243492005|937635|1 **Date Collected: 1/7/2010 10:36:42**
Analyst: JXL **Data Type: Original**

Replicate Data: 243492005|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.219	0.219	0.0028	0.0116	0.0029	10:37:34	Yes
2	0.223	0.223	0.0028	0.0117	0.0029	10:38:03	Yes
Mean:	0.221	0.221	0.0028				
SD:	0.003	0.003	0.0000				
%RSD:	1.309	1.309	1.09				

Sequence No.: 45 **Autosampler Location: 41**
Sample ID: 243492006|937635|1 **Date Collected: 1/7/2010 10:38:23**
Analyst: JXL **Data Type: Original**

Replicate Data: 243492006|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.135	0.135	0.0019	0.0077	0.0020	10:39:14	Yes
2	0.133	0.133	0.0019	0.0075	0.0020	10:39:44	Yes
Mean:	0.134	0.134	0.0019				
SD:	0.001	0.001	0.0000				
%RSD:	0.805	0.805	0.60				

Sequence No.: 46 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/7/2010 10:40:03**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.139	5.139	0.0551	0.2226	0.0552	10:40:54	Yes
2	5.126	5.126	0.0549	0.2220	0.0550	10:41:24	Yes
Mean:	5.132	5.132	0.0550				
SD:	0.009	0.009	0.0001				
%RSD:	0.184	0.184	0.18				

QC value within limits for Hg 253.7 Recovery = 102.65%
All analyte(s) passed QC.

Sequence No.: 47 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/7/2010 10:41:43**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.044	-0.044	0.0000	-0.0005	0.0001	10:42:33	Yes
2	-0.039	-0.039	0.0001	0.0003	0.0001	10:43:03	Yes
Mean:	-0.042	-0.042	0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	9.099	9.099	120.64				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 48 Autosampler Location: 42
Sample ID: 243492007|937635|1 Date Collected: 1/7/2010 10:43:23
Analyst: JXL Data Type: Original

Replicate Data: 243492007|937635|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.226	0.226	0.0029	0.0116	0.0030	10:44:14	Yes
2	0.224	0.224	0.0029	0.0118	0.0029	10:44:44	Yes
Mean:	0.225	0.225	0.0029				
SD:	0.001	0.001	0.0000				
%RSD:	0.622	0.622	0.52				

Sequence No.: 49 Autosampler Location: 43
Sample ID: 1202006392|937619|1 Date Collected: 1/7/2010 10:45:03
Analyst: JXL Data Type: Original

Replicate Data: 1202006392|937619|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.037	-0.037	0.0001	0.0005	0.0002	10:45:54	Yes
2	-0.039	-0.039	0.0001	0.0000	0.0001	10:46:24	Yes
Mean:	-0.038	-0.038	0.0001				
SD:	0.001	0.001	0.0000				
%RSD:	3.326	3.326	18.26				

Sequence No.: 50 Autosampler Location: 44
Sample ID: 1202006397|937619|10 Date Collected: 1/7/2010 10:46:44
Analyst: JXL Data Type: Original

Replicate Data: 1202006397|937619|10

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.315	4.315	0.0463	0.1877	0.0464	10:47:35	Yes
2	4.305	4.305	0.0462	0.1876	0.0463	10:48:05	Yes
Mean:	4.310	4.310	0.0463				
SD:	0.007	0.007	0.0001				
%RSD:	0.174	0.174	0.17				

Sequence No.: 51 Autosampler Location: 45
Sample ID: 243542001|937619|1 Date Collected: 1/7/2010 10:48:24
Analyst: JXL Data Type: Original

Replicate Data: 243542001|937619|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.578	0.578	0.0066	0.0269	0.0067	10:49:15	Yes
2	0.578	0.578	0.0066	0.0266	0.0067	10:49:45	Yes
Mean:	0.578	0.578	0.0066				
SD:	0.000	0.000	0.0000				
%RSD:	0.048	0.048	0.04				

Sequence No.: 52 Autosampler Location: 46
Sample ID: 1202006393|937619|1 Date Collected: 1/7/2010 10:50:04
Analyst: JXL Data Type: Original

Replicate Data: 1202006393|937619|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

Replicate Data: 243542003|937619|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.645	0.645	0.0073	0.0295	0.0074	10:59:22	Yes
2	0.651	0.651	0.0074	0.0300	0.0075	10:59:52	Yes
Mean:	0.648	0.648	0.0074				
SD:	0.004	0.004	0.0000				
%RSD:	0.625	0.625	0.58				

Sequence No.: 58 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 1/7/2010 11:00:11**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.195	5.195	0.0557	0.2255	0.0557	11:01:01	Yes
2	5.125	5.125	0.0549	0.2219	0.0550	11:01:31	Yes
Mean:	5.160	5.160	0.0553				
SD:	0.050	0.050	0.0005				
%RSD:	0.963	0.963	0.95				

QC value within limits for Hg 253.7 Recovery = 103.20%
All analyte(s) passed QC.

Sequence No.: 59 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 1/7/2010 11:01:50**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.036	-0.036	0.0001	0.0004	0.0002	11:02:41	Yes
2	-0.028	-0.028	0.0002	0.0006	0.0003	11:03:11	Yes
Mean:	-0.032	-0.032	0.0001				
SD:	0.006	0.006	0.0001				
%RSD:	17.97	17.97	45.43				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 60 **Autosampler Location: 52**
Sample ID: 243542004|937619|1 **Date Collected: 1/7/2010 11:03:30**
Analyst: JXL **Data Type: Original**

Replicate Data: 243542004|937619|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.429	0.429	0.0050	0.0205	0.0051	11:04:21	Yes
2	0.426	0.426	0.0050	0.0206	0.0051	11:04:51	Yes
Mean:	0.427	0.427	0.0050				
SD:	0.002	0.002	0.0000				
%RSD:	0.562	0.562	0.51				

Sequence No.: 61 **Autosampler Location: 53**
Sample ID: 243542005|937619|1 **Date Collected: 1/7/2010 11:05:11**
Analyst: JXL **Data Type: Original**

Replicate Data: 243542005|937619|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.635	0.635	0.0072	0.0295	0.0073	11:06:02	Yes
2	0.641	0.641	0.0073	0.0300	0.0074	11:06:31	Yes
Mean:	0.638	0.638	0.0073				

Miscellaneous

Prep LogBook

Analyst: FGA Verified by:_____
Batch: 936804
Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202004421	UI062540-MS	.501	g
MS	1202004423	UI091015-A	.5	mL
MS	1202004423	UI091015-B	.5	mL
MSD	1202004425	UI091015-A	.5	mL
MSD	1202004425	UI091015-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202004420		SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL
LCS	1202004421		SW846 3050B	29-DEC-2009 13:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	243457001		SW846 3050B	29-DEC-2009 13:00	0.5 g	50 mL	100	SOIL
SAMPLE	243457002		SW846 3050B	29-DEC-2009 13:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	243457003		SW846 3050B	29-DEC-2009 13:00	0.506 g	50 mL	98.81423	SOIL
SAMPLE	243457004		SW846 3050B	29-DEC-2009 13:00	0.51 g	50 mL	98.03922	SOIL
SAMPLE	243472001		SW846 3050B	29-DEC-2009 13:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	243472002		SW846 3050B	29-DEC-2009 13:00	0.513 g	50 mL	97.46589	SOIL
SAMPLE	243472003		SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
SAMPLE	243492001		SW846 3050B	29-DEC-2009 13:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	243492002		SW846 3050B	29-DEC-2009 13:00	0.5 g	50 mL	100	SOIL
SAMPLE	243492003		SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
SAMPLE	243492004		SW846 3050B	29-DEC-2009 13:00	0.5 g	50 mL	100	SOIL
SAMPLE	243492005		SW846 3050B	29-DEC-2009 13:00	0.516 g	50 mL	96.89922	SOIL
SAMPLE	243492006		SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
SAMPLE	243492007		SW846 3050B	29-DEC-2009 13:00	0.509 g	50 mL	98.23183	SOIL
SAMPLE	243547002		SW846 3050B	29-DEC-2009 13:00	0.521 g	50 mL	95.96929	SOIL
SAMPLE	243547003		SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
SAMPLE	243549002		SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL
DUP	1202004422	243549002	SW846 3050B	29-DEC-2009 13:00	0.515 g	50 mL	97.08738	SOIL
MS	1202004423	243549002	SW846 3050B	29-DEC-2009 13:00	0.517 g	50 mL	96.7118	SOIL
MSD	1202004425	243549002	SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
SDILT	1202004424	243549002	SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%
1234886	5 mL	Nitric Acid CONC.

Comments: Clumpy,gray soil.

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 936807

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202004427	UI062540-1	.503	g
MS	1202004429	UI091124-01	.25	mL
MS	1202004429	UI091124-06	.25	mL
MSD	1202004431	UI091124-01	.25	mL
MSD	1202004431	UI091124-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202004426		SW846 3050B	29-DEC-2009 13:00	0.505 g	50 mL	99.0099	SOIL
LCS	1202004427		SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL
SAMPLE	243457001		SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL
SAMPLE	243457002		SW846 3050B	29-DEC-2009 13:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	243457003		SW846 3050B	29-DEC-2009 13:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	243457004		SW846 3050B	29-DEC-2009 13:00	0.505 g	50 mL	99.0099	SOIL
SAMPLE	243472001		SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
SAMPLE	243472002		SW846 3050B	29-DEC-2009 13:00	0.508 g	50 mL	98.4252	SOIL
SAMPLE	243472003		SW846 3050B	29-DEC-2009 13:00	0.511 g	50 mL	97.84736	SOIL
SAMPLE	243492001		SW846 3050B	29-DEC-2009 13:00	0.525 g	50 mL	95.2381	SOIL
SAMPLE	243492002		SW846 3050B	29-DEC-2009 13:00	0.5 g	50 mL	100	SOIL
SAMPLE	243492003		SW846 3050B	29-DEC-2009 13:00	0.521 g	50 mL	95.96929	SOIL
SAMPLE	243492004		SW846 3050B	29-DEC-2009 13:00	0.501 g	50 mL	99.8004	SOIL
SAMPLE	243492005		SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL
SAMPLE	243492006		SW846 3050B	29-DEC-2009 13:00	0.516 g	50 mL	96.89922	SOIL
SAMPLE	243492007		SW846 3050B	29-DEC-2009 13:00	0.503 g	50 mL	99.40358	SOIL
SAMPLE	243547002		SW846 3050B	29-DEC-2009 13:00	0.512 g	50 mL	97.65625	SOIL
SAMPLE	243547003		SW846 3050B	29-DEC-2009 13:00	0.5 g	50 mL	100	SOIL
SAMPLE	243549002		SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL
DUP	1202004428	243549002	SW846 3050B	29-DEC-2009 13:00	0.501 g	50 mL	99.8004	SOIL
MS	1202004429	243549002	SW846 3050B	29-DEC-2009 13:00	0.51 g	50 mL	98.03922	SOIL
MSD	1202004431	243549002	SW846 3050B	29-DEC-2009 13:00	0.509 g	50 mL	98.23183	SOIL
SDILT	1202004430	243549002	SW846 3050B	29-DEC-2009 13:00	0.507 g	50 mL	98.61933	SOIL

Reagent/Solvent Lot ID	Amount	Description
1244970	10 mL	HYDROCHLORIC ACID
1234886	1.25 mL	Nitric Acid CONC.

Comments Clumpy,gray soil.

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 941049

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202014119	UI062540-I	.51	g
MS	1202004429	UI091216-01	.25	mL
MS	1202004429	UI091216-06	.25	mL
MSD	1202004431	UI091216-01	.25	mL
MSD	1202004431	UI091216-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202014118		SW846 3050B	13-JAN-2010 12:45	0.5 g	50 mL	100	SOIL
LCS	1202014119		SW846 3050B	13-JAN-2010 12:45	0.51 g	50 mL	98.03922	SOIL
SAMPLE	243457001		SW846 3050B	13-JAN-2010 12:45	0.505 g	50 mL	99.0099	SOIL
SAMPLE	243457002		SW846 3050B	13-JAN-2010 12:45	0.503 g	50 mL	99.40358	SOIL
SAMPLE	243457003		SW846 3050B	13-JAN-2010 12:45	0.523 g	50 mL	95.60229	SOIL
SAMPLE	243457004		SW846 3050B	13-JAN-2010 12:45	0.504 g	50 mL	99.20635	SOIL
SAMPLE	243472001		SW846 3050B	13-JAN-2010 12:45	0.502 g	50 mL	99.60159	SOIL
SAMPLE	243472002		SW846 3050B	13-JAN-2010 12:45	0.545 g	50 mL	91.74312	SOIL
SAMPLE	243472003		SW846 3050B	13-JAN-2010 12:45	0.516 g	50 mL	96.89922	SOIL
SAMPLE	243492001		SW846 3050B	13-JAN-2010 12:45	0.525 g	50 mL	95.2381	SOIL
SAMPLE	243492002		SW846 3050B	13-JAN-2010 12:45	0.516 g	50 mL	96.89922	SOIL
SAMPLE	243492003		SW846 3050B	13-JAN-2010 12:45	0.542 g	50 mL	92.25092	SOIL
SAMPLE	243492004		SW846 3050B	13-JAN-2010 12:45	0.52 g	50 mL	96.15385	SOIL
SAMPLE	243492005		SW846 3050B	13-JAN-2010 12:45	0.52 g	50 mL	96.15385	SOIL
SAMPLE	243492006		SW846 3050B	13-JAN-2010 12:45	0.546 g	50 mL	91.57509	SOIL
SAMPLE	243492007		SW846 3050B	13-JAN-2010 12:45	0.509 g	50 mL	98.23183	SOIL
SAMPLE	243547002		SW846 3050B	13-JAN-2010 12:45	0.517 g	50 mL	96.7118	SOIL
SAMPLE	243547003		SW846 3050B	13-JAN-2010 12:45	0.53 g	50 mL	94.33962	SOIL
SAMPLE	243549002		SW846 3050B	13-JAN-2010 12:45	0.534 g	50 mL	93.63296	SOIL
DUP	1202004428	243549002	SW846 3050B	13-JAN-2010 12:45	0.5 g	50 mL	100	SOIL
MS	1202004429	243549002	SW846 3050B	13-JAN-2010 12:45	0.505 g	50 mL	99.0099	SOIL
MSD	1202004431	243549002	SW846 3050B	13-JAN-2010 12:45	0.513 g	50 mL	97.46589	SOIL
SDILT	1202004430	243549002	SW846 3050B	13-JAN-2010 12:45	0.534 g	50 mL	93.63296	SOIL

Reagent/Solvent Lot ID	Amount	Description
1252838	10 mL	HYDROCHLORIC ACID
1252836	1.25 mL	Nitric Acid CONC.

Comments: Brown,medium soil.

Prep LogBook

Analyst: TXB3 Verified by:_____

Batch: 937634

Lab SOP: GL-MA-E-010 REV# 23

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202006446	UI031809A	.201	g
MS	1202006444	WHG100106-14	.3	mL
MSD	1202006445	WHG100106-14	.3	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202006441		SW846 7471A Prep	06-JAN-2010 11:05	0.551 g	30 mL	54.44646	SOIL
LCS	1202006446		SW846 7471A Prep	06-JAN-2010 11:05	0.201 g	30 mL	149.25373	SOIL
SAMPLE	243492001		SW846 7471A Prep	06-JAN-2010 11:05	0.509 g	30 mL	58.9391	SOIL
DUP	1202006442	243492001	SW846 7471A Prep	06-JAN-2010 11:05	0.591 g	30 mL	50.76142	SOIL
SDILT	1202006443	243492001	SW846 7471A Prep	06-JAN-2010 11:05	0.544 g	30 mL	55.14706	SOIL
MS	1202006444	243492001	SW846 7471A Prep	06-JAN-2010 11:05	0.564 g	30 mL	53.19149	SOIL
MSD	1202006445	243492001	SW846 7471A Prep	06-JAN-2010 11:05	0.509 g	30 mL	58.9391	SOIL
SAMPLE	243492002		SW846 7471A Prep	06-JAN-2010 11:05	0.535 g	30 mL	56.07477	SOIL
SAMPLE	243492003		SW846 7471A Prep	06-JAN-2010 11:05	0.541 g	30 mL	55.45287	SOIL
SAMPLE	243492004		SW846 7471A Prep	06-JAN-2010 11:05	0.533 g	30 mL	56.28518	SOIL
SAMPLE	243492005		SW846 7471A Prep	06-JAN-2010 11:05	0.517 g	30 mL	58.02708	SOIL
SAMPLE	243492006		SW846 7471A Prep	06-JAN-2010 11:05	0.58 g	30 mL	51.72414	SOIL
SAMPLE	243492007		SW846 7471A Prep	06-JAN-2010 11:05	0.561 g	30 mL	53.47594	SOIL

Reagent/Solvent Lot ID	Amount	Description
1236355-A	1.125 mL	Hydrochloric Acid Conc.
1240182-1	.375 mL	NITRIC ACID
1244904-C	7.5 mL	5% KMnO4 solution
1206350-C	2 mL	Hg reducing agent
WHG100106-07	30 uL	Mercury Working Standard 1st Source CAL S 0.2/CRA
WHG100106-08	75 uL	Mercury Working Standard 1st Source CAL S 0.5
WHG100106-11	1.5 mL	Mercury Working 1st Source CAL S 10.0
WHG100106-09	300 uL	Mercury Working 1st Source CAL S 2.0
WHG100106-10	750 uL	Mercury Working 1st Source CAL S 5.0/CCV
WHG100106-12	750 uL	Mercury Working 2nd Source S 5.0/ICV

Comments: Sample 243492001 is a dry brown rocky soil.
Digestion Start Date: 06-JAN-10 11:05
Digestion End Date: 06-JAN-10 11:35

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
12-JAN-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
936808	See Below		

Potentially affected work order(s)(SDG): 243457(10-1038),243472(10-1057),243492(10-1037),243547(10-1084),243549(10-1085)

Application Issues:

Failed Recovery for MS/PS

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202004429MS 2. Failed RPD for DUP: QC 1202004428DUP 3. Failed Recovery for MSD/PSD: QC 1202004431MSD	1. The matrix spike recovery failed outside of the control limits for calcium,magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 2. The sample and sample duplicate % RPD failed outside the control limits for cobalt,titanium and vanadium due to possible sample non-homogeneity and/or matrix interference. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported. 3. The matrix spike duplicate recovery failed outside of the control limits for magnesium and potassium due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Camello 13-JAN-10

Data Validator/Group Leader:

Bryan Davis 14-JAN-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
15-JAN-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP	SW846 3050B/6010B	Solid	LANL
Batch ID:	**Sample Numbers:**		
941050	See Below		

Potentially affected work order(s)(SDG): 243457(10-1038),243472(10-1057),243492(10-1037),243547(10-1084),243549(10-1085)

Application Issues:

Failed Recovery for MS/PS

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202004429MS 2. Failed Recovery for MSD/PSD: QC 1202004431MSD	1./2. The matrix spike and matrix spike duplicate recovery failed outside of the control limits for silicon due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Helen Carnello 15-JAN-10

Data Validator/Group Leader:

Eric Lawson 18-JAN-10

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
16-JAN-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3050B/6020	Solid	LANL
Batch ID:	**Sample Numbers:**		
936805	See Below		

Potentially affected work order(s)(SDG): 243457(10-1038),243472(10-1057),243492(10-1037),243547(10-1084),243549(10-1085)

Application Issues:

Failed RPD for DUP

Failed Recovery for MSD/PSD

Specification and Requirements Exception Description:	DER Disposition:
1. Failed RPD for DUP: QC 1202004422DUP 2. Failed Recovery for MSD/PSD: QC 1202004425MSD	The matrix spike duplicate failed outside of the control limits for Se due to possible matrix interferences and/or sample non-homogeneity. Per GEL's accredited methods and SOP's, a corrective action is not required and the data is qualified and reported. The sample and sample duplicate %RPD failed outside the control limits for Be and Ni due to possible sample homogeneity and/or matrix interference. Per GEL's accredited methods and SOP's, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Rose Jenkins 16-JAN-10

Data Validator/Group Leader:

Samantha Jacobs 18-JAN-10

Standard Logbook

Serial ID: UHG1167639-01 **Opened:** 13-AUG-09 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 13-AUG-09 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 15-37HG
Employee: Bryan Davis **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UHG1167641-02 **Opened:** 13-AUG-09 **Amount :** 100 mL
Name: MHGSTOCK2 **Received:** 13-AUG-09 **Catalog Number :** AHG1KN-100
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 4905530
Employee: Bryan Davis **Solvent :** 3% HNO3
Supplier: Ricca Chemical Company
Description: Mercury Source Standard #2 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	999.7 mg/L		

Serial ID: UI031809A **Opened:** 18-MAR-09 **Catalog Number :** 540
Name: METALSOILSRM **Received:** 18-MAR-09 **Lot Number :** D061-540
Type: Source Material **Expires:** 10-OCT-10
Employee: Jamie Johnson
Supplier: ERA
Description: Metals LCS Soil SRM
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10600 mg/kg	Antimony	126 mg/kg
Arsenic	225 mg/kg	Barium	565 mg/kg
Beryllium	162 mg/kg	Boron	107 mg/kg
Cadmium	69.1 mg/kg	Calcium	10000 mg/kg
Chromium	124 mg/kg	Cobalt	115 mg/kg
Copper	66.7 mg/kg	Iron	17600 mg/kg
Lead	223 mg/kg	Magnesium	4260 mg/kg
Manganese	368 mg/kg	Mercury	5.15 mg/kg
Molybdenum	107 mg/kg	Nickel	172 mg/kg
Potassium	4090 mg/kg	Selenium	147 mg/kg
Silver	35.2 mg/kg	Sodium	538 mg/kg
Strontium	117 mg/kg	Thallium	173 mg/kg
Tin	164 mg/kg	Titanium	381 mg/kg
Vanadium	93.9 mg/kg	Zinc	349 mg/kg

Standard Logbook

Serial ID: UI062540-I **Opened:** 12-JUN-09 **Amount :** 80 g
Name: ICP SOIL SRM **Received:** 12-JUN-09 **Lot Number :** D062-540
Type: Source Material **Expires:** 31-JAN-12
Employee: Bryan Davis
Supplier: ERA
Description: Metals Soil LCS SRM ICP/Hg
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	173 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.7 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Magnesium	4000 mg/kg
Manganese	558 mg/kg	Mercury	8.46 mg/kg
Molybdenum	48.6 mg/kg	Nickel	134 mg/kg
Phosphorous	736 mg/kg	Potassium	4300 mg/kg
Selenium	286 mg/kg	Silica	2591 mg/kg
Silicon	1211 mg/kg	Silver	30.1 mg/kg
Sodium	1020 mg/kg	Strontium	227 mg/kg
Sulfur	385 mg/kg	Thallium	121 mg/kg
Tin	104 mg/kg	Titanium	462 mg/kg
Vanadium	115 mg/kg	Zinc	594 mg/kg

Serial ID: UI062540-MS **Opened:** 12-JUN-09 **Lot Number :** D062-540
Name: ICPMS SOIL SRM **Received:** 12-JUN-09
Type: Source Material **Expires:** 31-JAN-12
Employee: Bryan Davis
Supplier: ERA
Description: Metals Soil LCS SRM ICPMS
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	10500 mg/kg	Antimony	67.4 mg/kg
Arsenic	104 mg/kg	Barium	198 mg/kg
Beryllium	77.6 mg/kg	Boron	141 mg/kg
Cadmium	60.6 mg/kg	Calcium	9870 mg/kg
Chromium	236 mg/kg	Cobalt	91.2 mg/kg
Copper	174 mg/kg	Iron	18000 mg/kg
Lead	86 mg/kg	Lithium	10.6 mg/kg
Magnesium	4000 mg/kg	Manganese	558 mg/kg
Mercury	8.46 mg/kg	Molybdenum	48.6 mg/kg
Nickel	134 mg/kg	Phosphorous	755 mg/kg
Potassium	4300 mg/kg	Selenium	286 mg/kg
Silver	30.1 mg/kg	Sodium	1020 mg/kg

Analyte	Concentration	Analyte	Concentration
Strontium	227 mg/kg	Thallium	121 mg/kg
Thorium	9.84 mg/kg	Tin	104 mg/kg
Titanium	462 mg/kg	Uranium	2.13 mg/kg
Uranium-235	.0153 mg/kg	Uranium-238	2.11 mg/kg
Vanadium	92.4 mg/kg	Zinc	594 mg/kg
Zirconium	10.6 mg/kg		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L

Analyte	Concentration	Analyte	Concentration
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L

Analyte	Concentration	Analyte	Concentration
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090828-42 **Opened:** 16-SEP-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 27-AUG-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 16-SEP-10 **Lot Number :** 1017098
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090925-40 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909129
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI090925-41 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909130
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI091015-42 **Opened:** 28-OCT-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 15-OCT-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-OCT-10 **Lot Number :** 1017581
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091015-A **Opened:** 15-OCT-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 15-OCT-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for soil products.
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	20 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	10 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Standard Logbook

Serial ID: UI091015-B **Opened:** 15-OCT-09 **Catalog Number :** 160067-03
Name: ICP-MS DOE SOIL SPIKE **Received:** 15-OCT-09 **Lot Number :** 1017142
Type: Source Material **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: 02si
Description: ICP-MS Spike for Soil Products
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silicon	200 mg/L	Silver	5 mg/L
Tin	5 mg/L	Zirconium	5 mg/L

Serial ID: UI091102-40 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930215
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI091102-41 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930216
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L

Analyte	Concentration	Analyte	Concentration
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI091102-42 **Opened:** 17-NOV-09 **Amount :** 200 mL
Name: SILICON **Received:** 02-NOV-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 17-NOV-10 **Lot Number :** 0921924
Employee: Helen Carnello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091124-01 **Opened:** 24-NOV-09 **Lot Number :** 1017642
Name: METALSPIKE-1 **Received:** 24-NOV-09
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI091124-06 **Opened:** 24-NOV-09 **Lot Number :** 1017643
Name: METALSPIKE-2 **Received:** 24-NOV-09
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL

Analyte	Concentration	Analyte	Concentration
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI091212-11 **Opened:** 12-DEC-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 12-DEC-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI091215-48 **Opened:** 04-JAN-10 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 18-DEC-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 04-JAN-11 **Lot Number :** 1018219
Employee: Helen Carnello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI091216-01 **Opened:** 16-DEC-09 **Lot Number :** 1018095
Name: METALSPIKE-1 **Received:** 16-DEC-09
Type: Source Material **Expires:** 16-DEC-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI091216-06 **Opened:** 16-DEC-09 **Lot Number :** 1018096
Name: METALSPIKE-2 **Received:** 16-DEC-09
Type: Source Material **Expires:** 16-DEC-10
Employee: Francena Armstrong
Supplier: OSI
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI091217-06 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 17-DEC-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018209
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI091217-07 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 17-DEC-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018210
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI

Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI091217-08 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-DEC-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018211
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI091217-12 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 17-DEC-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018212
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L

Analyte	Concentration	Analyte	Concentration
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI091217-13 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 17-DEC-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1016926
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI091228-40 **Opened:** 28-DEC-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 21-DEC-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 28-DEC-10 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI091228-41 **Opened:** 28-DEC-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 21-DEC-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 28-DEC-10 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI

Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI100114-40 **Opened:** 14-JAN-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 14-JAN-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-JAN-11 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI100114-41 **Opened:** 14-JAN-10 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 14-JAN-10 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 14-JAN-11 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Standard Logbook

Serial ID: UMS090303-01 **Opened:** 03-MAR-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 03-MAR-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 14-81JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090303-02 **Opened:** 03-MAR-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 03-MAR-09 **Lot Number :** 14-83JB
Type: Source Material **Expires:** 28-FEB-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090303-03 **Opened:** 03-MAR-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 03-MAR-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 15-199JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Standard Logbook

Serial ID: IHG100106-01 **Opened:** 06-JAN-10 **Instrument Id :** Mercury
Name: MHGINTER1 **Received:** 06-JAN-10 **Pipet Id :** Minou1
Type: Intermediate **Expires:** 07-JAN-10 **Solvent :** 1mL HNO3 + Typel H2O
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 1st Source 200 ug/L
Comments: Prepare fresh daily

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: IHG100106-02 **Opened:** 06-JAN-10 **Pipet Id :** Minou1
Name: MHGINTER2 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Intermediate **Expires:** 07-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Intermediate 2nd Source 200 ug/L
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167641-02	Mercury	999.7 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG100106-02 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.5 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	50 uL	20 mL	.5 ug/L

Serial ID: WHG100106-03 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL2.0 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	200 uL	20 mL	2 ug/L

Standard Logbook

Serial ID: WHG100106-04 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL5.0CCV **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100106-05 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCAL10.0 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	1 mL	20 mL	10 ug/L

Serial ID: WHG100106-06 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORK5.0ICV **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-02	Mercury	200 ug/L	500 uL	20 mL	5 ug/L

Serial ID: WHG100106-07 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.2CRA **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.2/CRA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	30 uL	30 mL	.2 ug/L

Standard Logbook

Serial ID: WHG100106-08 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS0.5 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working Standard 1st Source CAL S 0.5
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	75 uL	30 mL	.5 ug/L

Serial ID: WHG100106-09 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS2.0 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 2.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	300 uL	30 mL	2 ug/L

Serial ID: WHG100106-10 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS5.0CCV **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL S 5.0/CCV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100106-11 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKCALS10.0 **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Mercury Working 1st Source CAL S 10.0
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-01	Mercury	200 ug/L	1.5 mL	30 mL	10 ug/L

Standard Logbook

Serial ID: WHG100106-12 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGWORKS5.0ICV **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 13-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 2nd Source S 5.0/ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
IHG100106-02	Mercury	200 ug/L	750 uL	30 mL	5 ug/L

Serial ID: WHG100106-14 **Opened:** 06-JAN-10 **Pipet Id :** Hg1289245
Name: MHGSOILMSSPIKE **Received:** 06-JAN-10 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 07-JAN-10
Employee: Tara Griffin **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury soil working intermediate standard for MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WI100111-42 **Opened:** 11-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 12-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1253514
Employee: Helen Carnello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100111-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100111-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100111-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100111-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100111-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100111-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100111-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100111-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100111-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100111-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100111-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100111-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100111-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100111-43 **Opened:** 11-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 12-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1253514
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Serial ID: WI100111-44 **Opened:** 11-JAN-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 12-JAN-10 **Solvent :** 3%HCL and 1 %HNO3-1253514
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI100111-45 **Opened:** 11-JAN-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 1099667
Type: Working **Expires:** 12-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1253514
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI100111-46 **Opened:** 11-JAN-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 1099667
Type: Working **Expires:** 12-JAN-10 **Solvent :** 3%HCL AND 1%HNO3-1253514
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI100111-47 **Opened:** 11-JAN-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 1099667
Type: Working **Expires:** 12-JAN-10 **Solvent :** 3%HCL &1%HNO3-1253514
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WI100114-42 **Opened:** 14-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 15-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1253514
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100114-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100114-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100114-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100114-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100114-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100114-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100114-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100114-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100114-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100114-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100114-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100114-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100114-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100114-43 **Opened:** 14-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 15-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1253514
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Serial ID: WI100114-44 **Opened:** 14-JAN-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 15-JAN-10 **Solvent :** 3%HCL and 1 %HNO3-1253514
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI100114-45 **Opened:** 14-JAN-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 1099667
Type: Working **Expires:** 15-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1253514
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI100114-46 **Opened:** 14-JAN-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 1099667
Type: Working **Expires:** 15-JAN-10 **Solvent :** 3%HCL AND 1%HNO3-1253514
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI100114-47 **Opened:** 14-JAN-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 30-JUN-09 **Pipet Id :** 1099667
Type: Working **Expires:** 15-JAN-10 **Solvent :** 3%HCL &1%HNO3-1253514
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS100111-04AB **Opened:** 11-JAN-10 **Balance Id :** 40245216

Name: ICPMS Cal Standard 10 **Received:** 11-JAN-10 **Pipet Id :** 3541598

Type: Working **Expires:** 12-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829

Employee: Rose Jenkins

Supplier: GEL

Description: ICPMS Calibration Standard (10 ppb)

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100111-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100111-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100111-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100111-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100111-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100111-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100111-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100111-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100111-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100111-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100111-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100111-04B **Opened:** 11-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 11-JAN-10 **Balance Id :** 40245216
Type: Working **Expires:** 12-JAN-10 **Pipet Id :** 1758088
Employee: Rose Jenkins **Solvent :** 2%HNO3/1%HCl- 1238829
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS100111-05B **Opened:** 11-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 11-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 12-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100111-06B **Opened:** 11-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 11-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 12-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100111-07B **Opened:** 11-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 11-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 12-JAN-10 **Pipet Id :** 3541598
Employee: Rose Jenkins **Solvent :** 2%HNO3/1%HCl - 1238829
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100111-08B **Opened:** 11-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 11-JAN-10 **Pipet Id :** 3541598/1758088
Type: Working **Expires:** 12-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100113-04AB **Opened:** 13-JAN-10 **Balance Id :** 40245216
Name: ICPMS Cal Standard 10 **Received:** 13-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 14-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100113-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100113-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100113-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100113-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100113-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100113-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100113-04B **Opened:** 13-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 13-JAN-10 **Balance Id :** 40245216
Type: Working **Expires:** 14-JAN-10 **Pipet Id :** 1758088
Employee: Rose Jenkins **Solvent :** 2%HNO3/1%HCl- 1238829
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS100113-05B **Opened:** 13-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 13-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 14-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100113-06B **Opened:** 13-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 13-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 14-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1238829
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100113-07B
Name: ICPMS ICSA
Type: Working
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Opened: 13-JAN-10
Received: 13-JAN-10
Expires: 14-JAN-10

Balance Id : 40245216
Lot Number : 1010773
Pipet Id : 3541598
Solvent : 2%HNO3/1%HCl - 1238829

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100113-08B
Name: ICPMS ICSAB
Type: Working
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Opened: 13-JAN-10
Received: 13-JAN-10
Expires: 14-JAN-10

Balance Id : 40245216
Pipet Id : 3541598/1758088
Solvent : 2%HNO3/1%HCl - 1238829

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: 1156689-A **Opened:** 20-JUL-09 **Lot Number :** 41226920
Name: B-KMnO4(VWR)-MER **Received:** 20-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1164796-A **Opened:** 06-AUG-09 **Lot Number :** 49149927
Name: B-NH2OH.HCl-MER **Received:** 06-AUG-09
Type: Reagent/Solvent **Expires:** 06-AUG-10
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Serial ID: 1203655-02 **Opened:** 15-OCT-09 **Lot Number :** ZU74081198 mL
Name: B-H2O2 **Received:** 15-OCT-09
Type: Reagent/Solvent **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1206350-C **Opened:** 22-OCT-09 **Balance Id :** BAL-002
Name: B-NaCl.NH2OH.HCl-MER **Received:** 22-OCT-09
Type: Reagent/Solvent **Expires:** 15-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1164796-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1234886 **Opened:** 27-NOV-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 27-NOV-09
Type: Reagent/Solvent **Expires:** 27-NOV-10
Employee: Bryan Davis
Supplier: BAKER

Description: Nitric Acid CONC.
Comments: None

Serial ID: 1236355-A **Opened:** 01-DEC-09 **Lot Number :** 200930201
Name: B-HCl-MER **Received:** 01-DEC-09
Type: Reagent/Solvent **Expires:** 01-DEC-10
Employee: Tara Griffin
Supplier: Aristar
Description: Hydrochloric Acid Conc.
Comments: None

Serial ID: 1238345 **Opened:** 04-DEC-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 04-DEC-09
Type: Reagent/Solvent **Expires:** 04-DEC-10
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1240182-1 **Opened:** 09-DEC-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 09-DEC-09 **Lot Number :** H34040
Type: Reagent/Solvent **Expires:** 09-DEC-10
Employee: Tara Griffin
Supplier: Mallinckrodt Chemicals
Description: NITRIC ACID
Comments: None

Serial ID: 1244904-C **Opened:** 18-DEC-09 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 18-DEC-09
Type: Reagent/Solvent **Expires:** 18-JUN-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Standard Logbook

Serial ID: 1244970 **Opened:** 18-DEC-09 **Lot Number :** H41032
Name: I-HCL **Received:** 18-DEC-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 18-DEC-10
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1252836 **Opened:** 08-JAN-10 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 08-JAN-10
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1252838 **Opened:** 08-JAN-10 **Lot Number :** H41032
Name: I-HCL **Received:** 08-JAN-10 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1253206 **Opened:** 11-JAN-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 11-JAN-10
Type: Reagent/Solvent **Expires:** 18-JAN-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1253514 **Opened:** 11-JAN-10 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 11-JAN-10 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 17-JAN-10 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037-1

Sample Analysis

Sample ID	Client ID
243493001	RE12-10-7298
1202004435	Method Blank (MB) **ICP**
1202004436	Laboratory Control Sample (LCS)
1202004439	243554001(RE03-10-2750L) Serial Dilution (SD)
1202004437	243554001(RE03-10-2750D) Sample Duplicate (DUP)
1202004438	243554001(RE03-10-2750S) Matrix Spike (MS)
1202004440	Method Blank (MB) **ICP-MS**
1202014492	Method Blank (MB) **ICP-MS**
1202004441	Laboratory Control Sample (LCS)
1202014493	Laboratory Control Sample (LCS)
1202004444	243493001(RE12-10-7298L) Serial Dilution (SD)
1202014496	243493001(RE12-10-7298L) Serial Dilution (SD)
1202004442	243493001(RE12-10-7298D) Sample Duplicate (DUP)
1202014494	243493001(RE12-10-7298D) Sample Duplicate (DUP)
1202004443	243493001(RE12-10-7298S) Matrix Spike (MS)
1202014495	243493001(RE12-10-7298S) Matrix Spike (MS)
1202005775	Method Blank (MB) **CVAA**
1202005776	Laboratory Control Sample (LCS)
1202005779	243539001(RE16-10-1012L) Serial Dilution (SD)
1202005777	243539001(RE16-10-1012D) Sample Duplicate (DUP)
1202005778	243539001(RE16-10-1012S) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch: 936813, 936815, 941231 and 937342
Prep Batch : 936812, 936814, 941230 and 937341

Standard Operating Procedures:	GL-MA-E-013 REV# 20, GL-MA-E-006 REV# 9, GL-MA-E-014 REV# 21 and GL-MA-E-010 REV# 23
Analytical Method:	SW846 3005/6010B, SW846 3005/6020 and SW846 7470A
Prep Method :	SW846 3005A and SW846 7470A Prep

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with a Burgener nebulizer, cyclonic spray chamber, and yttrium or scandium internal standard. Operating conditions for the ICP are set at a power level of 1500 watts. The instrument has a peristaltic pump flow rate of 1.4L/min, argon gas flows of 15 L/min and 0.2 L/min for the torch and auxiliary gases, and a flow setting of 0.65L/min for the nebulizer.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 9000 inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

The Metals analysis-Mercury was performed on a Perkin-Elmer Flow Injection Mercury System (FIMS-100) automated mercury analyzer. The instrument consists of a cold vapor atomic absorption spectrometer set to detect mercury at a wavelength of 253.7 nm. Sample introduction through the flow injection system is performed via a peristaltic pump at 9 mL/min and nitrogen carrier gas rate of 80 mL/min.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MBs analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement
The following samples were selected as the quality control (QC) samples for this SDG: 243554001 (RE03-10-2750)-ICP, 243493001 (RE12-10-7298)-ICP-MS and 243539001 (RE16-10-1012)-CVAA.

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes with the exception of lead as indicated by the "N" qualifier.

Duplicate Relative Percent Difference (RPD) Statement
The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. All applicable analytes met these requirements.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: DER ID 779760. A copy is included in the Miscellaneous Data section of this package.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Nik-Cole A. Elmore **Date:** 1·19·10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037-1 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243493001 **BASIS:** As Received **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7298 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: WATER **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7429-90-5	Aluminum	200	ug/L	U	68	200	200	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-36-0	Antimony	3	ug/L	U	1	3	3	1	MS	BAJ	01/06/10 06:33	100105-3	936815
7440-38-2	Arsenic	8.81	ug/L	J	5	30	30	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-39-3	Barium	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-41-7	Beryllium	0.50	ug/L	U	0.1	0.5	0.5	1	MS	BAJ	01/14/10 22:45	100114-6	941231
7440-43-9	Cadmium	1	ug/L	U	0.11	1	1	1	MS	BAJ	01/06/10 06:33	100105-3	936815
7440-70-2	Calcium	200	ug/L	U	50	200	200	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-47-3	Chromium	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-48-4	Cobalt	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-50-8	Copper	10	ug/L	U	3	10	10	1	P	HSC	01/08/10 12:57	010810-1	936813
7439-89-6	Iron	100	ug/L	U	30	100	100	1	P	HSC	01/08/10 12:57	010810-1	936813
7439-92-1	Lead	2	ug/L	UN	0.5	2	2	1	MS	PRB	01/08/10 16:38	100108-2	936815
7439-95-4	Magnesium	300	ug/L	U	85	300	300	1	P	HSC	01/08/10 12:57	010810-1	936813
7439-96-5	Manganese	1.03	ug/L	J	1	5	5	1	MS	BAJ	01/07/10 05:09	100106-4	936815
7439-97-6	Mercury	0.20	ug/L	U	0.066	0.2	0.2	1	AV	JXL1	12/30/09 10:37	123009W1-7	937342
7440-02-0	Nickel	5	ug/L	U	1.5	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-09-7	Potassium	155	ug/L		50	150	150	1	P	HSC	01/08/10 12:57	010810-1	936813
7782-49-2	Selenium	30	ug/L	U	5	30	30	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-22-4	Silver	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-23-5	Sodium	110	ug/L	J	100	300	300	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-28-0	Thallium	1	ug/L	U	0.3	1	1	1	MS	BAJ	01/08/10 12:40	100108-5	936815
7440-61-1	Uranium	0.20	ug/L	U	0.05	0.2	0.2	1	MS	BAJ	01/08/10 12:40	100108-5	936815
7440-62-2	Vanadium	5	ug/L	U	1	5	5	1	P	HSC	01/08/10 12:57	010810-1	936813
7440-66-6	Zinc	10	ug/L	U	3.3	10	10	1	P	HSC	01/08/10 12:57	010810-1	936813

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
936813	936812	SW846 3005A	50	mL	50	mL	01/04/10	BXA1
936815	936814	SW846 3005A	50	mL	50	mL	01/04/10	BXA1
937342	937341	SW846 7470A Prep	20	mL	20	mL	12/29/09	BCD1
941231	941230	SW846 3005A	25	mL	25	mL	01/13/10	FGA

Quality Control Summary

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Mercury	5.12	ug/L	5	ug/L	102.4	90.0 – 110.0	AV	30–DEC–09 09:12	123009W1–7
	Antimony	52.4	ug/L	50	ug/L	104.7	90.0 – 110.0	MS	06–JAN–10 03:04	100105–3
	Cadmium	51.9	ug/L	50	ug/L	103.9	90.0 – 110.0	MS	06–JAN–10 03:04	100105–3
	Manganese	54.3	ug/L	50	ug/L	108.6	90.0 – 110.0	MS	07–JAN–10 04:46	100106–4
	Aluminum	4920	ug/L	5000	ug/L	98.3	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Arsenic	473	ug/L	500	ug/L	94.7	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Barium	496	ug/L	500	ug/L	99.1	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Calcium	4860	ug/L	5000	ug/L	97.3	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Chromium	476	ug/L	500	ug/L	95.1	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Cobalt	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Copper	490	ug/L	500	ug/L	98.1	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Iron	4960	ug/L	5000	ug/L	99.2	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Magnesium	5110	ug/L	5000	ug/L	102.1	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Nickel	486	ug/L	500	ug/L	97.2	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Potassium	2440	ug/L	2500	ug/L	97.6	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Selenium	2540	ug/L	2500	ug/L	101.5	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Silver	252	ug/L	250	ug/L	100.7	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Sodium	2410	ug/L	2500	ug/L	96.2	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Vanadium	500	ug/L	500	ug/L	100.1	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Zinc	492	ug/L	500	ug/L	98.4	90.0 – 110.0	P	08–JAN–10 11:40	010810–1
	Thallium	51.7	ug/L	50	ug/L	103.5	90.0 – 110.0	MS	08–JAN–10 11:58	100108–5
	Uranium	52.4	ug/L	50	ug/L	104.7	90.0 – 110.0	MS	08–JAN–10 11:58	100108–5
	Lead	52.6	ug/L	50	ug/L	105.2	90.0 – 110.0	MS	08–JAN–10 15:27	100108–2
	Beryllium	53	ug/L	50	ug/L	106	90.0 – 110.0	MS	14–JAN–10 21:31	100114–6
CCV01										
	Mercury	5.09	ug/L	5	ug/L	101.8	80.0 – 120.0	AV	30–DEC–09 09:18	123009W1–7
	Antimony	50.7	ug/L	50	ug/L	101.4	90.0 – 110.0	MS	06–JAN–10 03:35	100105–3
	Cadmium	48.1	ug/L	50	ug/L	96.2	90.0 – 110.0	MS	06–JAN–10 03:35	100105–3
	Manganese	52.5	ug/L	50	ug/L	105	90.0 – 110.0	MS	07–JAN–10 04:59	100106–4
	Thallium	51.3	ug/L	50	ug/L	102.7	90.0 – 110.0	MS	08–JAN–10 12:21	100108–5

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Uranium	51.4	ug/L	50	ug/L	102.8	90.0 - 110.0	MS	08-JAN-10 12:21	100108-5
	Aluminum	4870	ug/L	5000	ug/L	97.3	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Arsenic	503	ug/L	500	ug/L	100.7	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Barium	485	ug/L	500	ug/L	97	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Calcium	4970	ug/L	5000	ug/L	99.4	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Chromium	484	ug/L	500	ug/L	96.7	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Cobalt	478	ug/L	500	ug/L	95.6	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Copper	480	ug/L	500	ug/L	96	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Iron	5050	ug/L	5000	ug/L	101	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Magnesium	5030	ug/L	5000	ug/L	100.7	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Nickel	479	ug/L	500	ug/L	95.8	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Potassium	5100	ug/L	5000	ug/L	102.1	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Selenium	513	ug/L	500	ug/L	102.5	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Silver	481	ug/L	500	ug/L	96.3	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Sodium	9820	ug/L	10000	ug/L	98.2	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Vanadium	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Zinc	484	ug/L	500	ug/L	96.8	90.0 - 110.0	P	08-JAN-10 12:26	010810-1
	Lead	52.2	ug/L	50	ug/L	104.4	90.0 - 110.0	MS	08-JAN-10 15:38	100108-2
	Beryllium	54.7	ug/L	50	ug/L	109.4	90.0 - 110.0	MS	14-JAN-10 22:02	100114-6
CCV02										
	Mercury	5.04	ug/L	5	ug/L	100.7	80.0 - 120.0	AV	30-DEC-09 09:41	123009W1-7
	Antimony	53.6	ug/L	50	ug/L	107.3	90.0 - 110.0	MS	06-JAN-10 03:53	100105-3
	Cadmium	50.3	ug/L	50	ug/L	100.7	90.0 - 110.0	MS	06-JAN-10 03:53	100105-3
	Manganese	53.2	ug/L	50	ug/L	106.5	90.0 - 110.0	MS	07-JAN-10 05:20	100106-4
	Thallium	51.5	ug/L	50	ug/L	103.1	90.0 - 110.0	MS	08-JAN-10 12:59	100108-5
	Uranium	50.7	ug/L	50	ug/L	101.5	90.0 - 110.0	MS	08-JAN-10 12:59	100108-5
	Aluminum	4880	ug/L	5000	ug/L	97.6	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Arsenic	500	ug/L	500	ug/L	100.1	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Barium	490	ug/L	500	ug/L	97.9	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Calcium	4890	ug/L	5000	ug/L	97.8	90.0 - 110.0	P	08-JAN-10 13:31	010810-1

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
	Chromium	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Cobalt	486	ug/L	500	ug/L	97.3	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Copper	485	ug/L	500	ug/L	97	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Iron	5030	ug/L	5000	ug/L	100.6	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Magnesium	4990	ug/L	5000	ug/L	99.8	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Nickel	485	ug/L	500	ug/L	97	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Potassium	5040	ug/L	5000	ug/L	100.8	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Selenium	518	ug/L	500	ug/L	103.7	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Silver	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Sodium	9940	ug/L	10000	ug/L	99.4	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Vanadium	491	ug/L	500	ug/L	98.1	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Zinc	487	ug/L	500	ug/L	97.4	90.0 - 110.0	P	08-JAN-10 13:31	010810-1
	Lead	53.2	ug/L	50	ug/L	106.4	90.0 - 110.0	MS	08-JAN-10 15:44	100108-2
	Beryllium	51.5	ug/L	50	ug/L	103.1	90.0 - 110.0	MS	14-JAN-10 22:20	100114-6
CCV03										
	Mercury	5.16	ug/L	5	ug/L	103.1	80.0 - 120.0	AV	30-DEC-09 10:04	123009W1-7
	Antimony	50.1	ug/L	50	ug/L	100.2	90.0 - 110.0	MS	06-JAN-10 04:49	100105-3
	Cadmium	48.3	ug/L	50	ug/L	96.7	90.0 - 110.0	MS	06-JAN-10 04:49	100105-3
	Lead	51.9	ug/L	50	ug/L	103.7	90.0 - 110.0	MS	08-JAN-10 16:11	100108-2
	Beryllium	50.6	ug/L	50	ug/L	101.1	90.0 - 110.0	MS	14-JAN-10 23:10	100114-6
CCV04										
	Mercury	5.19	ug/L	5	ug/L	103.9	80.0 - 120.0	AV	30-DEC-09 10:27	123009W1-7
	Antimony	50.6	ug/L	50	ug/L	101.2	90.0 - 110.0	MS	06-JAN-10 05:38	100105-3
	Cadmium	49.9	ug/L	50	ug/L	99.9	90.0 - 110.0	MS	06-JAN-10 05:38	100105-3
	Lead	52.6	ug/L	50	ug/L	105.2	90.0 - 110.0	MS	08-JAN-10 16:28	100108-2
CCV05										
	Mercury	5.2	ug/L	5	ug/L	104.1	80.0 - 120.0	AV	30-DEC-09 10:50	123009W1-7
	Antimony	50.9	ug/L	50	ug/L	101.8	90.0 - 110.0	MS	06-JAN-10 06:09	100105-3
	Cadmium	48.9	ug/L	50	ug/L	97.8	90.0 - 110.0	MS	06-JAN-10 06:09	100105-3
	Lead	51.4	ug/L	50	ug/L	102.8	90.0 - 110.0	MS	08-JAN-10 16:47	100108-2

METALS
–2a–
Initial and Continuing Calibration Verification

SDG No: 10–1037–1

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
CCV06										
	Mercury	4.98	ug/L	5	ug/L	99.6	80.0 – 120.0	AV	30–DEC–09 11:13	123009W1–7
	Antimony	51.1	ug/L	50	ug/L	102.2	90.0 – 110.0	MS	06–JAN–10 06:58	100105–3
	Cadmium	49.2	ug/L	50	ug/L	98.5	90.0 – 110.0	MS	06–JAN–10 06:58	100105–3

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: HG3,ICPMS3,ICPMS5,OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01										
	Mercury	.185	ug/L	.2	ug/L	92.5	70.0 - 130.0	AV	30-DEC-09 09:16	123009W1-7
	Antimony	3.38	ug/L	3	ug/L	112.6	70.0 - 130.0	MS	06-JAN-10 03:17	100105-3
	Cadmium	1.09	ug/L	1	ug/L	108.6	70.0 - 130.0	MS	06-JAN-10 03:17	100105-3
	Manganese	6.17	ug/L	5	ug/L	123.4	70.0 - 130.0	MS	07-JAN-10 04:51	100106-4
	Thallium	1.2	ug/L	1	ug/L	119.9	70.0 - 130.0	MS	08-JAN-10 12:07	100108-5
	Uranium	.259	ug/L	.2	ug/L	129.5	70.0 - 130.0	MS	08-JAN-10 12:07	100108-5
	Lead	2.23	ug/L	2	ug/L	111.7	70.0 - 130.0	MS	08-JAN-10 15:31	100108-2
	Beryllium	.521	ug/L	.5	ug/L	104.2	70.0 - 130.0	MS	14-JAN-10 21:44	100114-6
PQL01										
	Aluminum	187	ug/L	200	ug/L	93.7	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Iron	127	ug/L	100	ug/L	127.4	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Magnesium	225	ug/L	300	ug/L	74.9	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Nickel	5.33	ug/L	5	ug/L	106.5	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Potassium	151	ug/L	150	ug/L	100.7	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Silver	5.23	ug/L	5	ug/L	104.6	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Sodium	294	ug/L	300	ug/L	97.8	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Arsenic	33.6	ug/L	30	ug/L	112	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Barium	5.37	ug/L	5	ug/L	107.4	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Chromium	4.95	ug/L	5	ug/L	99.1	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Cobalt	5.18	ug/L	5	ug/L	103.6	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Copper	10.6	ug/L	10	ug/L	105.7	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Vanadium	4.95	ug/L	5	ug/L	99	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Zinc	10.8	ug/L	10	ug/L	107.7	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Calcium	207	ug/L	200	ug/L	103.4	70.0 - 130.0	P	08-JAN-10 11:54	010810-1
	Selenium	30.2	ug/L	30	ug/L	100.5	70.0 - 130.0	P	08-JAN-10 11:54	010810-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1037–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	30–DEC–09 09:14	123009W1–7
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	06–JAN–10 03:10	100105–3
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	06–JAN–10 03:10	100105–3
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	07–JAN–10 04:49	100106–4
	Aluminum	68.0	+/–200	U	68.0	200	LIQ	P	08–JAN–10 11:47	010810–1
	Arsenic	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JAN–10 11:47	010810–1
	Barium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 11:47	010810–1
	Calcium	50.0	+/–200	U	50.0	200	LIQ	P	08–JAN–10 11:47	010810–1
	Chromium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 11:47	010810–1
	Cobalt	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 11:47	010810–1
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JAN–10 11:47	010810–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JAN–10 11:47	010810–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JAN–10 11:47	010810–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JAN–10 11:47	010810–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JAN–10 11:47	010810–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JAN–10 11:47	010810–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 11:47	010810–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JAN–10 11:47	010810–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 11:47	010810–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JAN–10 11:47	010810–1
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	08–JAN–10 12:02	100108–5
	Uranium	0.05	+/–.2	U	0.05	0.2	LIQ	MS	08–JAN–10 12:02	100108–5
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	08–JAN–10 15:29	100108–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JAN–10 21:38	100114–6
CCB01										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	30–DEC–09 09:20	123009W1–7
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	06–JAN–10 03:41	100105–3
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	06–JAN–10 03:41	100105–3
	Manganese	1.0	+/–5	U	1.0	5.0	LIQ	MS	07–JAN–10 05:02	100106–4
	Thallium	0.3	+/–1	U	0.3	1.0	LIQ	MS	08–JAN–10 12:26	100108–5
	Uranium	0.05	+/–.2	U	0.05	0.2	LIQ	MS	08–JAN–10 12:26	100108–5

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037-1

Contract: LANL01004

Lab Code: GEL

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JAN-10 12:33	010810-1
	Arsenic	11.15	+/-30	J	5.0	30.0	LIQ	P	08-JAN-10 12:33	010810-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 12:33	010810-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JAN-10 12:33	010810-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 12:33	010810-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 12:33	010810-1
	Copper	3.0	+/-10	U	3.0	10.0	LIQ	P	08-JAN-10 12:33	010810-1
	Iron	30.0	+/-100	U	30.0	100	LIQ	P	08-JAN-10 12:33	010810-1
	Magnesium	-109.57	+/-300	J	85.0	300	LIQ	P	08-JAN-10 12:33	010810-1
	Nickel	1.5	+/-5	U	1.5	5.0	LIQ	P	08-JAN-10 12:33	010810-1
	Potassium	104.21	+/-150	J	50.0	150	LIQ	P	08-JAN-10 12:33	010810-1
	Selenium	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JAN-10 12:33	010810-1
	Silver	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 12:33	010810-1
	Sodium	100	+/-300	U	100	300	LIQ	P	08-JAN-10 12:33	010810-1
	Vanadium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 12:33	010810-1
	Zinc	3.3	+/-10	U	3.3	10.0	LIQ	P	08-JAN-10 12:33	010810-1
	Lead	0.5	+/-2	U	0.5	2.0	LIQ	MS	08-JAN-10 15:40	100108-2
	Beryllium	0.1	+/-.5	U	0.1	0.5	LIQ	MS	14-JAN-10 22:08	100114-6
CCB02										
	Mercury	0.066	+/-.2	U	0.066	0.2	LIQ	AV	30-DEC-09 09:43	123009W1-7
	Antimony	1.19	+/-3	J	1.0	3.0	LIQ	MS	06-JAN-10 03:59	100105-3
	Cadmium	0.11	+/-1	U	0.11	1.0	LIQ	MS	06-JAN-10 03:59	100105-3
	Manganese	1.0	+/-5	U	1.0	5.0	LIQ	MS	07-JAN-10 05:22	100106-4
	Thallium	0.3	+/-1	U	0.3	1.0	LIQ	MS	08-JAN-10 13:04	100108-5
	Uranium	0.05	+/-.2	U	0.05	0.2	LIQ	MS	08-JAN-10 13:04	100108-5
	Aluminum	68.0	+/-200	U	68.0	200	LIQ	P	08-JAN-10 13:37	010810-1
	Arsenic	5.0	+/-30	U	5.0	30.0	LIQ	P	08-JAN-10 13:37	010810-1
	Barium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 13:37	010810-1
	Calcium	50.0	+/-200	U	50.0	200	LIQ	P	08-JAN-10 13:37	010810-1
	Chromium	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 13:37	010810-1
	Cobalt	1.0	+/-5	U	1.0	5.0	LIQ	P	08-JAN-10 13:37	010810-1

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1037–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Copper	3.0	+/–10	U	3.0	10.0	LIQ	P	08–JAN–10 13:37	010810–1
	Iron	30.0	+/–100	U	30.0	100	LIQ	P	08–JAN–10 13:37	010810–1
	Magnesium	85.0	+/–300	U	85.0	300	LIQ	P	08–JAN–10 13:37	010810–1
	Nickel	1.5	+/–5	U	1.5	5.0	LIQ	P	08–JAN–10 13:37	010810–1
	Potassium	50.0	+/–150	U	50.0	150	LIQ	P	08–JAN–10 13:37	010810–1
	Selenium	5.0	+/–30	U	5.0	30.0	LIQ	P	08–JAN–10 13:37	010810–1
	Silver	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 13:37	010810–1
	Sodium	100	+/–300	U	100	300	LIQ	P	08–JAN–10 13:37	010810–1
	Vanadium	1.0	+/–5	U	1.0	5.0	LIQ	P	08–JAN–10 13:37	010810–1
	Zinc	3.3	+/–10	U	3.3	10.0	LIQ	P	08–JAN–10 13:37	010810–1
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	08–JAN–10 15:46	100108–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JAN–10 22:26	100114–6
CCB03										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	30–DEC–09 10:06	123009W1–7
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	06–JAN–10 04:55	100105–3
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	06–JAN–10 04:55	100105–3
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	08–JAN–10 16:13	100108–2
	Beryllium	0.1	+/–.5	U	0.1	0.5	LIQ	MS	14–JAN–10 23:16	100114–6
CCB04										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	30–DEC–09 10:29	123009W1–7
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	06–JAN–10 05:44	100105–3
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	06–JAN–10 05:44	100105–3
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	08–JAN–10 16:31	100108–2
CCB05										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	30–DEC–09 10:52	123009W1–7
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	06–JAN–10 06:15	100105–3
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	06–JAN–10 06:15	100105–3
	Lead	0.5	+/–2	U	0.5	2.0	LIQ	MS	08–JAN–10 16:49	100108–2
CCB06										
	Mercury	0.066	+/–.2	U	0.066	0.2	LIQ	AV	30–DEC–09 11:15	123009W1–7
	Antimony	1.0	+/–3	U	1.0	3.0	LIQ	MS	06–JAN–10 07:04	100105–3

Metals
–3a–
Initial and Continuing Calibration Blank Summary

SDG No.: 10–1037–1

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
	Cadmium	0.11	+/–1	U	0.11	1.0	LIQ	MS	06–JAN–10 07:04	100105–3

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 10-1037-1
Contract: LANL01004
Matrix: WATER

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1202004435								
	Calcium	50	ug/L	+/-200	U	P	50	200
	Chromium	1	ug/L	+/-5	U	P	1	5
	Cobalt	1	ug/L	+/-5	U	P	1	5
	Copper	3	ug/L	+/-10	U	P	3	10
	Iron	30	ug/L	+/-100	U	P	30	100
	Magnesium	85	ug/L	+/-300	U	P	85	300
	Nickel	1.5	ug/L	+/-5	U	P	1.5	5
	Potassium	50	ug/L	+/-150	U	P	50	150
	Selenium	5	ug/L	+/-30	U	P	5	30
	Barium	1	ug/L	+/-5	U	P	1	5
	Arsenic	10.9	ug/L	+/-30	J	P	5	30
	Aluminum	68	ug/L	+/-200	U	P	68	200
	Silver	1	ug/L	+/-5	U	P	1	5
	Sodium	100	ug/L	+/-300	U	P	100	300
	Vanadium	1	ug/L	+/-5	U	P	1	5
	Zinc	3.3	ug/L	+/-10	U	P	3.3	10
1202004440								
	Antimony	1	ug/L	+/-3	U	MS	1	3
	Cadmium	0.11	ug/L	+/-1	U	MS	0.11	1
	Lead	0.5	ug/L	+/-2	U	MS	0.5	2
	Manganese	1	ug/L	+/-5	U	MS	1	5
	Thallium	0.3	ug/L	+/-1	U	MS	0.3	1
	Uranium	0.05	ug/L	+/-0.2	U	MS	0.05	0.2
1202005775								
	Mercury	0.066	ug/L	+/-0.2	U	AV	0.066	0.2
1202014492								
	Beryllium	0.1	ug/L	+/-0.5	U	MS	0.1	0.5

METALS
–4–
Interference Check Sample

SDG No: 10–1037–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: OPTIMA3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Aluminum	519000	ug/L	500000	ug/L	104	80.0 – 120.0	08–JAN–10 12:01	010810–1
	Arsenic	0.906	ug/L					08–JAN–10 12:01	010810–1
	Barium	–0.576	ug/L					08–JAN–10 12:01	010810–1
	Calcium	486000	ug/L	500000	ug/L	97.2	80.0 – 120.0	08–JAN–10 12:01	010810–1
	Chromium	1.39	ug/L					08–JAN–10 12:01	010810–1
	Cobalt	–1.11	ug/L					08–JAN–10 12:01	010810–1
	Copper	0.013	ug/L					08–JAN–10 12:01	010810–1
	Iron	192000	ug/L	200000	ug/L	95.8	80.0 – 120.0	08–JAN–10 12:01	010810–1
	Magnesium	493000	ug/L	500000	ug/L	98.7	80.0 – 120.0	08–JAN–10 12:01	010810–1
	Nickel	3.72	ug/L					08–JAN–10 12:01	010810–1
	Potassium	16.7	ug/L					08–JAN–10 12:01	010810–1
	Selenium	34.1	ug/L					08–JAN–10 12:01	010810–1
	Silver	3.18	ug/L					08–JAN–10 12:01	010810–1
	Sodium	14.0	ug/L					08–JAN–10 12:01	010810–1
	Vanadium	–3.48	ug/L					08–JAN–10 12:01	010810–1
	Zinc	–0.666	ug/L					08–JAN–10 12:01	010810–1
ICSAB01									
	Aluminum	510000	ug/L	500000	ug/L	102	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Arsenic	501	ug/L	500	ug/L	100	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Barium	492	ug/L	500	ug/L	98.5	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Calcium	478000	ug/L	500000	ug/L	95.5	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Chromium	469	ug/L	500	ug/L	93.8	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Cobalt	456	ug/L	500	ug/L	91.2	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Copper	556	ug/L	500	ug/L	111	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Iron	192000	ug/L	200000	ug/L	96.1	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Magnesium	490000	ug/L	500000	ug/L	98.1	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Nickel	456	ug/L	500	ug/L	91.2	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Potassium	5410	ug/L	5000	ug/L	108	80.0 – 120.0	08–JAN–10 12:07	010810–1
	Selenium	2590	ug/L	2500	ug/L	104	80.0 – 120.0	08–JAN–10 12:07	010810–1

METALS
-4-
Interference Check Sample

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

ICS:

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
	Silver	272	ug/L	250	ug/L	109	80.0 - 120.0	08-JAN-10 12:07	010810-1
	Sodium	5580	ug/L	5000	ug/L	112	80.0 - 120.0	08-JAN-10 12:07	010810-1
	Vanadium	498	ug/L	500	ug/L	99.6	80.0 - 120.0	08-JAN-10 12:07	010810-1
	Zinc	480	ug/L	500	ug/L	96	80.0 - 120.0	08-JAN-10 12:07	010810-1

METALS
-4-
Interference Check Sample

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS3

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Lead	0.201	ug/L					08-JAN-10 15:33	100108-2
ICSAB01									
	Lead	21.5	ug/L	20.5	ug/L	105	80.0 - 120.0	08-JAN-10 15:35	100108-2

METALS
-4-
Interference Check Sample

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Antimony	0.29	ug/L					06-JAN-10 03:23	100105-3
	Cadmium	0.537	ug/L					06-JAN-10 03:23	100105-3
ICSAB01									
	Antimony	23.4	ug/L	20.1	ug/L	116	80.0 - 120.0	06-JAN-10 03:29	100105-3
	Cadmium	19.6	ug/L	20.4	ug/L	95.9	80.0 - 120.0	06-JAN-10 03:29	100105-3

METALS
–4–
Interference Check Sample

SDG No: 10–1037–1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Manganese	6.14	ug/L					07–JAN–10 04:54	100106–4
ICSAB01									
	Manganese	26.7	ug/L	25.8	ug/L	104	80.0 – 120.0	07–JAN–10 04:56	100106–4

METALS
-4-
Interference Check Sample

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Thallium	0.011	ug/L					08-JAN-10 12:12	100108-5
	Uranium	0.0	ug/L					08-JAN-10 12:12	100108-5
ICSAB01									
	Thallium	21.5	ug/L	20	ug/L	108	80.0 - 120.0	08-JAN-10 12:16	100108-5
	Uranium	23.3	ug/L	20	ug/L	116	80.0 - 120.0	08-JAN-10 12:16	100108-5

METALS
-4-
Interference Check Sample

SDG No: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS5

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Beryllium	0.077	ug/L					14-JAN-10 21:50	100114-6
ICSAB01									
	Beryllium	20.9	ug/L	20	ug/L	104	80.0 - 120.0	14-JAN-10 21:56	100114-6

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1037-1 **Client ID** RE03-10-2750S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 243554001 **Spike ID:** 1202004438

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Aluminum	ug/L	75-125	5210		68	U	5000	104		P
Arsenic	ug/L	75-125	520		7.75	J	500	102		P
Barium	ug/L	75-125	526		1	U	500	105		P
Calcium	ug/L	75-125	5210		50	U	5000	104		P
Chromium	ug/L	75-125	511		1	U	500	102		P
Cobalt	ug/L	75-125	503		1	U	500	101		P
Copper	ug/L	75-125	517		3	U	500	103		P
Iron	ug/L	75-125	5350		30	U	5000	107		P
Magnesium	ug/L	75-125	5190		85	U	5000	104		P
Nickel	ug/L	75-125	508		1.5	U	500	101		P
Potassium	ug/L	75-125	5370		50	U	5000	107		P
Selenium	ug/L	75-125	516		5	U	500	103		P
Silver	ug/L	75-125	511		1	U	500	102		P
Sodium	ug/L	75-125	5310		100	U	5000	105		P
Vanadium	ug/L	75-125	521		1	U	500	104		P
Zinc	ug/L	75-125	500		3.3	U	500	99.7		P

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1037-1 **Client ID** RE12-10-7298S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 243493001 **Spike ID:** 1202004443

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Antimony	ug/L	75-125	214		1	U	200	107		MS
Cadmium	ug/L	75-125	11.4		0.11	U	10	114		MS
Lead	ug/L	75-125	51.5		0.5	U	40	128	N	MS
Manganese	ug/L	75-125	58.4		1.03	J	50	115		MS
Thallium	ug/L	75-125	109		0.3	U	100	109		MS
Uranium	ug/L	75-125	62.2		0.05	U	50	124		MS

METALS
-5a-

Matrix Spike Summary

SDG NO. 10-1037-1 **Client ID** RE16-10-1012S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 243539001 **Spike ID:** 1202005778

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75-125	2.1		0.066	U	2	105		AV

METALS
–5a–

Matrix Spike Summary

SDG NO. 10–1037–1 **Client ID** RE12–10–7298S

Contract: LANL01004 **Level:** Low

Matrix: WATER **% Solids:**

Sample ID: 243493001 **Spike ID:** 1202014495

Analyte	Units	Acceptance Limit	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	75–125	55.2		0.1	U	50	110		MS

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** RE03–10–2750D

Sample ID: 243554001 **Duplicate ID:** 1202004437 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Aluminum	ug/L		68	U	68	U			P
Arsenic	ug/L	+/–30	7.75	J	6	J	25.5		P
Barium	ug/L		1	U	1	U			P
Calcium	ug/L		50	U	50	U			P
Chromium	ug/L		1	U	1	U			P
Cobalt	ug/L		1	U	1	U			P
Copper	ug/L		3	U	3	U			P
Iron	ug/L		30	U	30	U			P
Magnesium	ug/L		85	U	85	U			P
Nickel	ug/L		1.5	U	1.5	U			P
Potassium	ug/L		50	U	56	J	200		P
Selenium	ug/L		5	U	5	U			P
Silver	ug/L		1	U	1	U			P
Sodium	ug/L		100	U	100	U			P
Vanadium	ug/L		1	U	1	U			P
Zinc	ug/L		3.3	U	3.3	U			P

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** RE12-10-7298D

Sample ID: 243493001 **Duplicate ID:** 1202004442 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Antimony	ug/L		1	U	1	U			MS
Cadmium	ug/L		0.11	U	0.11	U			MS
Lead	ug/L		0.5	U	0.5	U			MS
Manganese	ug/L	+/-5	1.03	J	1.06	J	2.87		MS
Thallium	ug/L		0.3	U	0.3	U			MS
Uranium	ug/L		0.05	U	0.05	U			MS

Metals
-6-
Duplicate Sample Summary

SDG No.: 10-1037-1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** RE16-10-1012D

Sample ID: 243539001 **Duplicate ID:** 1202005777 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Mercury	ug/L		0.066	U	0.066	U			AV

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037–1

Contract: LANL01004 **Lab Code:** GEL

Matrix: LIQUID **Level:** Low **Client ID:** RE12–10–7298D

Sample ID: 243493001 **Duplicate ID:** 1202014494 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Beryllium	ug/L		0.1	U	0.1	U			MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037-1

Contract: LANL01004

Aqueous LCS Source: OS2I **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202004436								
	Aluminum	ug/L	5000	5230		105	80-120	P
	Arsenic	ug/L	500	528		106	80-120	P
	Barium	ug/L	500	538		108	80-120	P
	Calcium	ug/L	5000	5190		104	80-120	P
	Chromium	ug/L	500	515		103	80-120	P
	Cobalt	ug/L	500	507		101	80-120	P
	Copper	ug/L	500	518		104	80-120	P
	Iron	ug/L	5000	5380		108	80-120	P
	Magnesium	ug/L	5000	5260		105	80-120	P
	Nickel	ug/L	500	512		102	80-120	P
	Potassium	ug/L	5000	5360		107	80-120	P
	Selenium	ug/L	500	527		105	80-120	P
	Silver	ug/L	500	514		103	80-120	P
	Sodium	ug/L	5000	5500		110	80-120	P
	Vanadium	ug/L	500	524		105	80-120	P
	Zinc	ug/L	500	504		101	80-120	P

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037-1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202004441								
	Antimony	ug/L	50	57.2		114	80-120	MS
	Cadmium	ug/L	50	50.8		102	80-120	MS
	Lead	ug/L	50	59.6		119	80-120	MS
	Manganese	ug/L	50	56.9		114	80-120	MS
	Thallium	ug/L	50	55.6		111	80-120	MS
	Uranium	ug/L	50	59.5		119	80-120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037-1

Contract: LANL01004

Aqueous LCS Source: GEL **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202005776								
	Mercury	ug/L	2	2.1		105	80-120	AV

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037-1

Contract: LANL01004

Aqueous LCS Source: O2si **Solid LCS Source:**

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202014493								
	Beryllium	ug/L	50	55.3		111	80-120	MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1037-1 **Client ID** RE03-10-2750L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 243554001 **Serial Dilution ID:** 1202004439

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Aluminum	68	U	340	U				P
Arsenic	7.75	J	25	U	100			P
Barium	1	U	5	U				P
Calcium	50	U	250	U				P
Chromium	1	U	5	U				P
Cobalt	1	U	5	U				P
Copper	3	U	15	U				P
Iron	30	U	150	U				P
Magnesium	85	U	425	U				P
Nickel	1.5	U	7.5	U				P
Potassium	50	U	250	U				P
Selenium	5	U	25	U				P
Silver	1	U	5	U				P
Sodium	100	U	500	U				P
Vanadium	1	U	5	U				P
Zinc	3.3	U	16.5	U				P

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1037-1 **Client ID** RE12-10-7298L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 243493001 **Serial Dilution ID:** 1202004444

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Antimony	1	U	5	U				MS
Cadmium	.11	U	.55	U				MS
Lead	.5	U	2.5	U				MS
Manganese	1.03	J	5	U	100			MS
Thallium	.3	U	2.54	J				MS
Uranium	.05	U	.25	U				MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1037-1 **Client ID** RE16-10-1012L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 243539001 **Serial Dilution ID:** 1202005779

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Mercury	.066	U	.33	U				AV

METALS
–9–
Serial Dilution Sample Summary

SDG NO. 10–1037–1 **Client ID** RE12–10–7298L

Contract: LANL01004

Matrix: LIQUID **Level:** Low

Sample ID: 243493001 **Serial Dilution ID:** 1202014496

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Beryllium	.1	U	.5	U				MS

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1037-1 **Method Type:** P

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 936812							
1202004435	MB for batch 936812	MB	W	04-JAN-10	50mL	50mL	
1202004436	LCS for batch 936812	LCS	W	04-JAN-10	50mL	50mL	
1202004438	RE03-10-2750S	MS	W	04-JAN-10	50mL	50mL	
1202004437	RE03-10-2750D	DUP	W	04-JAN-10	50mL	50mL	
243493001	RE12-10-7298	SAMPLE	W	04-JAN-10	50mL	50mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1037-1 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 936814							
1202004440	MB for batch 936814	MB	W	04-JAN-10	50mL	50mL	
1202004441	LCS for batch 936814	LCS	W	04-JAN-10	50mL	50mL	
1202004443	RE12-10-7298S	MS	W	04-JAN-10	50mL	50mL	
1202004442	RE12-10-7298D	DUP	W	04-JAN-10	50mL	50mL	
243493001	RE12-10-7298	SAMPLE	W	04-JAN-10	50mL	50mL	
Batch Number 941230							
1202014492	MB for batch 941230	MB	W	13-JAN-10	25mL	25mL	
1202014493	LCS for batch 941230	LCS	W	13-JAN-10	25mL	25mL	
1202014495	RE12-10-7298S	MS	W	13-JAN-10	25mL	25mL	
1202014494	RE12-10-7298D	DUP	W	13-JAN-10	25mL	25mL	
243493001	RE12-10-7298	SAMPLE	W	13-JAN-10	25mL	25mL	

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1037-1 **Method Type:** AV

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 937341							
1202005775	MB for batch 937341	MB	W	29-DEC-09	20mL	20mL	
1202005776	LCS for batch 937341	LCS	W	29-DEC-09	20mL	20mL	
1202005778	RE16-10-1012S	MS	W	29-DEC-09	20mL	20mL	
1202005777	RE16-10-1012D	DUP	W	29-DEC-09	20mL	20mL	
243493001	RE12-10-7298	SAMPLE	W	29-DEC-09	20mL	20mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 06-JAN-10
End Date: 06-JAN-10
Client Sdg: 10-1037-1
Method MS
Data File: 100105-3

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	02:46		X				X																		
S10	1	02:52		X				X																		
S100	1	02:58		X				X																		
ICV01	1	03:04		X				X																		
ICB01	1	03:10		X				X																		
CRDL01	1	03:17		X				X																		
ICSA01	1	03:23		X				X																		
ICSAB01	1	03:29		X				X																		
CCV01	1	03:35		X				X																		
CCB01	1	03:41		X				X																		
LR01	1	03:47		X				X																		
CCV02	1	03:53		X				X																		
CCB02	1	03:59		X				X																		
ZZZZZZ	1	04:05																								
ZZZZZZ	1	04:12																								
ZZZZZZ	1	04:18																								
ZZZZZZ	1	04:24																								
ZZZZZZ	1	04:30																								
ZZZZZZ	1	04:36																								
ZZZZZZ	5	04:42																								
CCV03	1	04:49		X				X																		
CCB03	1	04:55		X				X																		
ZZZZZZ	1	05:01																								
ZZZZZZ	1	05:07																								
ZZZZZZ	1	05:13																								
ZZZZZZ	1	05:19																								
ZZZZZZ	1	05:26																								
ZZZZZZ	5	05:32																								
CCV04	1	05:38		X				X																		
CCB04	1	05:44		X				X																		
ZZZZZZ	1	05:50																								
ZZZZZZ	1	05:57																								
ZZZZZZ	1	06:03																								
CCV05	1	06:09		X				X																		
CCB05	1	06:15		X				X																		
1202004440	1	06:21		X				X																		
1202004441	1	06:27		X				X																		
243493001	1	06:33		X				X																		
1202004442	1	06:40		X				X																		
1202004443	1	06:46		X				X																		

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																							
1202004444	5	06:52		X				X																	
CCV06	1	06:58		X				X																	
CCB06	1	07:04		X				X																	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 07-JAN-10 **End Date:** 07-JAN-10

Client Sdg: 10-1037-1
Method MS
Data File: 100106-4

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	04:38														X										
S10	1	04:41														X										
S100	1	04:44														X										
ICV01	1	04:46														X										
ICB01	1	04:49														X										
CRDL01	1	04:51														X										
ICSA01	1	04:54														X										
ICSAB01	1	04:56														X										
CCV01	1	04:59														X										
CCB01	1	05:02														X										
1202004440	1	05:04														X										
1202004441	1	05:07														X										
243493001	1	05:09														X										
1202004442	1	05:12														X										
1202004443	1	05:14														X										
1202004444	5	05:17														X										
CCV02	1	05:20														X										
CCB02	1	05:22														X										

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 08–JAN–10 **End Date:** 08–JAN–10

Client Sdg: 10–1037–1
Method MS
Data File: 100108–5

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	11:44																					X	X		
S10	1	11:48																					X	X		
S100	1	11:53																					X	X		
ICV01	1	11:58																					X	X		
ICB01	1	12:02																					X	X		
CRDL01	1	12:07																					X	X		
ICSA01	1	12:12																					X	X		
ICSAB01	1	12:16																					X	X		
CCV01	1	12:21																					X	X		
CCB01	1	12:26																					X	X		
1202004440	1	12:31																					X	X		
1202004441	1	12:35																					X	X		
243493001	1	12:40																					X	X		
1202004442	1	12:45																					X	X		
1202004443	1	12:50																					X	X		
1202004444	5	12:55																					X	X		
CCV02	1	12:59																					X	X		
CCB02	1	13:04																					X	X		

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS5
Start Date: 14-JAN-10 **End Date:** 14-JAN-10

Client Sdg: 10-1037-1
Method MS
Data File: 100114-6

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	21:13					X																			
S10	1	21:19					X																			
S100	1	21:25					X																			
ICV01	1	21:31					X																			
ICB01	1	21:38					X																			
CRDL01	1	21:44					X																			
ICSA01	1	21:50					X																			
ICSAB01	1	21:56					X																			
CCV01	1	22:02					X																			
CCB01	1	22:08					X																			
LR01	1	22:14					X																			
CCV02	1	22:20					X																			
CCB02	1	22:26					X																			
1202014492	1	22:33					X																			
1202014493	1	22:39					X																			
243493001	1	22:45					X																			
1202014494	1	22:51					X																			
1202014495	1	22:57					X																			
1202014496	5	23:03					X																			
CCV03	1	23:10					X																			
CCB03	1	23:16					X																			

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: OPTIMA3
Start Date: 08–JAN–10 **End Date:** 08–JAN–10

Client Sdg: 10–1037–1
Method P
Data File: 010810–1

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	11:08	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S0.1	1	11:15			X	X				X	X	X						X	X	X	X				X	X
S0.5	1	11:21	X		X	X			X	X	X	X			X			X	X	X	X				X	X
SCAL	1	11:28	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
S10	1	11:35	X						X				X		X							X				
ICV01	1	11:40	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICB01	1	11:47	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
PQL01	1	11:54	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSA01	1	12:01	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ICSAB01	1	12:07	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR01	1	12:13	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
LR02	1	12:19	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV01	1	12:26	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB01	1	12:33	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202004435	1	12:43	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202004436	1	12:50	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
243493001	1	12:57	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
ZZZZZZ	1	13:03																								
1202004437	1	13:10	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202004438	1	13:17	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
1202004439	5	13:24	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCV02	1	13:31	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X
CCB02	1	13:37	X		X	X			X	X	X	X	X		X			X	X	X	X	X			X	X

Metals
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Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: HG3
Start Date: 30-DEC-09 **End Date:** 30-DEC-09

Client Sdg: 10-1037-1
Method AV
Data File: 123009W1-7

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	09:00															X									
S0.2	1	09:02															X									
S0.5	1	09:04															X									
S2.0	1	09:06															X									
S5.0	1	09:08															X									
S10.0	1	09:10															X									
ICV01	1	09:12															X									
ICB01	1	09:14															X									
CRDL01	1	09:16															X									
CCV01	1	09:18															X									
CCB01	1	09:20															X									
ZZZZZZ	1	09:22																								
ZZZZZZ	1	09:24																								
ZZZZZZ	1	09:25																								
ZZZZZZ	1	09:27																								
ZZZZZZ	1	09:29																								
ZZZZZZ	1	09:31																								
ZZZZZZ	1	09:33																								
ZZZZZZ	5	09:35																								
ZZZZZZ	1	09:37																								
ZZZZZZ	1	09:39																								
CCV02	1	09:41															X									
CCB02	1	09:43															X									
ZZZZZZ	1	09:45																								
ZZZZZZ	1	09:47																								
ZZZZZZ	1	09:49																								
ZZZZZZ	1	09:50																								
ZZZZZZ	1	09:52																								
ZZZZZZ	1	09:54																								
ZZZZZZ	1	09:56																								
ZZZZZZ	1	09:58																								
ZZZZZZ	5	10:00																								
ZZZZZZ	1	10:02																								
CCV03	1	10:04															X									
CCB03	1	10:06															X									
ZZZZZZ	1	10:08																								
ZZZZZZ	1	10:10																								
ZZZZZZ	1	10:12																								
ZZZZZZ	1	10:14																								
ZZZZZZ	1	10:15																								

Metals
-14-
Analysis Run Log

Samp No.	D/F	Run Time																								
ZZZZZZ	5	10:17																								
ZZZZZZ	1	10:19																								
ZZZZZZ	1	10:21																								
1202005775	1	10:23														X										
1202005776	1	10:25														X										
CCV04	1	10:27														X										
CCB04	1	10:29														X										
ZZZZZZ	1	10:31																								
ZZZZZZ	1	10:33																								
ZZZZZZ	1	10:35																								
243493001	1	10:37														X										
ZZZZZZ	1	10:39																								
ZZZZZZ	1	10:41																								
ZZZZZZ	1	10:42																								
ZZZZZZ	1	10:44																								
1202005777	1	10:46														X										
1202005778	1	10:48														X										
CCV05	1	10:50														X										
CCB05	1	10:52														X										
1202005779	5	10:54														X										
ZZZZZZ	1	10:56																								
ZZZZZZ	1	10:58																								
ZZZZZZ	1	11:00																								
ZZZZZZ	1	11:02																								
ZZZZZZ	1	11:04																								
ZZZZZZ	1	11:06																								
ZZZZZZ	5	11:08																								
ZZZZZZ	1	11:09																								
ZZZZZZ	1	11:11																								
CCV06	1	11:13														X										
CCB06	1	11:15														X										

Metals
–14–
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS3
Start Date: 08–JAN–10 **End Date:** 08–JAN–10

Client Sdg: 10–1037–1
Method MS
Data File: 100108–2

Samp No.	D/F	Run Time	Al	Sb	As	Ba	Be	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Hg	Ni	K	Se	Ag	Na	Tl	U	V	Zn
S0.0	1	15:20												X												
S10	1	15:22												X												
S100	1	15:25												X												
ICV01	1	15:27												X												
ICB01	1	15:29												X												
CRDL01	1	15:31												X												
ICSA01	1	15:33												X												
ICSAB01	1	15:35												X												
CCV01	1	15:38												X												
CCB01	1	15:40												X												
LR01	1	15:42												X												
CCV02	1	15:44												X												
CCB02	1	15:46												X												
ZZZZZZ	1	15:49																								
ZZZZZZ	1	15:51																								
ZZZZZZ	1	15:53																								
ZZZZZZ	1	15:55																								
ZZZZZZ	1	15:57																								
ZZZZZZ	5	16:00																								
ZZZZZZ	1	16:02																								
ZZZZZZ	1	16:04																								
ZZZZZZ	1	16:06																								
ZZZZZZ	1	16:08																								
CCV03	1	16:11												X												
CCB03	1	16:13												X												
ZZZZZZ	2	16:17																								
ZZZZZZ	2	16:20																								
ZZZZZZ	2	16:22																								
ZZZZZZ	10	16:24																								
ZZZZZZ	2	16:26																								
CCV04	1	16:28												X												
CCB04	1	16:31												X												
1202004440	1	16:34												X												
1202004441	1	16:36												X												
243493001	1	16:38												X												
1202004442	1	16:40												X												
1202004443	1	16:43												X												
1202004444	5	16:45												X												
CCV05	1	16:47												X												
CCB05	1	16:49												X												

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1037-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum		15.0	30
	Antimony		1.0	3
	Arsenic		1.6	5
	Barium		0.6	2
	Beryllium		0.1	.5
	Cadmium		0.11	1
	Calcium		65.0	200
	Chromium		2.0	10
	Cobalt		0.1	1
	Copper		0.33	1
	Iron		33.0	100
	Lead		0.5	2
	Magnesium		5.2	15
	Manganese		1.0	5
	Nickel		0.5	2
	Potassium		80.0	300
	Selenium		1.0	5
	Silver		0.2	1
	Sodium		80.0	250
	Thallium		0.3	1
	Uranium		0.05	.2
	Vanadium		3.0	10
	Zinc		3.0	10

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1037-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
MERCURY				
LIQUID	Mercury		0.066	.2

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1037-1

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
LIQUID	Aluminum	396.153	68.0	200
	Antimony	206.836	3.0	10
	Arsenic	188.979	5.0	30
	Barium	233.527	1.0	5
	Beryllium	313.107	1.0	5
	Cadmium	226.502	1.0	5
	Calcium	317.933	50.0	200
	Chromium	267.716	1.0	5
	Cobalt	228.616	1.0	5
	Copper	324.752	3.0	10
	Iron	238.204	30.0	100
	Lead	220.353	3.3	10
	Magnesium	279.077	85.0	300
	Manganese	257.61	2.0	10
	Nickel	231.604	1.5	5
	Potassium	766.49	50.0	150
	Selenium	196.026	5.0	30
	Silver	328.068	1.0	5
	Sodium	589.592	100	300
	Thallium	190.801	5.0	20
	Uranium	409.014	10.0	50
	Vanadium	292.402	1.0	5
	Zinc	213.857	3.3	10

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037-1
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Aluminum	Antimony	Arsenic	Barium	Beryllium
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.02738	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	-0.44940	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	-0.22121	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	-0.33886	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.13648	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	-0.05571	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.19671	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-0.02739	0.00000	0.00000	0.00000	0.00000
Tin	189.927	-0.00058	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037-1
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Boron	Cadmium	Chromium	Cobalt	Copper
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	24.5549	0.00000	0.00000
Arsenic	188.979	0.52529	0.00000	-0.67113	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	2.54031	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.38952	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	-31.5465	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.78023
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.63859	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	160.41
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	5.22870	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.35099	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	1.93161	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.39273	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	1.19810

METALS
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Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037-1
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Iron	Lead	Magnesium	Manganese	Molybdenum
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	42.8126
Antimony	206.836	-0.01635	0.00000	0.00000	0.00000	-22.2146
Arsenic	188.979	-0.21271	0.00000	0.00000	0.00000	1.34645
Barium	233.527	-0.03709	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.13266	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.09998	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	-0.01788	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.01425	0.00000	0.00000	0.00000	-2.64232
Copper	324.752	-0.05101	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.09069	0.00000	0.00000	0.00000	-2.44485
Magnesium	279.077	0.85543	0.00000	0.00000	0.00000	-20.2401
Manganese	257.61	-0.09972	0.00000	0.01862	0.00000	0.00000
Molybdenum	202.031	-0.07094	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.80633	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	-0.03176	0.00000	0.01823	12.4291	-3.60863
Selenium	196.026	-3.00009	0.00000	0.00000	0.00000	-3.17982
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	17.4444
Silver	328.068	-0.31825	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	-5.85948	0.00000
Tin	189.927	-0.01337	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.12581	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.15211	0.00000	-0.02256	0.00000	-14.2921
Zinc	213.857	0.09548	0.00000	0.03423	0.00000	0.00000

METALS
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Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037-1
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Nickel	Phosphorous	Potassium	Selenium	Silicon
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	0.00000
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	-0.64279	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.44040	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.33191	0.00000	0.00000
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	6.38465	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL **GEL Job No:** 10-1037-1
Contract: LANL01004
Instrument: OPTIMA3 **Effective Dates:** 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Silver	Strontium	Sulfur	Thallium	Tin
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	0.00000	0.00000	0.00000	0.00000	-17.4077
Arsenic	188.979	0.00000	0.00000	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	0.00000	0.00000	0.00000
Beryllium	313.107	0.00000	0.00000	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.00000	0.00000	0.00000	0.00000
Cobalt	228.616	0.00000	0.00000	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000	-13.8713
Potassium	766.49	0.00000	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000	3.10491
Silver	328.068	0.00000	0.00000	0.00000	0.00000	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	0.00000	0.00000	0.00000	0.00000	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.00000	0.00000	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	0.00000	0.00000	0.00000	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000	0.00000

METALS
-11-
Interelement Correction Factors

Lab Code: GEL
GEL Job No: 10-1037-1
Contract: LANL01004
Instrument: OPTIMA3
Effective Dates: 01-NOV-09
Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Parmname	Wavelength	Titanium	Uranium	Vanadium	Zinc
Aluminum	396.153	0.00000	0.00000	0.00000	0.00000
Antimony	206.836	2.73145	0.00000	-2.31857	0.00000
Arsenic	188.979	-8.38419	0.00000	0.00000	0.00000
Barium	233.527	0.00000	0.00000	-2.24883	0.00000
Beryllium	313.107	-1.96555	0.00000	0.00000	0.00000
Boron	249.677	0.00000	0.00000	0.00000	0.00000
Cadmium	226.502	0.00000	0.00000	0.00000	0.00000
Chromium	267.716	0.00000	0.32181	-1.76281	0.00000
Cobalt	228.616	2.12623	0.00000	0.00000	0.00000
Copper	324.752	0.00000	0.00000	0.00000	0.00000
Iron	238.204	0.00000	0.00000	0.00000	0.00000
Lead	220.353	0.00000	0.00000	0.00000	0.00000
Magnesium	279.077	0.00000	0.00000	0.00000	0.00000
Manganese	257.61	0.00000	0.00000	0.00000	0.00000
Molybdenum	202.031	0.00000	0.00000	0.00000	0.00000
Nickel	231.604	0.00000	0.00000	0.00000	0.00000
Phosphorous	214.914	0.00000	0.00000	0.00000	0.00000
Potassium	766.49	0.00000	0.00000	0.00000	0.00000
Selenium	196.026	0.00000	0.00000	0.00000	0.00000
Silicon	251.611	0.00000	0.00000	0.00000	0.00000
Silver	328.068	0.00000	0.85359	-3.92851	0.00000
Strontium	421.552	0.00000	0.00000	0.00000	0.00000
Sulfur	181.975	0.00000	0.00000	0.00000	0.00000
Thallium	190.801	-7.67419	0.00000	2.18873	0.00000
Tin	189.927	0.00000	0.00000	0.00000	0.00000
Titanium	334.94	0.00000	0.44145	0.00000	0.00000
Uranium	409.014	0.00000	0.00000	0.00000	0.00000
Vanadium	292.402	1.10141	-1.94183	0.00000	0.00000
Zinc	213.857	0.00000	0.00000	0.00000	0.00000

METALS
-12-
Linear Ranges

SDG NO. 10-1037-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS5

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Aluminum	1	50000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09

METALS
-12-
Linear Ranges

SDG NO. 10-1037-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID OPTIMA3

Analyte	Integration Time (sec)	LDR	Units	Effective Date
Aluminum	20	500000	ug/L	01-NOV-09
Antimony	20	10000	ug/L	01-NOV-09
Arsenic	20	10000	ug/L	01-NOV-09
Barium	20	15000	ug/L	01-NOV-09
Beryllium	20	3000	ug/L	01-NOV-09
Cadmium	20	10000	ug/L	01-NOV-09
Chromium	20	25000	ug/L	01-NOV-09
Cobalt	20	10000	ug/L	01-NOV-09
Copper	20	20000	ug/L	01-NOV-09
Iron	20	500000	ug/L	01-NOV-09
Lead	20	25000	ug/L	01-NOV-09
Magnesium	20	500000	ug/L	01-NOV-09
Manganese	20	10000	ug/L	01-NOV-09
Nickel	20	10000	ug/L	01-NOV-09
Potassium	20	300000	ug/L	01-NOV-09
Selenium	20	10000	ug/L	01-NOV-09
Silver	20	1000	ug/L	01-NOV-09
Sodium	20	500000	ug/L	01-NOV-09
Thallium	20	10000	ug/L	01-NOV-09
Uranium	20	15000	ug/L	01-NOV-09
Vanadium	20	10000	ug/L	01-NOV-09
Zinc	20	15000	ug/L	01-NOV-09
Calcium	20	500000	ug/L	01-NOV-09

METALS
-12-
Linear Ranges

SDG NO. 10-1037-1

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS3

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Barium	1000	1000	ug/L	01-NOV-09
Beryllium	1000	1000	ug/L	01-NOV-09
Cadmium	1000	1000	ug/L	01-NOV-09
Calcium	500	50000	ug/L	01-NOV-09
Chromium	1000	1000	ug/L	01-NOV-09
Cobalt	1000	1000	ug/L	01-NOV-09
Copper	1000	1000	ug/L	01-NOV-09
Iron	500	50000	ug/L	01-NOV-09
Lead	1000	5000	ug/L	01-NOV-09
Magnesium	1	50000	ug/L	01-NOV-09
Manganese	1000	1000	ug/L	01-NOV-09
Nickel	1000	1000	ug/L	01-NOV-09
Potassium	1	50000	ug/L	01-NOV-09
Selenium	1000	500	ug/L	01-NOV-09
Silver	1000	250	ug/L	01-NOV-09
Sodium	1	50000	ug/L	01-NOV-09
Thallium	1000	500	ug/L	01-NOV-09
Uranium	1000	5000	ug/L	01-NOV-09
Vanadium	1000	100	ug/L	01-NOV-09
Zinc	1000	2500	ug/L	01-NOV-09
Aluminum	1	50000	ug/L	01-NOV-09
Antimony	1000	250	ug/L	01-NOV-09
Arsenic	1000	1000	ug/L	01-NOV-09

Raw Data

1/8/2010 11:05:08 Hg ReAlign... Actual peak offset (nm): -0.009
Drift (nm): 0.000 Slit adjustment: -2

Analysis Begun

Start Time: 1/8/2010 11:08:19 **Plasma On Time: 1/4/2010 06:33:21**
Logged In Analyst: Optima3 **Technique: ICP Continuous**
Spectrometer Model: Optima 5300 DV, S/N 077C7090601 **Autosampler Model: S10**

Sample Information File: C:\pe\Optima3\Sample Information\010810.sif
Batch ID:
Results Data Set: 010810
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX **Method Last Saved: 1/7/2010 12:39:11**
IEC File: 101209.iec **MSF File:**
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 **Autosampler Location: 8**
Sample ID: S0 **Date Collected: 1/8/2010 11:08:21**
Analyst: **Data Type: Original**
Initial Sample Wt: **Initial Sample Vol:**
Dilution: **Sample Prep Vol:**

Replicate Data: S0

	Net	Corrected	Calib.	Analysis

Repl#	Analyte	Intensity	Intensity	Conc.	Units	Time
1	Sc Radial	4358.5	4358.5	99.1	%	11:10:13
1	Y RADIAL	4654.9	4654.9	99.34	%	11:10:13
1	Al 396.153Radial†	0.7	0.7	[0.00]	ug/L	11:10:13
1	Ca 317.933Radial†	13.5	13.6	[0.00]	ug/L	11:10:33
1	Fe 238.204 Radial†	9.7	9.7	[0.00]	ug/L	11:10:33
1	K 766.490 Radial†	3082.7	3110.1	[0.00]	ug/L	11:10:13
1	Mg 279.077 IEC†	4.1	4.2	[0.00]	ug/L	11:10:33
1	Na 589.592 Radial†	-1302.3	-1313.9	[0.00]	ug/L	11:10:13
1	Sr 421.552†	-1.1	-1.1	[0.00]	ug/L	11:10:13
1	Sc 361.383	853010.2	853010.2	99.767	%	11:11:30
1	Y 371.029	730210.9	730210.9	99.727	%	11:11:30
1	Ag 328.068†	515.5	516.7	[0.00]	ug/L	11:11:30
1	As 188.979†	-37.5	-37.6	[0.00]	ug/L	11:11:50
1	B 249.677†	-739.1	-740.8	[0.00]	ug/L	11:11:30
1	Ba 233.527†	-13.1	-13.1	[0.00]	ug/L	11:11:50
1	Be 313.107†	-4385.4	-4395.7	[0.00]	ug/L	11:11:30
1	Cd 226.502†	-247.7	-248.3	[0.00]	ug/L	11:11:50
1	Co 228.616†	-105.0	-105.2	[0.00]	ug/L	11:11:50
1	Cr 267.716†	90.5	90.7	[0.00]	ug/L	11:11:30
1	Cu 324.752†	8203.6	8222.7	[0.00]	ug/L	11:11:30
1	Mn 257.610†	624.1	625.6	[0.00]	ug/L	11:11:30
1	Mo 202.031†	21.2	21.2	[0.00]	ug/L	11:11:50
1	Ni 231.604†	122.8	123.1	[0.00]	ug/L	11:11:50
1	P 214.914†	253.9	254.5	[0.00]	ug/L	11:11:50
1	Pb 220.353†	-88.4	-88.6	[0.00]	ug/L	11:11:50
1	S 181.975 Axial†	65.3	65.4	[0.00]	ug/L	11:11:50
1	Sb 206.836†	40.1	40.2	[0.00]	ug/L	11:11:50
1	Se 196.026†	-32.8	-32.8	[0.00]	ug/L	11:11:50
1	Si 251.611†	584.0	585.3	[0.00]	ug/L	11:11:50
1	Sn 189.927†	7.1	7.1	[0.00]	ug/L	11:11:50
1	Ti 334.940†	-1730.8	-1734.9	[0.00]	ug/L	11:11:30
1	Tl 190.801†	-43.9	-44.0	[0.00]	ug/L	11:11:50
1	U 409.014†	-2555.0	-2560.9	[0.00]	ug/L	11:11:30
1	V 292.402†	-1787.4	-1791.5	[0.00]	ug/L	11:11:30
1	Zn 213.857†	830.7	832.6	[0.00]	ug/L	11:11:50
1	SiO2†	606.6	608.0	[0.00]	ug/L	11:12:47
2	Sc Radial	4409.2	4409.2	100	%	11:10:38
2	Y RADIAL	4698.5	4698.5	100.3	%	11:10:38
2	Al 396.153Radial†	9.0	9.0	[0.00]	ug/L	11:10:38
2	Ca 317.933Radial†	20.2	20.2	[0.00]	ug/L	11:10:59
2	Fe 238.204 Radial†	10.7	10.7	[0.00]	ug/L	11:10:59
2	K 766.490 Radial†	3104.0	3095.5	[0.00]	ug/L	11:10:38
2	Mg 279.077 IEC†	5.0	5.0	[0.00]	ug/L	11:10:59
2	Na 589.592 Radial†	-1344.4	-1340.7	[0.00]	ug/L	11:10:38
2	Sr 421.552†	-29.7	-29.6	[0.00]	ug/L	11:10:38
2	Sc 361.383	850519.2	850519.2	99.476	%	11:11:56
2	Y 371.029	727992.4	727992.4	99.424	%	11:11:56
2	Ag 328.068†	420.1	422.3	[0.00]	ug/L	11:11:56
2	As 188.979†	-29.6	-29.7	[0.00]	ug/L	11:12:16
2	B 249.677†	-784.8	-789.0	[0.00]	ug/L	11:11:56
2	Ba 233.527†	-14.1	-14.2	[0.00]	ug/L	11:12:16
2	Be 313.107†	-4375.4	-4398.5	[0.00]	ug/L	11:11:56
2	Cd 226.502†	-254.4	-255.7	[0.00]	ug/L	11:12:16
2	Co 228.616†	-97.8	-98.3	[0.00]	ug/L	11:12:16
2	Cr 267.716†	124.7	125.4	[0.00]	ug/L	11:11:56
2	Cu 324.752†	8223.1	8266.5	[0.00]	ug/L	11:11:56
2	Mn 257.610†	627.3	630.6	[0.00]	ug/L	11:11:56
2	Mo 202.031†	25.3	25.5	[0.00]	ug/L	11:12:16
2	Ni 231.604†	143.0	143.7	[0.00]	ug/L	11:12:16
2	P 214.914†	255.5	256.9	[0.00]	ug/L	11:12:16
2	Pb 220.353†	-88.2	-88.7	[0.00]	ug/L	11:12:16
2	S 181.975 Axial†	67.9	68.3	[0.00]	ug/L	11:12:16
2	Sb 206.836†	34.0	34.2	[0.00]	ug/L	11:12:16
2	Se 196.026†	-35.4	-35.6	[0.00]	ug/L	11:12:16
2	Si 251.611†	582.0	585.1	[0.00]	ug/L	11:12:16
2	Sn 189.927†	4.9	4.9	[0.00]	ug/L	11:12:16
2	Ti 334.940†	-1654.0	-1662.7	[0.00]	ug/L	11:11:56
2	Tl 190.801†	-46.9	-47.2	[0.00]	ug/L	11:12:16
2	U 409.014†	-2778.9	-2793.5	[0.00]	ug/L	11:11:56
2	V 292.402†	-1687.4	-1696.3	[0.00]	ug/L	11:11:56

2	Zn 213.857†	812.0	816.3	[0.00] ug/L	11:12:16
2	SiO2†	615.6	618.8	[0.00] ug/L	11:12:52
3	Sc Radial	4423.9	4423.9	101 %	11:11:04
3	Y RADIAL	4704.3	4704.3	100.4 %	11:11:04
3	Al 396.153Radial†	-8.8	-8.7	[0.00] ug/L	11:11:04
3	Ca 317.933Radial†	7.7	7.6	[0.00] ug/L	11:11:24
3	Fe 238.204 Radial†	8.1	8.0	[0.00] ug/L	11:11:24
3	K 766.490 Radial†	3194.4	3175.2	[0.00] ug/L	11:11:04
3	Mg 279.077 IEC†	3.5	3.5	[0.00] ug/L	11:11:24
3	Na 589.592 Radial†	-1370.6	-1362.3	[0.00] ug/L	11:11:04
3	Sr 421.552†	16.9	16.8	[0.00] ug/L	11:11:04
3	Sc 361.383	861476.1	861476.1	100.76 %	11:12:21
3	Y 371.029	738435.4	738435.4	100.85 %	11:12:21
3	Ag 328.068†	447.6	444.2	[0.00] ug/L	11:12:21
3	As 188.979†	-53.8	-53.4	[0.00] ug/L	11:12:41
3	B 249.677†	-830.0	-823.7	[0.00] ug/L	11:12:21
3	Ba 233.527†	4.9	4.9	[0.00] ug/L	11:12:41
3	Be 313.107†	-4404.1	-4371.0	[0.00] ug/L	11:12:21
3	Cd 226.502†	-229.6	-227.9	[0.00] ug/L	11:12:41
3	Co 228.616†	-97.0	-96.3	[0.00] ug/L	11:12:41
3	Cr 267.716†	131.7	130.7	[0.00] ug/L	11:12:21
3	Cu 324.752†	8170.5	8109.1	[0.00] ug/L	11:12:21
3	Mn 257.610†	646.3	641.5	[0.00] ug/L	11:12:21
3	Mo 202.031†	29.2	29.0	[0.00] ug/L	11:12:41
3	Ni 231.604†	114.7	113.9	[0.00] ug/L	11:12:41
3	P 214.914†	254.6	252.7	[0.00] ug/L	11:12:41
3	Pb 220.353†	-68.8	-68.3	[0.00] ug/L	11:12:41
3	S 181.975 Axial†	70.4	69.9	[0.00] ug/L	11:12:41
3	Sb 206.836†	38.3	38.0	[0.00] ug/L	11:12:41
3	Se 196.026†	-31.2	-30.9	[0.00] ug/L	11:12:41
3	Si 251.611†	591.6	587.2	[0.00] ug/L	11:12:41
3	Sn 189.927†	-1.2	-1.2	[0.00] ug/L	11:12:41
3	Ti 334.940†	-1763.4	-1750.1	[0.00] ug/L	11:12:21
3	Tl 190.801†	-38.7	-38.4	[0.00] ug/L	11:12:41
3	U 409.014†	-2633.9	-2614.1	[0.00] ug/L	11:12:21
3	V 292.402†	-1771.6	-1758.3	[0.00] ug/L	11:12:21
3	Zn 213.857†	820.6	814.4	[0.00] ug/L	11:12:41
3	SiO2†	613.1	608.5	[0.00] ug/L	11:12:57

Mean Data: S0

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	855001.8	5743.52	0.67%	100.00	%
Sc Radial	4397.2	34.32	0.78%	100	%
Y 371.029	732212.9	5501.82	0.75%	100.00	%
Y RADIAL	4685.9	26.98	0.58%	100.0	%
Ag 328.068†	461.1	49.40	10.71%	[0.00]	ug/L
Al 396.153Radial†	0.3	8.89	>999.9%	[0.00]	ug/L
As 188.979†	-40.3	12.03	29.88%	[0.00]	ug/L
B 249.677†	-784.5	41.64	5.31%	[0.00]	ug/L
Ba 233.527†	-7.5	10.71	143.77%	[0.00]	ug/L
Be 313.107†	-4388.4	15.13	0.34%	[0.00]	ug/L
Ca 317.933Radial†	13.8	6.27	45.45%	[0.00]	ug/L
Cd 226.502†	-244.0	14.39	5.90%	[0.00]	ug/L
Co 228.616†	-99.9	4.68	4.68%	[0.00]	ug/L
Cr 267.716†	115.6	21.71	18.78%	[0.00]	ug/L
Cu 324.752†	8199.4	81.24	0.99%	[0.00]	ug/L
Fe 238.204 Radial†	9.5	1.33	14.01%	[0.00]	ug/L
K 766.490 Radial†	3126.9	42.41	1.36%	[0.00]	ug/L
Mg 279.077 IEC†	4.2	0.79	18.75%	[0.00]	ug/L
Mn 257.610†	632.6	8.11	1.28%	[0.00]	ug/L
Mo 202.031†	25.2	3.86	15.32%	[0.00]	ug/L
Na 589.592 Radial†	-1339.0	24.26	1.81%	[0.00]	ug/L
Ni 231.604†	126.9	15.27	12.03%	[0.00]	ug/L
P 214.914†	254.7	2.11	0.83%	[0.00]	ug/L
Pb 220.353†	-81.8	11.77	14.38%	[0.00]	ug/L
S 181.975 Axial†	67.9	2.27	3.35%	[0.00]	ug/L
Sb 206.836†	37.4	3.03	8.08%	[0.00]	ug/L
Se 196.026†	-33.1	2.36	7.11%	[0.00]	ug/L
Si 251.611†	585.9	1.14	0.19%	[0.00]	ug/L

Sn 189.927†	3.6	4.31	118.95%	[0.00] ug/L
Sr 421.552†	-4.6	23.39	505.02%	[0.00] ug/L
Ti 334.940†	-1715.9	46.69	2.72%	[0.00] ug/L
Tl 190.801†	-43.2	4.46	10.33%	[0.00] ug/L
U 409.014†	-2656.2	121.88	4.59%	[0.00] ug/L
V 292.402†	-1748.7	48.32	2.76%	[0.00] ug/L
Zn 213.857†	821.1	10.02	1.22%	[0.00] ug/L
SiO2†	611.8	6.09	1.00%	[0.00] ug/L

Sequence No.: 2
Sample ID: S0.1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 1/8/2010 11:15:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.1

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4428.6	4428.6	101	%	11:17:04
1	Y RADIAL	4714.6	4714.6	100.6	%	11:17:04
1	K 766.490 Radial†	7781.3	4599.3	[1000]	ug/L	11:16:59
1	Sr 421.552†	13069.0	12981.1	[100]	ug/L	11:17:04
1	Sc 361.383	833997.8	833997.8	97.543	%	11:17:31
1	Y 371.029	725154.0	725154.0	99.036	%	11:17:31
1	Ag 328.068†	23418.3	23547.0	[100]	ug/L	11:17:31
1	As 188.979†	253.0	299.6	[100]	ug/L	11:17:51
1	B 249.677†	3853.1	4734.7	[100]	ug/L	11:17:31
1	Ba 233.527†	13568.5	13917.7	[100]	ug/L	11:17:31
1	Be 313.107†	291629.1	303362.1	[100]	ug/L	11:17:31
1	Cd 226.502†	10085.4	10583.4	[100]	ug/L	11:17:51
1	Co 228.616†	5193.3	5424.0	[100]	ug/L	11:17:51
1	Cr 267.716†	9916.7	10050.9	[100]	ug/L	11:17:31
1	Cu 324.752†	41261.3	34101.0	[100]	ug/L	11:17:31
1	Mn 257.610†	96264.4	98056.3	[100]	ug/L	11:17:31
1	Mo 202.031†	1604.9	1620.1	[100]	ug/L	11:17:51
1	Ni 231.604†	4672.1	4662.8	[100]	ug/L	11:17:51
1	P 214.914†	1260.9	1038.0	[500]	ug/L	11:17:51
1	Pb 220.353†	861.7	965.2	[100]	ug/L	11:17:51
1	S 181.975 Axial†	229.4	167.3	[200]	ug/L	11:17:51
1	Sb 206.836†	384.5	356.7	[100]	ug/L	11:17:51
1	Se 196.026†	164.0	201.2	[100]	ug/L	11:17:51
1	Si 251.611†	17621.1	17479.0	[500]	ug/L	11:17:31
1	Sn 189.927†	667.0	680.1	[100]	ug/L	11:17:51
1	Ti 334.940†	61245.8	64504.1	[100]	ug/L	11:17:31
1	Tl 190.801†	321.7	373.0	[100]	ug/L	11:17:51
1	U 409.014†	558.2	3228.4	[100]	ug/L	11:17:31
1	V 292.402†	13799.8	15896.0	[100]	ug/L	11:17:31
1	Zn 213.857†	12897.0	12400.7	[100]	ug/L	11:17:31
1	SiO2†	17790.4	17626.7	[1069.5]	ug/L	11:18:48
2	Sc Radial	4426.4	4426.4	101	%	11:17:14
2	Y RADIAL	4704.8	4704.8	100.4	%	11:17:14
2	K 766.490 Radial†	7769.2	4591.0	[1000]	ug/L	11:17:09
2	Sr 421.552†	13109.0	13026.9	[100]	ug/L	11:17:14
2	Sc 361.383	842101.5	842101.5	98.491	%	11:17:57
2	Y 371.029	733355.1	733355.1	100.16	%	11:17:57
2	Ag 328.068†	23713.8	23616.0	[100]	ug/L	11:17:57
2	As 188.979†	241.8	285.8	[100]	ug/L	11:18:17
2	B 249.677†	3961.7	4806.9	[100]	ug/L	11:17:57
2	Ba 233.527†	13719.5	13937.2	[100]	ug/L	11:17:57
2	Be 313.107†	295213.3	304124.1	[100]	ug/L	11:17:57
2	Cd 226.502†	10068.1	10466.3	[100]	ug/L	11:18:17
2	Co 228.616†	5184.2	5363.6	[100]	ug/L	11:18:17
2	Cr 267.716†	10047.8	10086.1	[100]	ug/L	11:17:57
2	Cu 324.752†	41881.1	34323.3	[100]	ug/L	11:17:57
2	Mn 257.610†	97314.5	98172.7	[100]	ug/L	11:17:57
2	Mo 202.031†	1611.4	1610.9	[100]	ug/L	11:18:17
2	Ni 231.604†	4666.9	4611.5	[100]	ug/L	11:18:17
2	P 214.914†	1253.8	1018.4	[500]	ug/L	11:18:17
2	Pb 220.353†	870.9	966.1	[100]	ug/L	11:18:17
2	S 181.975 Axial†	240.0	175.8	[200]	ug/L	11:18:17
2	Sb 206.836†	362.9	331.0	[100]	ug/L	11:18:17
2	Se 196.026†	169.9	205.7	[100]	ug/L	11:18:17
2	Si 251.611†	17860.8	17548.6	[500]	ug/L	11:17:57
2	Sn 189.927†	666.0	672.6	[100]	ug/L	11:18:17
2	Ti 334.940†	62126.7	64794.3	[100]	ug/L	11:17:57
2	Tl 190.801†	312.3	360.3	[100]	ug/L	11:18:17
2	U 409.014†	603.7	3269.2	[100]	ug/L	11:17:57

2	V 292.402†	13979.8	15942.7	[100] ug/L	11:17:57
2	Zn 213.857†	12995.8	12373.7	[100] ug/L	11:17:57
2	SiO2†	17675.3	17334.3	[1069.5] ug/L	11:18:53
3	Sc Radial	4334.3	4334.3	98.6 %	11:17:24
3	Y RADIAL	4611.8	4611.8	98.42 %	11:17:24
3	K 766.490 Radial†	7776.9	4762.8	[1000] ug/L	11:17:19
3	Sr 421.552†	12855.6	13046.7	[100] ug/L	11:17:24
3	Sc 361.383	838619.1	838619.1	98.084 %	11:18:22
3	Y 371.029	729737.6	729737.6	99.662 %	11:18:22
3	Ag 328.068†	24035.0	24043.4	[100] ug/L	11:18:22
3	As 188.979†	251.5	296.7	[100] ug/L	11:18:42
3	B 249.677†	3984.7	4847.0	[100] ug/L	11:18:22
3	Ba 233.527†	13873.6	14152.0	[100] ug/L	11:18:22
3	Be 313.107†	298626.8	308848.9	[100] ug/L	11:18:22
3	Cd 226.502†	10133.8	10575.8	[100] ug/L	11:18:42
3	Co 228.616†	5200.2	5401.7	[100] ug/L	11:18:42
3	Cr 267.716†	10186.0	10269.4	[100] ug/L	11:18:22
3	Cu 324.752†	42404.3	35033.3	[100] ug/L	11:18:22
3	Mn 257.610†	98333.1	99621.5	[100] ug/L	11:18:22
3	Mo 202.031†	1617.5	1623.9	[100] ug/L	11:18:42
3	Ni 231.604†	4665.7	4630.0	[100] ug/L	11:18:42
3	P 214.914†	1259.7	1029.6	[500] ug/L	11:18:42
3	Pb 220.353†	861.8	960.5	[100] ug/L	11:18:42
3	S 181.975 Axial†	243.6	180.4	[200] ug/L	11:18:42
3	Sb 206.836†	377.7	347.6	[100] ug/L	11:18:42
3	Se 196.026†	166.1	202.4	[100] ug/L	11:18:42
3	Si 251.611†	18062.5	17829.5	[500] ug/L	11:18:22
3	Sn 189.927†	678.5	688.1	[100] ug/L	11:18:42
3	Ti 334.940†	62781.0	65723.3	[100] ug/L	11:18:22
3	Tl 190.801†	304.8	353.9	[100] ug/L	11:18:42
3	U 409.014†	1024.0	3700.2	[100] ug/L	11:18:22
3	V 292.402†	14186.0	16211.8	[100] ug/L	11:18:22
3	Zn 213.857†	13121.9	12557.1	[100] ug/L	11:18:22
3	SiO2†	17706.0	17440.1	[1069.5] ug/L	11:18:58

Mean Data: S0.1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	838239.4	4065.19	0.48%	98.039	%
Sc Radial	4396.4	53.82	1.22%	100.0	%
Y 371.029	729415.6	4110.01	0.56%	99.618	%
Y RADIAL	4677.1	56.75	1.21%	99.81	%
Ag 328.068†	23735.5	268.91	1.13%	[100]	ug/L
As 188.979†	294.0	7.28	2.48%	[100]	ug/L
B 249.677†	4796.2	56.92	1.19%	[100]	ug/L
Ba 233.527†	14002.3	130.04	0.93%	[100]	ug/L
Be 313.107†	305445.1	2972.37	0.97%	[100]	ug/L
Cd 226.502†	10541.8	65.50	0.62%	[100]	ug/L
Co 228.616†	5396.4	30.55	0.57%	[100]	ug/L
Cr 267.716†	10135.4	117.31	1.16%	[100]	ug/L
Cu 324.752†	34485.8	486.94	1.41%	[100]	ug/L
K 766.490 Radial†	4651.0	96.89	2.08%	[1000]	ug/L
Mn 257.610†	98616.8	872.04	0.88%	[100]	ug/L
Mo 202.031†	1618.3	6.71	0.41%	[100]	ug/L
Ni 231.604†	4634.8	26.01	0.56%	[100]	ug/L
P 214.914†	1028.6	9.84	0.96%	[500]	ug/L
Pb 220.353†	963.9	3.01	0.31%	[100]	ug/L
S 181.975 Axial†	174.5	6.69	3.83%	[200]	ug/L
Sb 206.836†	345.1	13.04	3.78%	[100]	ug/L
Se 196.026†	203.1	2.31	1.14%	[100]	ug/L
Si 251.611†	17619.0	185.56	1.05%	[500]	ug/L
Sn 189.927†	680.3	7.80	1.15%	[100]	ug/L
Sr 421.552†	13018.2	33.68	0.26%	[100]	ug/L
Ti 334.940†	65007.2	636.88	0.98%	[100]	ug/L
Tl 190.801†	362.4	9.72	2.68%	[100]	ug/L
U 409.014†	3399.3	261.43	7.69%	[100]	ug/L
V 292.402†	16016.8	170.46	1.06%	[100]	ug/L
Zn 213.857†	12443.9	99.01	0.80%	[100]	ug/L
SiO2†	17467.0	148.03	0.85%	[1069.5]	ug/L

Sequence No.: 3
Sample ID: S0.5
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 1/8/2010 11:21:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S0.5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4383.4	4383.4	99.7	%	11:23:01
1	Y RADIAL	4647.2	4647.2	99.17	%	11:23:01
1	Al 396.153Radial†	5754.2	5772.0	[5000]	ug/L	11:23:01
1	Ca 317.933Radial†	2934.9	2930.3	[5000]	ug/L	11:23:21
1	K 766.490 Radial†	26732.9	23690.1	[5000]	ug/L	11:23:01
1	Mg 279.077 IEC†	156.6	152.9	[5000]	ug/L	11:23:21
1	Sr 421.552†	65450.4	65661.0	[500]	ug/L	11:23:01
1	Sc 361.383	877350.0	877350.0	102.61	%	11:24:20
1	Y 371.029	742812.1	742812.1	101.45	%	11:24:20
1	Ag 328.068†	116771.5	113336.0	[500]	ug/L	11:24:20
1	As 188.979†	1394.1	1398.8	[500]	ug/L	11:24:40
1	B 249.677†	23593.8	23777.3	[500]	ug/L	11:24:20
1	Ba 233.527†	68659.2	66917.7	[500]	ug/L	11:24:20
1	Be 313.107†	1517375.6	1483112.9	[500]	ug/L	11:24:20
1	Cd 226.502†	53261.4	52148.6	[500]	ug/L	11:24:20
1	Co 228.616†	26191.0	25623.8	[500]	ug/L	11:24:40
1	Cr 267.716†	49957.7	48569.5	[500]	ug/L	11:24:20
1	Cu 324.752†	178799.1	166045.3	[500]	ug/L	11:24:20
1	Mn 257.610†	482342.8	469423.8	[500]	ug/L	11:24:20
1	Mo 202.031†	7902.7	7676.2	[500]	ug/L	11:24:40
1	Ni 231.604†	22644.0	21940.3	[500]	ug/L	11:24:40
1	P 214.914†	5387.0	4995.1	[2500]	ug/L	11:24:40
1	Pb 220.353†	4728.7	4690.1	[500]	ug/L	11:24:40
1	S 181.975 Axial†	945.2	853.2	[1000]	ug/L	11:24:40
1	Sb 206.836†	1668.7	1588.8	[500]	ug/L	11:24:40
1	Se 196.026†	965.6	974.2	[500]	ug/L	11:24:40
1	Si 251.611†	88001.7	85174.2	[2500]	ug/L	11:24:20
1	Sn 189.927†	3318.2	3230.0	[500]	ug/L	11:24:40
1	Ti 334.940†	317487.2	311115.9	[500]	ug/L	11:24:20
1	Tl 190.801†	1769.3	1767.4	[500]	ug/L	11:24:40
1	U 409.014†	13783.5	16088.6	[500]	ug/L	11:24:20
1	V 292.402†	78104.0	77863.2	[500]	ug/L	11:24:20
1	Zn 213.857†	62622.6	60206.4	[500]	ug/L	11:24:20
1	SiO2†	88286.1	85425.5	[5347.5]	ug/L	11:25:40
2	Sc Radial	4468.8	4468.8	102	%	11:23:26
2	Y RADIAL	4755.9	4755.9	101.5	%	11:23:26
2	Al 396.153Radial†	5806.8	5713.4	[5000]	ug/L	11:23:26
2	Ca 317.933Radial†	2923.9	2863.2	[5000]	ug/L	11:23:46
2	K 766.490 Radial†	27260.8	23696.9	[5000]	ug/L	11:23:26
2	Mg 279.077 IEC†	156.3	149.6	[5000]	ug/L	11:23:46
2	Sr 421.552†	66680.3	65616.0	[500]	ug/L	11:23:26
2	Sc 361.383	878926.3	878926.3	102.80	%	11:24:47
2	Y 371.029	743845.7	743845.7	101.59	%	11:24:47
2	Ag 328.068†	116836.3	113194.9	[500]	ug/L	11:24:47
2	As 188.979†	1415.4	1417.1	[500]	ug/L	11:25:07
2	B 249.677†	23721.8	23860.5	[500]	ug/L	11:24:47
2	Ba 233.527†	68907.5	67039.3	[500]	ug/L	11:24:47
2	Be 313.107†	1521747.9	1484714.1	[500]	ug/L	11:24:47
2	Cd 226.502†	53564.8	52350.8	[500]	ug/L	11:24:47
2	Co 228.616†	26330.5	25713.7	[500]	ug/L	11:25:07
2	Cr 267.716†	50139.3	48658.9	[500]	ug/L	11:24:47
2	Cu 324.752†	178897.0	165828.0	[500]	ug/L	11:24:47
2	Mn 257.610†	483699.7	469900.8	[500]	ug/L	11:24:47
2	Mo 202.031†	7965.8	7723.8	[500]	ug/L	11:25:07
2	Ni 231.604†	22787.4	22040.3	[500]	ug/L	11:25:07
2	P 214.914†	5452.9	5049.8	[2500]	ug/L	11:25:07
2	Pb 220.353†	4778.7	4730.5	[500]	ug/L	11:25:07
2	S 181.975 Axial†	942.3	848.8	[1000]	ug/L	11:25:07
2	Sb 206.836†	1685.3	1602.0	[500]	ug/L	11:25:07

2	Se 196.026†	965.6	972.4	[500]	ug/L	11:25:07
2	Si 251.611†	88106.6	85122.4	[2500]	ug/L	11:24:47
2	Sn 189.927†	3348.9	3254.1	[500]	ug/L	11:25:07
2	Ti 334.940†	318095.1	311152.4	[500]	ug/L	11:24:47
2	Tl 190.801†	1782.6	1777.2	[500]	ug/L	11:25:07
2	U 409.014†	13696.3	15979.7	[500]	ug/L	11:24:47
2	V 292.402†	78383.1	77998.2	[500]	ug/L	11:24:47
2	Zn 213.857†	62797.8	60267.3	[500]	ug/L	11:24:47
2	SiO2†	87508.1	84514.3	[5347.5]	ug/L	11:25:45
3	Sc Radial	4409.3	4409.3	100	%	11:23:51
3	Y RADIAL	4666.3	4666.3	99.58	%	11:23:51
3	Al 396.153Radial†	5752.9	5736.8	[5000]	ug/L	11:23:51
3	Ca 317.933Radial†	2907.1	2885.3	[5000]	ug/L	11:24:11
3	K 766.490 Radial†	26822.8	23622.1	[5000]	ug/L	11:23:51
3	Mg 279.077 IEC†	151.7	147.0	[5000]	ug/L	11:24:11
3	Sr 421.552†	65504.5	65329.0	[500]	ug/L	11:23:51
3	Sc 361.383	869075.4	869075.4	101.65	%	11:25:15
3	Y 371.029	735774.2	735774.2	100.49	%	11:25:15
3	Ag 328.068†	115434.4	113104.0	[500]	ug/L	11:25:15
3	As 188.979†	1417.5	1434.8	[500]	ug/L	11:25:35
3	B 249.677†	23396.4	23802.0	[500]	ug/L	11:25:15
3	Ba 233.527†	67844.0	66752.8	[500]	ug/L	11:25:15
3	Be 313.107†	1500930.6	1481013.3	[500]	ug/L	11:25:15
3	Cd 226.502†	52604.1	51996.2	[500]	ug/L	11:25:15
3	Co 228.616†	26464.5	26135.9	[500]	ug/L	11:25:35
3	Cr 267.716†	49478.1	48561.3	[500]	ug/L	11:25:15
3	Cu 324.752†	176896.0	165831.9	[500]	ug/L	11:25:15
3	Mn 257.610†	476608.5	468257.9	[500]	ug/L	11:25:15
3	Mo 202.031†	8020.3	7865.2	[500]	ug/L	11:25:35
3	Ni 231.604†	22899.7	22402.0	[500]	ug/L	11:25:35
3	P 214.914†	5452.5	5109.6	[2500]	ug/L	11:25:35
3	Pb 220.353†	4774.8	4779.4	[500]	ug/L	11:25:35
3	S 181.975 Axial†	953.0	869.7	[1000]	ug/L	11:25:35
3	Sb 206.836†	1695.4	1630.5	[500]	ug/L	11:25:35
3	Se 196.026†	977.3	994.6	[500]	ug/L	11:25:35
3	Si 251.611†	86966.7	84972.5	[2500]	ug/L	11:25:15
3	Sn 189.927†	3356.9	3298.9	[500]	ug/L	11:25:35
3	Ti 334.940†	313988.8	310620.0	[500]	ug/L	11:25:15
3	Tl 190.801†	1790.9	1805.1	[500]	ug/L	11:25:35
3	U 409.014†	13533.9	15971.0	[500]	ug/L	11:25:15
3	V 292.402†	77356.2	77852.3	[500]	ug/L	11:25:15
3	Zn 213.857†	61797.6	59975.7	[500]	ug/L	11:25:15
3	SiO2†	86707.7	84691.7	[5347.5]	ug/L	11:25:51

Mean Data: S0.5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	875117.2	5291.41	0.60%	102.35	%
Sc Radial	4420.5	43.80	0.99%	101	%
Y 371.029	740810.7	4392.24	0.59%	101.17	%
Y RADIAL	4689.8	58.06	1.24%	100.1	%
Ag 328.068†	113211.6	116.89	0.10%	[500]	ug/L
Al 396.153Radial†	5740.7	29.48	0.51%	[5000]	ug/L
As 188.979†	1416.9	17.97	1.27%	[500]	ug/L
B 249.677†	23813.3	42.75	0.18%	[500]	ug/L
Ba 233.527†	66903.3	143.78	0.21%	[500]	ug/L
Be 313.107†	1482946.8	1855.98	0.13%	[500]	ug/L
Ca 317.933Radial†	2892.9	34.20	1.18%	[5000]	ug/L
Cd 226.502†	52165.2	177.86	0.34%	[500]	ug/L
Co 228.616†	25824.4	273.43	1.06%	[500]	ug/L
Cr 267.716†	48596.6	54.15	0.11%	[500]	ug/L
Cu 324.752†	165901.7	124.34	0.07%	[500]	ug/L
K 766.490 Radial†	23669.7	41.33	0.17%	[5000]	ug/L
Mg 279.077 IEC†	149.8	2.93	1.96%	[5000]	ug/L
Mn 257.610†	469194.2	845.19	0.18%	[500]	ug/L
Mo 202.031†	7755.0	98.29	1.27%	[500]	ug/L
Ni 231.604†	22127.5	242.91	1.10%	[500]	ug/L
P 214.914†	5051.5	57.28	1.13%	[2500]	ug/L
Pb 220.353†	4733.3	44.70	0.94%	[500]	ug/L
S 181.975 Axial†	857.3	11.01	1.28%	[1000]	ug/L

Sb 206.836†	1607.1	21.32	1.33%	[500] ug/L
Se 196.026†	980.4	12.33	1.26%	[500] ug/L
Si 251.611†	85089.7	104.76	0.12%	[2500] ug/L
Sn 189.927†	3261.0	34.94	1.07%	[500] ug/L
Sr 421.552†	65535.3	180.10	0.27%	[500] ug/L
Ti 334.940†	310962.8	297.40	0.10%	[500] ug/L
Tl 190.801†	1783.2	19.53	1.10%	[500] ug/L
U 409.014†	16013.1	65.56	0.41%	[500] ug/L
V 292.402†	77904.6	81.26	0.10%	[500] ug/L
Zn 213.857†	60149.8	153.81	0.26%	[500] ug/L
SiO2†	84877.2	483.05	0.57%	[5347.5] ug/L

Sequence No.: 4
Sample ID: SCAL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 1/8/2010 11:28:01
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: SCAL

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4320.1	4320.1	98.2	%	11:29:54
1	Y RADIAL	4568.0	4568.0	97.48	%	11:29:54
1	Al 396.153Radial†	11129.6	11327.7	[10000]	ug/L	11:29:54
1	Ca 317.933Radial†	5722.6	5810.8	[10000]	ug/L	11:29:54
1	Fe 238.204 Radial†	1005.7	1014.1	[10000]	ug/L	11:30:14
1	K 766.490 Radial†	49339.4	47092.3	[10000]	ug/L	11:29:54
1	Mg 279.077 IEC†	297.2	298.3	[10000]	ug/L	11:30:14
1	Na 589.592 Radial†	26383.0	28192.5	[10000]	ug/L	11:29:54
1	Sr 421.552†	125639.8	127884.8	[1000]	ug/L	11:29:54
1	Sc 361.383	843449.9	843449.9	98.649	%	11:31:18
1	Y 371.029	716720.4	716720.4	97.884	%	11:31:18
1	Ag 328.068†	230127.6	232818.4	[1000]	ug/L	11:31:18
1	As 188.979†	2773.0	2851.3	[1000]	ug/L	11:31:38
1	B 249.677†	47097.4	48526.9	[1000]	ug/L	11:31:18
1	Ba 233.527†	134106.0	135950.2	[1000]	ug/L	11:31:18
1	Be 313.107†	2966055.4	3011067.1	[1000]	ug/L	11:31:12
1	Cd 226.502†	103666.1	105329.8	[1000]	ug/L	11:31:18
1	Co 228.616†	52385.8	53203.2	[1000]	ug/L	11:31:18
1	Cr 267.716†	97762.8	98986.1	[1000]	ug/L	11:31:18
1	Cu 324.752†	342284.9	338773.4	[1000]	ug/L	11:31:18
1	Mn 257.610†	940923.8	953178.2	[1000]	ug/L	11:31:12
1	Mo 202.031†	15652.8	15842.0	[1000]	ug/L	11:31:38
1	Ni 231.604†	44954.5	45443.3	[1000]	ug/L	11:31:18
1	P 214.914†	10321.1	10207.7	[5000]	ug/L	11:31:38
1	Pb 220.353†	9302.0	9511.3	[1000]	ug/L	11:31:38
1	S 181.975 Axial†	1806.6	1763.5	[2000]	ug/L	11:31:38
1	Sb 206.836†	3312.6	3320.6	[1000]	ug/L	11:31:38
1	Se 196.026†	1909.6	1968.9	[1000]	ug/L	11:31:38
1	Si 251.611†	172162.2	173934.3	[5000]	ug/L	11:31:18
1	Sn 189.927†	6613.7	6700.7	[1000]	ug/L	11:31:38
1	Ti 334.940†	631376.5	641739.8	[1000]	ug/L	11:31:12
1	Tl 190.801†	3529.2	3620.7	[1000]	ug/L	11:31:38
1	U 409.014†	31026.6	34107.8	[1000]	ug/L	11:31:18
1	V 292.402†	155412.8	159290.1	[1000]	ug/L	11:31:18
1	Zn 213.857†	120221.4	121046.8	[1000]	ug/L	11:31:18
1	SiO2†	172856.8	174612.4	[10695]	ug/L	11:32:47
2	Sc Radial	4316.7	4316.7	98.2	%	11:30:19
2	Y RADIAL	4577.0	4577.0	97.68	%	11:30:19
2	Al 396.153Radial†	11180.1	11388.2	[10000]	ug/L	11:30:19
2	Ca 317.933Radial†	5739.8	5833.1	[10000]	ug/L	11:30:19
2	Fe 238.204 Radial†	1004.6	1013.8	[10000]	ug/L	11:30:39
2	K 766.490 Radial†	49385.7	47179.8	[10000]	ug/L	11:30:19
2	Mg 279.077 IEC†	293.8	295.1	[10000]	ug/L	11:30:39
2	Na 589.592 Radial†	26536.0	28369.8	[10000]	ug/L	11:30:19
2	Sr 421.552†	126057.4	128412.8	[1000]	ug/L	11:30:19
2	Sc 361.383	856358.7	856358.7	100.16	%	11:31:49
2	Y 371.029	727387.2	727387.2	99.341	%	11:31:49
2	Ag 328.068†	234266.9	233434.6	[1000]	ug/L	11:31:49
2	As 188.979†	2767.1	2803.0	[1000]	ug/L	11:32:10
2	B 249.677†	48225.7	48933.8	[1000]	ug/L	11:31:49
2	Ba 233.527†	136229.5	136021.1	[1000]	ug/L	11:31:49
2	Be 313.107†	2926049.5	2925801.5	[1000]	ug/L	11:31:44
2	Cd 226.502†	104906.4	104984.1	[1000]	ug/L	11:31:49
2	Co 228.616†	53188.4	53204.1	[1000]	ug/L	11:31:49
2	Cr 267.716†	98920.1	98647.7	[1000]	ug/L	11:31:49
2	Cu 324.752†	350359.8	341605.2	[1000]	ug/L	11:31:49
2	Mn 257.610†	929625.5	927519.9	[1000]	ug/L	11:31:44
2	Mo 202.031†	15635.3	15585.3	[1000]	ug/L	11:32:10
2	Ni 231.604†	45545.2	45346.1	[1000]	ug/L	11:31:49

2	P 214.914†	10355.8	10084.7	[5000] ug/L	11:32:10
2	Pb 220.353†	9312.3	9379.4	[1000] ug/L	11:32:10
2	S 181.975 Axial†	1796.5	1725.8	[2000] ug/L	11:32:10
2	Sb 206.836†	3309.9	3267.2	[1000] ug/L	11:32:10
2	Se 196.026†	1902.9	1933.0	[1000] ug/L	11:32:10
2	Si 251.611†	175382.9	174519.2	[5000] ug/L	11:31:49
2	Sn 189.927†	6588.0	6573.9	[1000] ug/L	11:32:10
2	Ti 334.940†	623833.3	624560.7	[1000] ug/L	11:31:44
2	Tl 190.801†	3531.8	3569.4	[1000] ug/L	11:32:10
2	U 409.014†	31679.2	34285.2	[1000] ug/L	11:31:49
2	V 292.402†	157836.2	159334.8	[1000] ug/L	11:31:49
2	Zn 213.857†	122177.9	121163.2	[1000] ug/L	11:31:49
2	SiO2†	171371.3	170488.0	[10695] ug/L	11:32:52
3	Sc Radial	4363.3	4363.3	99.2 %	11:30:44
3	Y RADIAL	4637.4	4637.4	98.97 %	11:30:44
3	Al 396.153Radial†	11266.5	11353.7	[10000] ug/L	11:30:44
3	Ca 317.933Radial†	5806.7	5838.0	[10000] ug/L	11:30:44
3	Fe 238.204 Radial†	1000.9	999.2	[10000] ug/L	11:31:04
3	K 766.490 Radial†	49976.3	47237.5	[10000] ug/L	11:30:44
3	Mg 279.077 IEC†	295.0	293.0	[10000] ug/L	11:31:04
3	Na 589.592 Radial†	26782.3	28329.2	[10000] ug/L	11:30:44
3	Sr 421.552†	127282.0	128275.1	[1000] ug/L	11:30:44
3	Sc 361.383	850035.6	850035.6	99.419 %	11:32:21
3	Y 371.029	722576.6	722576.6	98.684 %	11:32:21
3	Ag 328.068†	232106.3	233001.3	[1000] ug/L	11:32:21
3	As 188.979†	2779.4	2835.9	[1000] ug/L	11:32:41
3	B 249.677†	47759.3	48822.8	[1000] ug/L	11:32:21
3	Ba 233.527†	135015.6	135811.9	[1000] ug/L	11:32:21
3	Be 313.107†	2964695.2	2986404.5	[1000] ug/L	11:32:16
3	Cd 226.502†	104407.5	105261.4	[1000] ug/L	11:32:21
3	Co 228.616†	52675.2	53082.9	[1000] ug/L	11:32:21
3	Cr 267.716†	98468.8	98928.5	[1000] ug/L	11:32:21
3	Cu 324.752†	345801.7	339622.6	[1000] ug/L	11:32:21
3	Mn 257.610†	940820.3	945684.4	[1000] ug/L	11:32:16
3	Mo 202.031†	15609.2	15675.2	[1000] ug/L	11:32:41
3	Ni 231.604†	45241.4	45378.8	[1000] ug/L	11:32:21
3	P 214.914†	10320.0	10125.6	[5000] ug/L	11:32:41
3	Pb 220.353†	9302.9	9439.1	[1000] ug/L	11:32:41
3	S 181.975 Axial†	1801.9	1744.5	[2000] ug/L	11:32:41
3	Sb 206.836†	3318.4	3300.4	[1000] ug/L	11:32:41
3	Se 196.026†	1903.8	1948.1	[1000] ug/L	11:32:41
3	Si 251.611†	173590.2	174018.5	[5000] ug/L	11:32:21
3	Sn 189.927†	6593.8	6628.7	[1000] ug/L	11:32:41
3	Ti 334.940†	631533.2	636938.7	[1000] ug/L	11:32:16
3	Tl 190.801†	3523.7	3587.5	[1000] ug/L	11:32:41
3	U 409.014†	31036.6	33874.1	[1000] ug/L	11:32:21
3	V 292.402†	156783.1	159447.8	[1000] ug/L	11:32:21
3	Zn 213.857†	121221.4	121108.6	[1000] ug/L	11:32:21
3	SiO2†	172748.1	173145.5	[10695] ug/L	11:32:58

Mean Data: SCAL

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	849948.1	6454.88	0.76%	99.409	%
Sc Radial	4333.4	25.97	0.60%	98.5	%
Y 371.029	722228.1	5341.95	0.74%	98.636	%
Y RADIAL	4594.2	37.73	0.82%	98.04	%
Ag 328.068†	233084.8	316.52	0.14%	[1000]	ug/L
Al 396.153Radial†	11356.5	30.36	0.27%	[10000]	ug/L
As 188.979†	2830.0	24.66	0.87%	[1000]	ug/L
B 249.677†	48761.2	210.34	0.43%	[1000]	ug/L
Ba 233.527†	135927.7	106.42	0.08%	[1000]	ug/L
Be 313.107†	2974424.4	43877.09	1.48%	[1000]	ug/L
Ca 317.933Radial†	5827.3	14.47	0.25%	[10000]	ug/L
Cd 226.502†	105191.8	183.10	0.17%	[1000]	ug/L
Co 228.616†	53163.4	69.74	0.13%	[1000]	ug/L
Cr 267.716†	98854.1	181.04	0.18%	[1000]	ug/L
Cu 324.752†	340000.4	1453.20	0.43%	[1000]	ug/L
Fe 238.204 Radial†	1009.1	8.53	0.84%	[10000]	ug/L
K 766.490 Radial†	47169.8	73.10	0.15%	[10000]	ug/L

Mg 279.077 IEC†	295.5	2.65	0.90%	[10000] ug/L
Mn 257.610†	942127.5	13193.76	1.40%	[1000] ug/L
Mo 202.031†	15700.8	130.26	0.83%	[1000] ug/L
Na 589.592 Radial†	28297.2	92.93	0.33%	[10000] ug/L
Ni 231.604†	45389.4	49.44	0.11%	[1000] ug/L
P 214.914†	10139.3	62.66	0.62%	[5000] ug/L
Pb 220.353†	9443.3	66.06	0.70%	[1000] ug/L
S 181.975 Axial†	1744.6	18.87	1.08%	[2000] ug/L
Sb 206.836†	3296.0	26.94	0.82%	[1000] ug/L
Se 196.026†	1950.0	18.04	0.93%	[1000] ug/L
Si 251.611†	174157.3	316.17	0.18%	[5000] ug/L
Sn 189.927†	6634.4	63.56	0.96%	[1000] ug/L
Sr 421.552†	128190.9	273.93	0.21%	[1000] ug/L
Ti 334.940†	634413.1	8863.65	1.40%	[1000] ug/L
Tl 190.801†	3592.5	26.04	0.72%	[1000] ug/L
U 409.014†	34089.0	206.17	0.60%	[1000] ug/L
V 292.402†	159357.6	81.29	0.05%	[1000] ug/L
Zn 213.857†	121106.2	58.23	0.05%	[1000] ug/L
SiO2†	172748.6	2090.67	1.21%	[10695] ug/L

Sequence No.: 5
Sample ID: S10
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 1/8/2010 11:35:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: S10

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Analysis Time
1	Sc Radial	4302.1	4302.1	97.8	%	11:37:22
1	Y RADIAL	4570.3	4570.3	97.53	%	11:37:22
1	Al 396.153Radial†	56371.4	57616.4	[50000]	ug/L	11:37:02
1	Ca 317.933Radial†	28409.1	29023.0	[50000]	ug/L	11:37:02
1	Fe 238.204 Radial†	1992.1	2026.6	[20000]	ug/L	11:37:22
1	Mg 279.077 IEC†	1433.0	1460.4	[50000]	ug/L	11:37:22
1	Na 589.592 Radial†	55944.5	58519.4	[20000]	ug/L	11:37:02
1	Sc 361.383	843837.0	843837.0	98.694	%	11:38:19
1	Y 371.029	710464.8	710464.8	97.030	%	11:38:19
2	Sc Radial	4278.2	4278.2	97.3	%	11:37:47
2	Y RADIAL	4536.1	4536.1	96.80	%	11:37:47
2	Al 396.153Radial†	56425.9	57994.2	[50000]	ug/L	11:37:27
2	Ca 317.933Radial†	28359.7	29134.3	[50000]	ug/L	11:37:27
2	Fe 238.204 Radial†	1981.0	2026.6	[20000]	ug/L	11:37:47
2	Mg 279.077 IEC†	1421.5	1456.8	[50000]	ug/L	11:37:47
2	Na 589.592 Radial†	55560.3	58443.9	[20000]	ug/L	11:37:27
2	Sc 361.383	853963.3	853963.3	99.879	%	11:38:25
2	Y 371.029	720016.2	720016.2	98.334	%	11:38:25
3	Sc Radial	4328.8	4328.8	98.4	%	11:38:12
3	Y RADIAL	4592.5	4592.5	98.01	%	11:38:12
3	Al 396.153Radial†	56345.4	57235.7	[50000]	ug/L	11:37:52
3	Ca 317.933Radial†	28445.9	28881.7	[50000]	ug/L	11:37:52
3	Fe 238.204 Radial†	1990.8	2012.8	[20000]	ug/L	11:38:12
3	Mg 279.077 IEC†	1431.0	1449.4	[50000]	ug/L	11:38:12
3	Na 589.592 Radial†	55641.6	57860.1	[20000]	ug/L	11:37:52
3	Sc 361.383	851572.5	851572.5	99.599	%	11:38:30
3	Y 371.029	717867.0	717867.0	98.041	%	11:38:30

Mean Data: S10

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Sc 361.383	849790.9	5293.02	0.62%	99.391	%
Sc Radial	4303.0	25.27	0.59%	97.9	%
Y 371.029	716116.0	5010.65	0.70%	97.802	%
Y RADIAL	4566.3	28.41	0.62%	97.45	%
Al 396.153Radial†	57615.5	379.28	0.66%	[50000]	ug/L
Ca 317.933Radial†	29013.0	126.60	0.44%	[50000]	ug/L
Fe 238.204 Radial†	2022.0	7.98	0.39%	[20000]	ug/L
Mg 279.077 IEC†	1455.5	5.61	0.39%	[50000]	ug/L
Na 589.592 Radial†	58274.5	360.82	0.62%	[20000]	ug/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	3	Lin Thru 0	0.0	231.8	0.00000	0.999932	
Al 396.153Radial	3	Lin Thru 0	0.0	1.152	0.00000	0.999996	
As 188.979	3	Lin Thru 0	0.0	2.832	0.00000	0.999994	
B 249.677	3	Lin Thru 0	0.0	48.53	0.00000	0.999956	
Ba 233.527	3	Lin Thru 0	0.0	135.5	0.00000	0.999976	
Be 313.107	3	Lin Thru 0	0.0	2973	0.00000	0.999996	
Ca 317.933Radial	3	Lin Thru 0	0.0	0.5803	0.00000	1.000000	
Cd 226.502	3	Lin Thru 0	0.0	105.0	0.00000	0.999995	
Co 228.616	3	Lin Thru 0	0.0	52.87	0.00000	0.999933	
Cr 267.716	3	Lin Thru 0	0.0	98.54	0.00000	0.999974	
Cu 324.752	3	Lin Thru 0	0.0	338.4	0.00000	0.999952	
Fe 238.204 Radia	2	Lin Thru 0	0.0	0.1011	0.00000	1.000000	
K 766.490 Radial	3	Lin Thru 0	0.0	4.720	0.00000	0.999998	

Mg 279.077 IEC	3	Lin Thru 0	0.0	0.0291	0.00000	0.999992
Mn 257.610	3	Lin Thru 0	0.0	941.7	0.00000	0.999990
Mo 202.031	3	Lin Thru 0	0.0	15.67	0.00000	0.999984
Na 589.592 Radia	2	Lin Thru 0	0.0	2.897	0.00000	0.999933
Ni 231.604	3	Lin Thru 0	0.0	45.17	0.00000	0.999947
P 214.914	3	Lin Thru 0	0.0	2.027	0.00000	0.999998
Pb 220.353	3	Lin Thru 0	0.0	9.449	0.00000	0.999998
S 181.975 Axial	3	Lin Thru 0	0.0	0.8693	0.00000	0.999976
Sb 206.836	3	Lin Thru 0	0.0	3.281	0.00000	0.999940
Se 196.026	3	Lin Thru 0	0.0	1.953	0.00000	0.999991
Si 251.611	3	Lin Thru 0	0.0	34.68	0.00000	0.999957
Sn 189.927	3	Lin Thru 0	0.0	6.613	0.00000	0.999974
Sr 421.552	3	Lin Thru 0	0.0	128.8	0.00000	0.999960
Ti 334.940	3	Lin Thru 0	0.0	632.1	0.00000	0.999966
Tl 190.801	3	Lin Thru 0	0.0	3.588	0.00000	0.999995
U 409.014	3	Lin Thru 0	0.0	33.68	0.00000	0.999702
V 292.402	3	Lin Thru 0	0.0	158.7	0.00000	0.999960
Zn 213.857	3	Lin Thru 0	0.0	121.0	0.00000	0.999993
SiO2	3	Lin Thru 0	0.0	16.10	0.00000	0.999975

Sequence No.: 6
Sample ID: ICV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 9
Date Collected: 1/8/2010 11:40:42
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICV

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4391.3	4391.3	99.9	%			11:42:35
1	Y RADIAL	4688.9	4688.9	100.1	%			11:42:35
1	Al 396.153Radial†	5699.8	5707.1	4932.6	ug/L	4932.6	ppb	11:42:35
1	Ca 317.933Radial†	2828.1	2818.1	4855.9	ug/L	4855.9	ppb	11:42:55
1	Fe 238.204 Radial†	505.8	497.0	4933.2	ug/L	4933.2	ppb	11:42:55
1	K 766.490 Radial†	14635.0	11527.7	2437.3	ug/L	2437.3	ppb	11:42:35
1	Mg 279.077 IEC†	154.1	150.1	5159.6	ug/L	5159.6	ppb	11:42:55
1	Na 589.592 Radial†	5635.8	6982.3	2410.3	ug/L	2410.3	ppb	11:42:35
1	Sr 421.552†	67025.1	67119.5	521.16	ug/L	521.16	ppb	11:42:35
1	Sc 361.383	864428.1	864428.1	101.10	%			11:43:52
1	Y 371.029	733086.4	733086.4	100.12	%			11:43:52
1	Ag 328.068†	58741.8	57640.1	251.76	ug/L	251.76	ppb	11:43:52
1	As 188.979†	1314.3	1340.2	477.44	ug/L	477.44	ppb	11:44:12
1	B 249.677†	23712.5	24238.4	497.54	ug/L	497.54	ppb	11:43:52
1	Ba 233.527†	67679.3	66948.8	495.18	ug/L	495.18	ppb	11:43:52
1	Be 313.107†	757088.4	753221.0	254.28	ug/L	254.28	ppb	11:43:52
1	Cd 226.502†	51256.4	50941.5	484.88	ug/L	484.88	ppb	11:43:52
1	Co 228.616†	26415.8	26227.6	496.44	ug/L	496.44	ppb	11:44:12
1	Cr 267.716†	47370.7	46738.5	475.09	ug/L	475.09	ppb	11:43:52
1	Cu 324.752†	176150.3	166030.0	490.87	ug/L	490.87	ppb	11:43:52
1	Mn 257.610†	477728.7	471886.7	501.48	ug/L	501.48	ppb	11:43:52
1	Mo 202.031†	8530.7	8412.5	537.43	ug/L	537.43	ppb	11:44:12
1	Ni 231.604†	22581.9	22208.7	491.33	ug/L	491.33	ppb	11:44:12
1	P 214.914†	5404.2	5090.6	2438.2	ug/L	2438.2	ppb	11:44:12
1	Pb 220.353†	4684.6	4715.4	500.65	ug/L	500.65	ppb	11:44:12
1	S 181.975 Axial†	2267.4	2174.8	2500.7	ug/L	2500.7	ppb	11:44:12
1	Sb 206.836†	1682.1	1626.3	504.96	ug/L	504.96	ppb	11:44:12
1	Se 196.026†	5001.9	4980.4	2568.1	ug/L	2568.1	ppb	11:44:12
1	Si 251.611†	164638.2	162257.0	4667.3	ug/L	4667.3	ppb	11:43:52
1	Sn 189.927†	3551.1	3508.7	531.11	ug/L	531.11	ppb	11:44:12
1	Ti 334.940†	308224.2	306579.0	484.92	ug/L	484.92	ppb	11:43:52
1	Tl 190.801†	1856.9	1879.9	527.11	ug/L	527.11	ppb	11:44:12
1	U 409.014†	13838.1	16343.4	483.73	ug/L	483.73	ppb	11:43:52
1	V 292.402†	77235.4	78141.9	499.78	ug/L	499.78	ppb	11:43:52
1	Zn 213.857†	61457.9	59966.6	491.55	ug/L	491.55	ppb	11:43:52
1	SiO2†	165734.3	163315.2	10119	ug/L	10119	ppb	11:45:10
2	Sc Radial	4482.5	4482.5	102	%			11:43:00
2	Y RADIAL	4722.6	4722.6	100.8	%			11:43:00
2	Al 396.153Radial†	5739.3	5629.6	4865.6	ug/L	4865.6	ppb	11:43:00
2	Ca 317.933Radial†	2821.9	2754.4	4746.2	ug/L	4746.2	ppb	11:43:20
2	Fe 238.204 Radial†	509.0	489.9	4862.5	ug/L	4862.5	ppb	11:43:20
2	K 766.490 Radial†	14792.8	11384.2	2406.8	ug/L	2406.8	ppb	11:43:00
2	Mg 279.077 IEC†	152.6	145.5	5000.9	ug/L	5000.9	ppb	11:43:20
2	Na 589.592 Radial†	5775.5	7004.5	2417.9	ug/L	2417.9	ppb	11:43:00
2	Sr 421.552†	68144.6	66851.6	519.08	ug/L	519.08	ppb	11:43:00
2	Sc 361.383	867528.4	867528.4	101.47	%			11:44:18
2	Y 371.029	736719.0	736719.0	100.62	%			11:44:18
2	Ag 328.068†	58892.6	57581.2	251.49	ug/L	251.49	ppb	11:44:18
2	As 188.979†	1308.6	1329.9	473.81	ug/L	473.81	ppb	11:44:38
2	B 249.677†	23749.1	24190.7	496.58	ug/L	496.58	ppb	11:44:18
2	Ba 233.527†	68037.1	67062.1	496.01	ug/L	496.01	ppb	11:44:18
2	Be 313.107†	761782.6	755171.3	254.93	ug/L	254.93	ppb	11:44:18
2	Cd 226.502†	51610.4	51109.1	486.48	ug/L	486.48	ppb	11:44:18
2	Co 228.616†	26309.2	26029.3	492.68	ug/L	492.68	ppb	11:44:38
2	Cr 267.716†	47665.5	46861.6	476.34	ug/L	476.34	ppb	11:44:18
2	Cu 324.752†	176193.4	165449.9	489.15	ug/L	489.15	ppb	11:44:18
2	Mn 257.610†	480159.5	472593.7	502.22	ug/L	502.22	ppb	11:44:18
2	Mo 202.031†	8496.5	8348.6	533.35	ug/L	533.35	ppb	11:44:38
2	Ni 231.604†	22533.6	22081.3	488.51	ug/L	488.51	ppb	11:44:38

2	P 214.914†	5390.3	5057.8	2422.3 ug/L	2422.3 ppb	11:44:38
2	Pb 220.353†	4656.6	4671.3	495.96 ug/L	495.96 ppb	11:44:38
2	S 181.975 Axial†	2233.8	2133.7	2453.5 ug/L	2453.5 ppb	11:44:38
2	Sb 206.836†	1671.3	1609.8	499.79 ug/L	499.79 ppb	11:44:38
2	Se 196.026†	4992.5	4953.5	2554.0 ug/L	2554.0 ppb	11:44:38
2	Si 251.611†	165031.8	162063.0	4661.8 ug/L	4661.8 ppb	11:44:18
2	Sn 189.927†	3561.5	3506.4	530.76 ug/L	530.76 ppb	11:44:38
2	Ti 334.940†	309196.6	306447.9	484.71 ug/L	484.71 ppb	11:44:18
2	Tl 190.801†	1858.9	1875.2	525.83 ug/L	525.83 ppb	11:44:38
2	U 409.014†	13713.3	16171.5	478.64 ug/L	478.64 ppb	11:44:18
2	V 292.402†	77755.5	78381.5	501.22 ug/L	501.22 ppb	11:44:18
2	Zn 213.857†	61798.2	60084.8	492.55 ug/L	492.55 ppb	11:44:18
2	SiO2†	164962.1	161968.4	10036 ug/L	10036 ppb	11:45:15
3	Sc Radial	4326.0	4326.0	98.4 %		11:43:25
3	Y RADIAL	4651.9	4651.9	99.27 %		11:43:25
3	Al 396.153Radial†	5635.3	5727.7	4951.1 ug/L	4951.1 ppb	11:43:25
3	Ca 317.933Radial†	2860.3	2893.5	4986.0 ug/L	4986.0 ppb	11:43:45
3	Fe 238.204 Radial†	513.6	512.6	5087.1 ug/L	5087.1 ppb	11:43:45
3	K 766.490 Radial†	14606.3	11719.8	2477.9 ug/L	2477.9 ppb	11:43:25
3	Mg 279.077 IEC†	151.9	150.1	5159.4 ug/L	5159.4 ppb	11:43:45
3	Na 589.592 Radial†	5490.3	6919.7	2388.6 ug/L	2388.6 ppb	11:43:25
3	Sr 421.552†	66638.3	67739.7	525.97 ug/L	525.97 ppb	11:43:25
3	Sc 361.383	879094.7	879094.7	102.82 %		11:44:44
3	Y 371.029	746107.5	746107.5	101.90 %		11:44:44
3	Ag 328.068†	59793.9	57694.1	252.04 ug/L	252.04 ppb	11:44:44
3	As 188.979†	1311.8	1316.1	468.97 ug/L	468.97 ppb	11:45:04
3	B 249.677†	24251.1	24371.0	500.29 ug/L	500.29 ppb	11:44:44
3	Ba 233.527†	68925.6	67044.0	495.88 ug/L	495.88 ppb	11:44:44
3	Be 313.107†	771727.9	754966.0	254.86 ug/L	254.86 ppb	11:44:44
3	Cd 226.502†	52173.7	50987.8	485.29 ug/L	485.29 ppb	11:44:44
3	Co 228.616†	26091.8	25476.6	482.19 ug/L	482.19 ppb	11:45:04
3	Cr 267.716†	48199.6	46763.0	475.34 ug/L	475.34 ppb	11:44:44
3	Cu 324.752†	179238.5	166126.8	491.16 ug/L	491.16 ppb	11:44:44
3	Mn 257.610†	486415.1	472451.6	502.09 ug/L	502.09 ppb	11:44:44
3	Mo 202.031†	8447.4	8190.6	523.29 ug/L	523.29 ppb	11:45:04
3	Ni 231.604†	22349.1	21609.7	478.08 ug/L	478.08 ppb	11:45:04
3	P 214.914†	5341.5	4940.4	2363.8 ug/L	2363.8 ppb	11:45:04
3	Pb 220.353†	4651.4	4605.8	489.01 ug/L	489.01 ppb	11:45:04
3	S 181.975 Axial†	2221.4	2092.7	2406.3 ug/L	2406.3 ppb	11:45:04
3	Sb 206.836†	1662.6	1579.6	490.19 ug/L	490.19 ppb	11:45:04
3	Se 196.026†	4927.0	4825.1	2489.0 ug/L	2489.0 ppb	11:45:04
3	Si 251.611†	167366.7	162193.9	4665.7 ug/L	4665.7 ppb	11:44:44
3	Sn 189.927†	3528.7	3428.4	518.98 ug/L	518.98 ppb	11:45:04
3	Ti 334.940†	313869.5	306983.4	485.56 ug/L	485.56 ppb	11:44:44
3	Tl 190.801†	1843.1	1835.8	514.90 ug/L	514.90 ppb	11:45:04
3	U 409.014†	14258.1	16523.5	489.06 ug/L	489.06 ppb	11:44:44
3	V 292.402†	78665.1	78257.9	500.29 ug/L	500.29 ppb	11:44:44
3	Zn 213.857†	62591.7	60055.2	492.35 ug/L	492.35 ppb	11:44:44
3	SiO2†	168068.5	162850.5	10091 ug/L	10091 ppb	11:45:20

Mean Data: ICV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	870350.4	101.80	%	0.904				0.89%
Sc Radial	4399.9	100	%	1.8				1.79%
Y 371.029	738637.6	100.88	%	0.918				0.91%
Y RADIAL	4687.8	100.0	%	0.76				0.75%
Ag 328.068†	57638.5	251.76	ug/L	0.273	251.76	ppb	0.273	0.11%
QC value within limits for Ag 328.068 Recovery = 100.71%								
Al 396.153Radial†	5688.1	4916.4	ug/L	45.02	4916.4	ppb	45.02	0.92%
QC value within limits for Al 396.153Radial Recovery = 98.33%								
As 188.979†	1328.7	473.41	ug/L	4.249	473.41	ppb	4.249	0.90%
QC value within limits for As 188.979 Recovery = 94.68%								
B 249.677†	24266.7	498.14	ug/L	1.926	498.14	ppb	1.926	0.39%
QC value within limits for B 249.677 Recovery = 99.63%								
Ba 233.527†	67018.3	495.69	ug/L	0.451	495.69	ppb	0.451	0.09%
QC value within limits for Ba 233.527 Recovery = 99.14%								
Be 313.107†	754452.8	254.69	ug/L	0.361	254.69	ppb	0.361	0.14%
QC value within limits for Be 313.107 Recovery = 101.88%								
Ca 317.933Radial†	2822.0	4862.7	ug/L	120.02	4862.7	ppb	120.02	2.47%

QC value within limits for Ca 317.933Radial Recovery = 97.25%						
Cd 226.502†	51012.8	485.55 ug/L	0.831	485.55 ppb	0.831	0.17%
QC value within limits for Cd 226.502 Recovery = 97.11%						
Co 228.616†	25911.2	490.44 ug/L	7.383	490.44 ppb	7.383	1.51%
QC value within limits for Co 228.616 Recovery = 98.09%						
Cr 267.716†	46787.7	475.59 ug/L	0.662	475.59 ppb	0.662	0.14%
QC value within limits for Cr 267.716 Recovery = 95.12%						
Cu 324.752†	165868.9	490.39 ug/L	1.087	490.39 ppb	1.087	0.22%
QC value within limits for Cu 324.752 Recovery = 98.08%						
Fe 238.204 Radial†	499.8	4961.0 ug/L	114.84	4961.0 ppb	114.84	2.31%
QC value within limits for Fe 238.204 Radial Recovery = 99.22%						
K 766.490 Radial†	11543.9	2440.7 ug/L	35.66	2440.7 ppb	35.66	1.46%
QC value within limits for K 766.490 Radial Recovery = 97.63%						
Mg 279.077 IEC†	148.6	5106.6 ug/L	91.56	5106.6 ppb	91.56	1.79%
QC value within limits for Mg 279.077 IEC Recovery = 102.13%						
Mn 257.610†	472310.7	501.93 ug/L	0.399	501.93 ppb	0.399	0.08%
QC value within limits for Mn 257.610 Recovery = 100.39%						
Mo 202.031†	8317.2	531.36 ug/L	7.279	531.36 ppb	7.279	1.37%
QC value within limits for Mo 202.031 Recovery = 106.27%						
Na 589.592 Radial†	6968.9	2405.6 ug/L	15.19	2405.6 ppb	15.19	0.63%
QC value within limits for Na 589.592 Radial Recovery = 96.22%						
Ni 231.604†	21966.6	485.98 ug/L	6.981	485.98 ppb	6.981	1.44%
QC value within limits for Ni 231.604 Recovery = 97.20%						
P 214.914†	5029.6	2408.1 ug/L	39.20	2408.1 ppb	39.20	1.63%
QC value within limits for P 214.914 Recovery = 96.32%						
Pb 220.353†	4664.2	495.21 ug/L	5.858	495.21 ppb	5.858	1.18%
QC value within limits for Pb 220.353 Recovery = 99.04%						
S 181.975 Axial†	2133.7	2453.5 ug/L	47.23	2453.5 ppb	47.23	1.92%
QC value within limits for S 181.975 Axial Recovery = 98.14%						
Sb 206.836†	1605.2	498.31 ug/L	7.495	498.31 ppb	7.495	1.50%
QC value within limits for Sb 206.836 Recovery = 99.66%						
Se 196.026†	4919.7	2537.0 ug/L	42.21	2537.0 ppb	42.21	1.66%
QC value within limits for Se 196.026 Recovery = 101.48%						
Si 251.611†	162171.3	4664.9 ug/L	2.84	4664.9 ppb	2.84	0.06%
QC value within limits for Si 251.611 Recovery = 93.30%						
Sn 189.927†	3481.2	526.95 ug/L	6.905	526.95 ppb	6.905	1.31%
QC value within limits for Sn 189.927 Recovery = 105.39%						
Sr 421.552†	67237.0	522.07 ug/L	3.536	522.07 ppb	3.536	0.68%
QC value within limits for Sr 421.552 Recovery = 104.41%						
Ti 334.940†	306670.1	485.06 ug/L	0.446	485.06 ppb	0.446	0.09%
QC value within limits for Ti 334.940 Recovery = 97.01%						
Tl 190.801†	1863.6	522.62 ug/L	6.709	522.62 ppb	6.709	1.28%
QC value within limits for Tl 190.801 Recovery = 104.52%						
U 409.014†	16346.1	483.81 ug/L	5.214	483.81 ppb	5.214	1.08%
QC value within limits for U 409.014 Recovery = 96.76%						
V 292.402†	78260.4	500.43 ug/L	0.735	500.43 ppb	0.735	0.15%
QC value within limits for V 292.402 Recovery = 100.09%						
Zn 213.857†	60035.5	492.15 ug/L	0.533	492.15 ppb	0.533	0.11%
QC value within limits for Zn 213.857 Recovery = 98.43%						
SiO2†	162711.4	10082 ug/L	42.5	10082 ppb	42.5	0.42%
QC value within limits for SiO2 Recovery = 94.27%						

All analyte(s) passed QC.

Sequence No.: 7
Sample ID: ICB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 10
Date Collected: 1/8/2010 11:47:32
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4455.3	4455.3	101	%			11:49:24
1	Y RADIAL	4716.5	4716.5	100.7	%			11:49:24
1	Al 396.153Radial†	-4.7	-5.0	-4.3771	ug/L	-4.3771	ppb	11:49:24
1	Ca 317.933Radial†	7.6	-6.3	-10.895	ug/L	-10.895	ppb	11:49:44
1	Fe 238.204 Radial†	10.1	0.5	5.1830	ug/L	5.1830	ppb	11:49:44
1	K 766.490 Radial†	3223.1	54.1	11.465	ug/L	11.465	ppb	11:49:24
1	Mg 279.077 IEC†	3.2	-1.0	-35.357	ug/L	-35.357	ppb	11:49:44
1	Na 589.592 Radial†	-1396.6	-39.4	-13.615	ug/L	-13.615	ppb	11:49:24
1	Sr 421.552†	-6.0	-1.3	-0.0100	ug/L	-0.0100	ppb	11:49:24
1	Sc 361.383	839595.4	839595.4	98.198	%			11:50:41
1	Y 371.029	733246.4	733246.4	100.14	%			11:50:41
1	Ag 328.068†	389.8	-64.1	-0.2733	ug/L	-0.2733	ppb	11:50:41
1	As 188.979†	-36.7	2.9	1.0049	ug/L	1.0049	ppb	11:51:01
1	B 249.677†	-486.7	288.9	5.9515	ug/L	5.9515	ppb	11:50:41
1	Ba 233.527†	17.1	24.8	0.1828	ug/L	0.1828	ppb	11:51:01
1	Be 313.107†	-4414.4	-107.1	-0.0364	ug/L	-0.0364	ppb	11:50:41
1	Cd 226.502†	-252.5	-13.1	-0.1255	ug/L	-0.1255	ppb	11:51:01
1	Co 228.616†	-88.8	9.5	0.1808	ug/L	0.1808	ppb	11:51:01
1	Cr 267.716†	111.4	-2.2	-0.0216	ug/L	-0.0216	ppb	11:50:41
1	Cu 324.752†	8106.1	55.4	0.1639	ug/L	0.1639	ppb	11:50:41
1	Mn 257.610†	646.8	26.1	0.0289	ug/L	0.0289	ppb	11:50:41
1	Mo 202.031†	29.6	5.0	0.3167	ug/L	0.3167	ppb	11:51:01
1	Ni 231.604†	133.4	9.0	0.1989	ug/L	0.1989	ppb	11:51:01
1	P 214.914†	257.9	8.0	3.9099	ug/L	3.9099	ppb	11:51:01
1	Pb 220.353†	-93.9	-13.8	-1.4632	ug/L	-1.4632	ppb	11:51:01
1	S 181.975 Axial†	61.7	-5.1	-5.8270	ug/L	-5.8270	ppb	11:51:01
1	Sb 206.836†	42.4	5.7	1.7583	ug/L	1.7583	ppb	11:51:01
1	Se 196.026†	-28.8	3.8	1.9610	ug/L	1.9610	ppb	11:51:01
1	Si 251.611†	624.1	49.7	1.4218	ug/L	1.4218	ppb	11:51:01
1	Sn 189.927†	6.4	2.9	0.4407	ug/L	0.4407	ppb	11:51:01
1	Ti 334.940†	-1800.9	-118.1	-0.1862	ug/L	-0.1862	ppb	11:50:41
1	Tl 190.801†	-56.0	-13.8	-3.8512	ug/L	-3.8512	ppb	11:51:01
1	U 409.014†	-2694.9	-88.2	-2.6195	ug/L	-2.6195	ppb	11:50:41
1	V 292.402†	-1753.5	-37.0	-0.2350	ug/L	-0.2350	ppb	11:50:41
1	Zn 213.857†	819.3	13.2	0.1087	ug/L	0.1087	ppb	11:51:01
1	SiO2†	635.5	35.4	2.1753	ug/L	2.1753	ppb	11:51:58
2	Sc Radial	4434.3	4434.3	101	%			11:49:49
2	Y RADIAL	4689.8	4689.8	100.1	%			11:49:49
2	Al 396.153Radial†	-25.3	-25.4	-22.100	ug/L	-22.100	ppb	11:49:49
2	Ca 317.933Radial†	11.2	-2.7	-4.7237	ug/L	-4.7237	ppb	11:50:10
2	Fe 238.204 Radial†	12.9	3.3	32.909	ug/L	32.909	ppb	11:50:10
2	K 766.490 Radial†	3187.4	33.8	7.1659	ug/L	7.1659	ppb	11:49:49
2	Mg 279.077 IEC†	1.0	-3.3	-112.03	ug/L	-112.03	ppb	11:50:10
2	Na 589.592 Radial†	-1379.3	-28.8	-9.9393	ug/L	-9.9393	ppb	11:49:49
2	Sr 421.552†	27.5	31.9	0.2477	ug/L	0.2477	ppb	11:49:49
2	Sc 361.383	847924.6	847924.6	99.172	%			11:51:07
2	Y 371.029	743075.8	743075.8	101.48	%			11:51:07
2	Ag 328.068†	408.4	-49.3	-0.1972	ug/L	-0.1972	ppb	11:51:07
2	As 188.979†	-32.5	7.5	2.6499	ug/L	2.6499	ppb	11:51:27
2	B 249.677†	-442.2	338.6	6.9730	ug/L	6.9730	ppb	11:51:07
2	Ba 233.527†	9.0	16.6	0.1235	ug/L	0.1235	ppb	11:51:27
2	Be 313.107†	-4320.5	31.8	0.0104	ug/L	0.0104	ppb	11:51:07
2	Cd 226.502†	-247.3	-5.4	-0.0549	ug/L	-0.0549	ppb	11:51:27
2	Co 228.616†	-94.3	4.8	0.0915	ug/L	0.0915	ppb	11:51:27
2	Cr 267.716†	129.9	15.4	0.1586	ug/L	0.1586	ppb	11:51:07
2	Cu 324.752†	8325.4	195.5	0.5794	ug/L	0.5794	ppb	11:51:07
2	Mn 257.610†	646.5	19.3	0.0259	ug/L	0.0259	ppb	11:51:07
2	Mo 202.031†	25.9	0.9	0.0584	ug/L	0.0584	ppb	11:51:27
2	Ni 231.604†	123.7	-2.2	-0.0490	ug/L	-0.0490	ppb	11:51:27

2	P 214.914†	256.2	3.7	1.6824 ug/L	1.6824 ppb	11:51:27
2	Pb 220.353†	-75.9	5.3	0.5582 ug/L	0.5582 ppb	11:51:27
2	S 181.975 Axial†	61.5	-5.9	-6.7581 ug/L	-6.7581 ppb	11:51:27
2	Sb 206.836†	48.1	11.1	3.3698 ug/L	3.3698 ppb	11:51:27
2	Se 196.026†	-22.7	10.2	5.3402 ug/L	5.3402 ppb	11:51:27
2	Si 251.611†	601.8	21.0	0.6043 ug/L	0.6043 ppb	11:51:27
2	Sn 189.927†	-1.2	-4.9	-0.7335 ug/L	-0.7335 ppb	11:51:27
2	Ti 334.940†	-1793.7	-92.8	-0.1454 ug/L	-0.1454 ppb	11:51:07
2	Tl 190.801†	-58.7	-16.0	-4.4516 ug/L	-4.4516 ppb	11:51:27
2	U 409.014†	-2768.5	-135.4	-4.0251 ug/L	-4.0251 ppb	11:51:07
2	V 292.402†	-1698.3	36.2	0.2137 ug/L	0.2137 ppb	11:51:07
2	Zn 213.857†	844.8	30.8	0.2562 ug/L	0.2562 ppb	11:51:27
2	SiO2†	619.7	13.0	0.8079 ug/L	0.8079 ppb	11:52:03
3	Sc Radial	4452.7	4452.7	101 %		11:50:15
3	Y RADIAL	4748.9	4748.9	101.3 %		11:50:15
3	Al 396.153Radial†	3.2	2.8	2.4093 ug/L	2.4093 ppb	11:50:15
3	Ca 317.933Radial†	13.0	-0.9	-1.6008 ug/L	-1.6008 ppb	11:50:35
3	Fe 238.204 Radial†	11.6	2.0	19.576 ug/L	19.576 ppb	11:50:35
3	K 766.490 Radial†	3122.9	-43.0	-9.0909 ug/L	-9.0909 ppb	11:50:15
3	Mg 279.077 IEC†	6.6	2.3	78.526 ug/L	78.526 ppb	11:50:35
3	Na 589.592 Radial†	-1398.1	-41.7	-14.393 ug/L	-14.393 ppb	11:50:15
3	Sr 421.552†	-17.4	-12.6	-0.0978 ug/L	-0.0978 ppb	11:50:15
3	Sc 361.383	847318.4	847318.4	99.101 %		11:51:32
3	Y 371.029	742602.9	742602.9	101.42 %		11:51:32
3	Ag 328.068†	600.6	144.9	0.6322 ug/L	0.6322 ppb	11:51:32
3	As 188.979†	-41.2	-1.3	-0.4677 ug/L	-0.4677 ppb	11:51:52
3	B 249.677†	-472.6	307.6	6.3351 ug/L	6.3351 ppb	11:51:32
3	Ba 233.527†	11.1	18.6	0.1369 ug/L	0.1369 ppb	11:51:52
3	Be 313.107†	-4452.1	-104.1	-0.0352 ug/L	-0.0352 ppb	11:51:32
3	Cd 226.502†	-236.8	5.1	0.0464 ug/L	0.0464 ppb	11:51:52
3	Co 228.616†	-75.2	24.0	0.4569 ug/L	0.4569 ppb	11:51:52
3	Cr 267.716†	96.6	-18.1	-0.1835 ug/L	-0.1835 ppb	11:51:32
3	Cu 324.752†	8297.8	173.6	0.5141 ug/L	0.5141 ppb	11:51:32
3	Mn 257.610†	551.9	-75.6	-0.0798 ug/L	-0.0798 ppb	11:51:32
3	Mo 202.031†	37.1	12.2	0.7828 ug/L	0.7828 ppb	11:51:52
3	Ni 231.604†	142.0	16.4	0.3626 ug/L	0.3626 ppb	11:51:52
3	P 214.914†	245.2	-7.3	-3.6838 ug/L	-3.6838 ppb	11:51:52
3	Pb 220.353†	-91.0	-9.9	-1.0510 ug/L	-1.0510 ppb	11:51:52
3	S 181.975 Axial†	67.7	0.4	0.5166 ug/L	0.5166 ppb	11:51:52
3	Sb 206.836†	42.7	5.6	1.7527 ug/L	1.7527 ppb	11:51:52
3	Se 196.026†	-30.3	2.6	1.3927 ug/L	1.3927 ppb	11:51:52
3	Si 251.611†	609.0	28.6	0.8107 ug/L	0.8107 ppb	11:51:52
3	Sn 189.927†	10.9	7.3	1.1089 ug/L	1.1089 ppb	11:51:52
3	Ti 334.940†	-1748.2	-48.2	-0.0751 ug/L	-0.0751 ppb	11:51:32
3	Tl 190.801†	-46.9	-4.1	-1.1442 ug/L	-1.1442 ppb	11:51:52
3	U 409.014†	-2726.1	-94.6	-2.8115 ug/L	-2.8115 ppb	11:51:32
3	V 292.402†	-1815.5	-83.2	-0.5197 ug/L	-0.5197 ppb	11:51:32
3	Zn 213.857†	833.6	20.0	0.1590 ug/L	0.1590 ppb	11:51:52
3	SiO2†	627.2	21.1	1.2806 ug/L	1.2806 ppb	11:52:08

Mean Data: ICB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	844946.1	98.824	%	0.5431				0.55%
Sc Radial	4447.4	101	%	0.3				0.26%
Y 371.029	739641.7	101.01	%	0.757				0.75%
Y RADIAL	4718.4	100.7	%	0.63				0.63%
Ag 328.068†	10.5	0.0539	ug/L	0.50224	0.0539	ppb	0.50224	931.89%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-9.2	-8.0226	ug/L	12.65479	-8.0226	ppb	12.65479	157.74%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	3.0	1.0624	ug/L	1.55955	1.0624	ppb	1.55955	146.80%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	311.7	6.4199	ug/L	0.51598	6.4199	ppb	0.51598	8.04%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	20.0	0.1477	ug/L	0.03108	0.1477	ppb	0.03108	21.04%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-59.8	-0.0204	ug/L	0.02667	-0.0204	ppb	0.02667	130.93%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	-3.3	-5.7398	ug/L	4.72967	-5.7398	ppb	4.72967	82.40%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              -4.5     -0.0447 ug/L       0.08643     -0.0447 ppb       0.08643 193.42%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†              12.8      0.2431 ug/L       0.19048      0.2431 ppb       0.19048  78.37%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†              -1.6     -0.0155 ug/L       0.17113     -0.0155 ppb       0.17113 >999.9%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†             141.5      0.4191 ug/L       0.22343      0.4191 ppb       0.22343  53.31%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        1.9     19.222 ug/L       13.8663      19.222 ppb       13.8663  72.14%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        15.0      3.1799 ug/L      10.84203      3.1799 ppb      10.84203 340.96%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -0.7     -22.954 ug/L       95.8830     -22.954 ppb       95.8830 417.71%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†             -10.1     -0.0084 ug/L       0.06192     -0.0084 ppb       0.06192 740.61%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†               6.0      0.3860 ug/L       0.36712      0.3860 ppb       0.36712  95.12%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      -36.6     -12.649 ug/L        2.3786     -12.649 ppb        2.3786  18.80%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               7.7      0.1708 ug/L       0.20720      0.1708 ppb       0.20720 121.28%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                1.5      0.6362 ug/L       3.90347      0.6362 ppb       3.90347 613.59%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†              -6.1     -0.6520 ug/L       1.06810     -0.6520 ppb       1.06810 163.82%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -3.5     -4.0228 ug/L       3.95873     -4.0228 ppb       3.95873  98.41%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†               7.5      2.2936 ug/L       0.93204      2.2936 ppb       0.93204  40.64%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               5.5      2.8980 ug/L       2.13404      2.8980 ppb       2.13404  73.64%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†              33.1      0.9456 ug/L       0.42514      0.9456 ppb       0.42514  44.96%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.8      0.2720 ug/L       0.93270      0.2720 ppb       0.93270 342.90%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               6.0      0.0466 ug/L       0.17954      0.0466 ppb       0.17954 384.96%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†             -86.4     -0.1356 ug/L       0.05623     -0.1356 ppb       0.05623  41.48%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†             -11.3     -3.1490 ug/L       1.76196     -3.1490 ppb       1.76196  55.95%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†              -106.1     -3.1520 ug/L       0.76220     -3.1520 ppb       0.76220  24.18%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -28.0     -0.1803 ug/L       0.36975     -0.1803 ppb       0.36975 205.04%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              21.3      0.1746 ug/L       0.07499      0.1746 ppb       0.07499  42.94%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                    23.2      1.4213 ug/L       0.69448      1.4213 ppb       0.69448  48.86%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 8
Sample ID: PQL
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 11
Date Collected: 1/8/2010 11:54:18
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: PQL

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4506.9	4506.9	102	%			11:56:11
1	Y RADIAL	4755.1	4755.1	101.5	%			11:56:11
1	Al 396.153Radial†	211.5	206.0	178.43	ug/L	178.43	ppb	11:56:11
1	Ca 317.933Radial†	134.1	117.1	201.72	ug/L	201.72	ppb	11:56:31
1	Fe 238.204 Radial†	22.9	12.9	127.41	ug/L	127.41	ppb	11:56:31
1	K 766.490 Radial†	3882.1	660.7	139.75	ug/L	139.75	ppb	11:56:11
1	Mg 279.077 IEC†	12.0	7.4	255.69	ug/L	255.69	ppb	11:56:31
1	Na 589.592 Radial†	-469.8	880.6	303.97	ug/L	303.97	ppb	11:56:11
1	Sr 421.552†	668.4	656.7	5.0978	ug/L	5.0978	ppb	11:56:11
1	Sc 361.383	838530.0	838530.0	98.073	%			11:57:28
1	Y 371.029	731139.2	731139.2	99.853	%			11:57:28
1	Ag 328.068†	1642.1	1213.2	5.2511	ug/L	5.2511	ppb	11:57:28
1	As 188.979†	51.8	93.0	32.875	ug/L	32.875	ppb	11:57:48
1	B 249.677†	1814.8	2634.9	54.265	ug/L	54.265	ppb	11:57:28
1	Ba 233.527†	707.3	728.7	5.3900	ug/L	5.3900	ppb	11:57:48
1	Be 313.107†	10701.7	15300.3	5.1559	ug/L	5.1559	ppb	11:57:28
1	Cd 226.502†	264.5	513.7	4.8819	ug/L	4.8819	ppb	11:57:48
1	Co 228.616†	181.1	284.6	5.3970	ug/L	5.3970	ppb	11:57:48
1	Cr 267.716†	594.8	490.9	4.9761	ug/L	4.9761	ppb	11:57:28
1	Cu 324.752†	11570.4	3598.2	10.639	ug/L	10.639	ppb	11:57:28
1	Mn 257.610†	10584.1	10159.4	10.796	ug/L	10.796	ppb	11:57:28
1	Mo 202.031†	179.9	158.2	10.108	ug/L	10.108	ppb	11:57:48
1	Ni 231.604†	353.2	233.2	5.1590	ug/L	5.1590	ppb	11:57:48
1	P 214.914†	548.1	304.2	148.51	ug/L	148.51	ppb	11:57:48
1	Pb 220.353†	15.5	97.7	10.381	ug/L	10.381	ppb	11:57:48
1	S 181.975 Axial†	147.1	82.1	94.386	ug/L	94.386	ppb	11:57:48
1	Sb 206.836†	67.9	31.8	9.9618	ug/L	9.9618	ppb	11:57:48
1	Se 196.026†	28.4	62.1	32.256	ug/L	32.256	ppb	11:57:48
1	Si 251.611†	4154.6	3650.3	105.01	ug/L	105.01	ppb	11:57:28
1	Sn 189.927†	72.6	70.4	10.664	ug/L	10.664	ppb	11:57:48
1	Ti 334.940†	1504.6	3250.0	5.1295	ug/L	5.1295	ppb	11:57:28
1	Tl 190.801†	21.5	65.1	18.221	ug/L	18.221	ppb	11:57:48
1	U 409.014†	-1016.2	1620.0	48.076	ug/L	48.076	ppb	11:57:28
1	V 292.402†	-981.3	748.1	4.9318	ug/L	4.9318	ppb	11:57:28
1	Zn 213.857†	2083.9	1303.8	10.716	ug/L	10.716	ppb	11:57:48
1	SiO2†	4220.7	3691.8	228.77	ug/L	228.77	ppb	11:58:45
2	Sc Radial	4388.1	4388.1	99.8	%			11:56:36
2	Y RADIAL	4668.5	4668.5	99.63	%			11:56:36
2	Al 396.153Radial†	237.4	237.5	205.81	ug/L	205.81	ppb	11:56:36
2	Ca 317.933Radial†	135.8	122.2	210.63	ug/L	210.63	ppb	11:56:56
2	Fe 238.204 Radial†	24.4	14.9	147.99	ug/L	147.99	ppb	11:56:56
2	K 766.490 Radial†	3906.3	787.5	166.64	ug/L	166.64	ppb	11:56:36
2	Mg 279.077 IEC†	10.4	6.2	212.88	ug/L	212.88	ppb	11:56:56
2	Na 589.592 Radial†	-504.6	833.3	287.64	ug/L	287.64	ppb	11:56:36
2	Sr 421.552†	647.4	653.4	5.0719	ug/L	5.0719	ppb	11:56:36
2	Sc 361.383	829849.6	829849.6	97.058	%			11:57:54
2	Y 371.029	722165.5	722165.5	98.628	%			11:57:54
2	Ag 328.068†	1588.5	1175.6	5.0967	ug/L	5.0967	ppb	11:57:54
2	As 188.979†	57.4	99.4	35.120	ug/L	35.120	ppb	11:58:14
2	B 249.677†	1791.0	2629.8	54.157	ug/L	54.157	ppb	11:57:54
2	Ba 233.527†	686.0	714.3	5.2844	ug/L	5.2844	ppb	11:58:14
2	Be 313.107†	10538.7	15246.5	5.1380	ug/L	5.1380	ppb	11:57:54
2	Cd 226.502†	268.0	520.1	4.9413	ug/L	4.9413	ppb	11:58:14
2	Co 228.616†	170.3	275.3	5.2221	ug/L	5.2221	ppb	11:58:14
2	Cr 267.716†	553.0	454.2	4.6046	ug/L	4.6046	ppb	11:57:54
2	Cu 324.752†	11368.2	3513.4	10.390	ug/L	10.390	ppb	11:57:54
2	Mn 257.610†	10369.5	10051.2	10.684	ug/L	10.684	ppb	11:57:54
2	Mo 202.031†	178.4	158.6	10.139	ug/L	10.139	ppb	11:58:14
2	Ni 231.604†	363.7	247.8	5.4826	ug/L	5.4826	ppb	11:58:14

2	P 214.914†	559.9	322.2	157.42 ug/L	157.42 ppb	11:58:14
2	Pb 220.353†	11.9	94.1	10.011 ug/L	10.011 ppb	11:58:14
2	S 181.975 Axial†	141.0	77.4	88.950 ug/L	88.950 ppb	11:58:14
2	Sb 206.836†	75.6	40.5	12.633 ug/L	12.633 ppb	11:58:14
2	Se 196.026†	21.1	54.9	28.636 ug/L	28.636 ppb	11:58:14
2	Si 251.611†	4115.2	3654.1	105.11 ug/L	105.11 ppb	11:57:54
2	Sn 189.927†	75.1	73.7	11.175 ug/L	11.175 ppb	11:58:14
2	Ti 334.940†	1566.1	3329.5	5.2563 ug/L	5.2563 ppb	11:57:54
2	Tl 190.801†	19.8	63.6	17.799 ug/L	17.799 ppb	11:58:14
2	U 409.014†	-1045.3	1579.2	46.862 ug/L	46.862 ppb	11:57:54
2	V 292.402†	-966.7	752.8	4.9550 ug/L	4.9550 ppb	11:57:54
2	Zn 213.857†	2075.6	1317.5	10.828 ug/L	10.828 ppb	11:58:14
2	SiO2†	4154.8	3668.9	227.33 ug/L	227.33 ppb	11:58:50
3	Sc Radial	4413.3	4413.3	100 %		11:57:02
3	Y RADIAL	4694.5	4694.5	100.2 %		11:57:02
3	Al 396.153Radial†	206.3	205.2	177.74 ug/L	177.74 ppb	11:57:02
3	Ca 317.933Radial†	134.9	120.6	207.75 ug/L	207.75 ppb	11:57:22
3	Fe 238.204 Radial†	20.3	10.8	106.93 ug/L	106.93 ppb	11:57:22
3	K 766.490 Radial†	3834.6	693.7	146.76 ug/L	146.76 ppb	11:57:02
3	Mg 279.077 IEC†	10.2	6.0	205.39 ug/L	205.39 ppb	11:57:22
3	Na 589.592 Radial†	-504.0	836.9	288.88 ug/L	288.88 ppb	11:57:02
3	Sr 421.552†	660.2	662.5	5.1424 ug/L	5.1424 ppb	11:57:02
3	Sc 361.383	831413.4	831413.4	97.241 %		11:58:19
3	Y 371.029	723233.3	723233.3	98.774 %		11:58:19
3	Ag 328.068†	1649.9	1235.7	5.3407 ug/L	5.3407 ppb	11:58:19
3	As 188.979†	51.1	92.8	32.800 ug/L	32.800 ppb	11:58:39
3	B 249.677†	1815.0	2651.0	54.600 ug/L	54.600 ppb	11:58:19
3	Ba 233.527†	707.6	735.1	5.4372 ug/L	5.4372 ppb	11:58:39
3	Be 313.107†	10498.6	15184.8	5.1169 ug/L	5.1169 ppb	11:58:19
3	Cd 226.502†	273.7	525.4	4.9955 ug/L	4.9955 ppb	11:58:39
3	Co 228.616†	155.3	259.6	4.9251 ug/L	4.9251 ppb	11:58:39
3	Cr 267.716†	618.6	520.5	5.2765 ug/L	5.2765 ppb	11:58:19
3	Cu 324.752†	11484.0	3610.4	10.674 ug/L	10.674 ppb	11:58:19
3	Mn 257.610†	10393.4	10055.8	10.685 ug/L	10.685 ppb	11:58:19
3	Mo 202.031†	174.8	154.6	9.8756 ug/L	9.8756 ppb	11:58:39
3	Ni 231.604†	357.9	241.1	5.3345 ug/L	5.3345 ppb	11:58:39
3	P 214.914†	556.0	317.1	154.92 ug/L	154.92 ppb	11:58:39
3	Pb 220.353†	-0.5	81.3	8.6516 ug/L	8.6516 ppb	11:58:39
3	S 181.975 Axial†	150.0	86.4	99.392 ug/L	99.392 ppb	11:58:39
3	Sb 206.836†	71.5	36.1	11.299 ug/L	11.299 ppb	11:58:39
3	Se 196.026†	23.2	57.0	29.584 ug/L	29.584 ppb	11:58:39
3	Si 251.611†	4144.5	3676.3	105.76 ug/L	105.76 ppb	11:58:19
3	Sn 189.927†	80.0	78.6	11.914 ug/L	11.914 ppb	11:58:39
3	Ti 334.940†	1455.0	3212.2	5.0697 ug/L	5.0697 ppb	11:58:19
3	Tl 190.801†	29.0	73.0	20.418 ug/L	20.418 ppb	11:58:39
3	U 409.014†	-995.7	1632.2	48.440 ug/L	48.440 ppb	11:58:19
3	V 292.402†	-968.9	752.4	4.9579 ug/L	4.9579 ppb	11:58:19
3	Zn 213.857†	2070.3	1307.9	10.753 ug/L	10.753 ppb	11:58:39
3	SiO2†	4185.9	3692.8	228.83 ug/L	228.83 ppb	11:58:55

Mean Data: PQL

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	833264.3	97.458	%	0.5411				0.56%
Sc Radial	4436.1	101	%	1.4				1.41%
Y 371.029	725512.7	99.085	%	0.6695				0.68%
Y RADIAL	4706.0	100.4	%	0.95				0.94%
Ag 328.068†	1208.2	5.2295	ug/L	0.12344	5.2295	ppb	0.12344	2.36%
QC value within limits for Ag 328.068 Recovery = 104.59%								
Al 396.153Radial†	216.2	187.33	ug/L	16.011	187.33	ppb	16.011	8.55%
QC value within limits for Al 396.153Radial Recovery = 93.66%								
As 188.979†	95.1	33.598	ug/L	1.3187	33.598	ppb	1.3187	3.92%
QC value within limits for As 188.979 Recovery = 111.99%								
B 249.677†	2638.6	54.341	ug/L	0.2312	54.341	ppb	0.2312	0.43%
QC value within limits for B 249.677 Recovery = 108.68%								
Ba 233.527†	726.0	5.3706	ug/L	0.07825	5.3706	ppb	0.07825	1.46%
QC value within limits for Ba 233.527 Recovery = 107.41%								
Be 313.107†	15243.9	5.1369	ug/L	0.01949	5.1369	ppb	0.01949	0.38%
QC value within limits for Be 313.107 Recovery = 102.74%								
Ca 317.933Radial†	120.0	206.70	ug/L	4.544	206.70	ppb	4.544	2.20%

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   QC value within limits for Ca 317.933Radial  Recovery = 103.35%
Cd 226.502†              519.7      4.9396 ug/L       0.05680      4.9396 ppb       0.05680   1.15%
   QC value within limits for Cd 226.502  Recovery = 98.79%
Co 228.616†              273.2      5.1814 ug/L       0.23856      5.1814 ppb       0.23856   4.60%
   QC value within limits for Co 228.616  Recovery = 103.63%
Cr 267.716†              488.5      4.9524 ug/L       0.33655      4.9524 ppb       0.33655   6.80%
   QC value within limits for Cr 267.716  Recovery = 99.05%
Cu 324.752†             3574.0      10.568 ug/L        0.1552      10.568 ppb        0.1552   1.47%
   QC value within limits for Cu 324.752  Recovery = 105.68%
Fe 238.204 Radial†       12.9       127.44 ug/L        20.530      127.44 ppb       20.530   16.11%
   QC value within limits for Fe 238.204 Radial  Recovery = 127.44%
K 766.490 Radial†        714.0      151.05 ug/L        13.947      151.05 ppb       13.947   9.23%
   QC value within limits for K 766.490 Radial  Recovery = 100.70%
Mg 279.077 IEC†           6.5       224.65 ug/L        27.139      224.65 ppb       27.139   12.08%
   QC value within limits for Mg 279.077 IEC  Recovery = 74.88%
Mn 257.610†            10088.8      10.722 ug/L        0.0644      10.722 ppb       0.0644   0.60%
   QC value within limits for Mn 257.610  Recovery = 107.22%
Mo 202.031†              157.1      10.041 ug/L        0.1440      10.041 ppb       0.1440   1.43%
   QC value within limits for Mo 202.031  Recovery = 100.41%
Na 589.592 Radial†       850.2      293.50 ug/L         9.092      293.50 ppb        9.092   3.10%
   QC value within limits for Na 589.592 Radial  Recovery = 97.83%
Ni 231.604†              240.7      5.3254 ug/L       0.16196      5.3254 ppb       0.16196   3.04%
   QC value within limits for Ni 231.604  Recovery = 106.51%
P 214.914†               314.5      153.61 ug/L         4.593      153.61 ppb         4.593   2.99%
   QC value within limits for P 214.914  Recovery = 102.41%
Pb 220.353†               91.0      9.6812 ug/L       0.91064      9.6812 ppb       0.91064   9.41%
   QC value within limits for Pb 220.353  Recovery = 96.81%
S 181.975 Axial†          82.0      94.243 ug/L        5.2223      94.243 ppb       5.2223   5.54%
   QC value within limits for S 181.975 Axial  Recovery = 94.24%
Sb 206.836†               36.1      11.298 ug/L        1.3355      11.298 ppb       1.3355   11.82%
   QC value within limits for Sb 206.836  Recovery = 112.98%
Se 196.026†               58.0      30.159 ug/L        1.8769      30.159 ppb       1.8769   6.22%
   QC value within limits for Se 196.026  Recovery = 100.53%
Si 251.611†              3660.2      105.29 ug/L         0.406      105.29 ppb        0.406   0.39%
   QC value within limits for Si 251.611  Recovery = 105.29%
Sn 189.927†               74.3       11.251 ug/L        0.6285      11.251 ppb       0.6285   5.59%
   QC value within limits for Sn 189.927  Recovery = 112.51%
Sr 421.552†              657.5       5.1040 ug/L       0.03566      5.1040 ppb       0.03566   0.70%
   QC value within limits for Sr 421.552  Recovery = 102.08%
Ti 334.940†              3263.9      5.1518 ug/L       0.09532      5.1518 ppb       0.09532   1.85%
   QC value within limits for Ti 334.940  Recovery = 103.04%
Tl 190.801†               67.2       18.813 ug/L        1.4060      18.813 ppb       1.4060   7.47%
   QC value within limits for Tl 190.801  Recovery = 94.06%
U 409.014†               1610.5      47.793 ug/L        0.8266      47.793 ppb       0.8266   1.73%
   QC value within limits for U 409.014  Recovery = 95.59%
V 292.402†               751.1       4.9482 ug/L       0.01433      4.9482 ppb       0.01433   0.29%
   QC value within limits for V 292.402  Recovery = 98.96%
Zn 213.857†              1309.7      10.766 ug/L        0.0570      10.766 ppb       0.0570   0.53%
   QC value within limits for Zn 213.857  Recovery = 107.66%
SiO2†                    3684.5      228.31 ug/L         0.852      228.31 ppb        0.852   0.37%
   QC value within limits for SiO2  Recovery = 107.19%
All analyte(s) passed QC.
```

Sequence No.: 9
Sample ID: ICSA
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 13
Date Collected: 1/8/2010 12:01:06
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSA

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	3965.4	3965.4	90.2	%			12:03:04
1	Y RADIAL	4245.7	4245.7	90.61	%			12:03:04
1	Al 396.153Radial†	533115.1	591159.4	513320	ug/L	513320	ppb	12:02:59
1	Ca 317.933Radial†	251469.0	278834.8	480470	ug/L	480470	ppb	12:02:59
1	Fe 238.204 Radial†	17491.4	19386.4	191830	ug/L	191830	ppb	12:03:04
1	K 766.490 Radial†	2780.7	-43.5	6.1483	ug/L	6.1483	ppb	12:02:59
1	Mg 279.077 IEC†	12984.8	14394.4	493890	ug/L	493890	ppb	12:03:04
1	Na 589.592 Radial†	-1128.3	87.8	30.317	ug/L	30.317	ppb	12:03:04
1	Sr 421.552†	469.3	525.1	-0.3762	ug/L	-0.3762	ppb	12:03:04
1	Sc 361.383	754088.2	754088.2	88.197	%			12:03:31
1	Y 371.029	636453.8	636453.8	86.922	%			12:03:31
1	Ag 328.068†	-10563.5	-12438.2	3.4531	ug/L	3.4531	ppb	12:03:31
1	As 188.979†	-118.4	-93.9	-3.7093	ug/L	-3.7093	ppb	12:03:51
1	B 249.677†	23.6	811.2	-8.7341	ug/L	-8.7341	ppb	12:03:31
1	Ba 233.527†	-632.8	-710.1	-0.3702	ug/L	-0.3702	ppb	12:03:51
1	Be 313.107†	-4170.4	-340.2	-0.1568	ug/L	-0.1568	ppb	12:03:31
1	Cd 226.502†	1311.4	1730.9	-2.6947	ug/L	-2.6947	ppb	12:03:51
1	Co 228.616†	-36.1	58.9	-1.6265	ug/L	-1.6265	ppb	12:03:51
1	Cr 267.716†	-73.8	-199.3	1.4267	ug/L	1.4267	ppb	12:03:51
1	Cu 324.752†	4318.8	-3302.7	0.0261	ug/L	0.0261	ppb	12:03:31
1	Mn 257.610†	-279.8	-949.8	8.9227	ug/L	8.9227	ppb	12:03:31
1	Mo 202.031†	-247.8	-306.2	-1.1580	ug/L	-1.1580	ppb	12:03:51
1	Ni 231.604†	252.9	159.9	3.5380	ug/L	3.5380	ppb	12:03:51
1	P 214.914†	235.3	12.2	25.868	ug/L	25.868	ppb	12:03:51
1	Pb 220.353†	-975.2	-1023.9	-8.9425	ug/L	-8.9425	ppb	12:03:51
1	S 181.975 Axial†	85.2	28.7	-67.980	ug/L	-67.980	ppb	12:03:51
1	Sb 206.836†	86.6	60.8	6.1052	ug/L	6.1052	ppb	12:03:51
1	Se 196.026†	-1097.8	-1211.6	49.631	ug/L	49.631	ppb	12:03:51
1	Si 251.611†	534.8	20.5	1.1515	ug/L	1.1515	ppb	12:03:51
1	Sn 189.927†	-402.9	-460.4	-16.890	ug/L	-16.890	ppb	12:03:51
1	Ti 334.940†	-13539.2	-13635.2	3.4805	ug/L	3.4805	ppb	12:03:31
1	Tl 190.801†	-107.5	-78.7	-8.0768	ug/L	-8.0768	ppb	12:03:51
1	U 409.014†	-1677.3	754.4	-1.7296	ug/L	-1.7296	ppb	12:03:31
1	V 292.402†	535.1	2355.5	-3.4008	ug/L	-3.4008	ppb	12:03:51
1	Zn 213.857†	3504.4	3152.3	-0.8047	ug/L	-0.8047	ppb	12:03:51
1	SiO2†	485.8	-61.0	-2.5711	ug/L	-2.5711	ppb	12:04:48
2	Sc Radial	3936.1	3936.1	89.5	%			12:03:14
2	Y RADIAL	4172.0	4172.0	89.03	%			12:03:14
2	Al 396.153Radial†	536145.9	598944.3	520080	ug/L	520080	ppb	12:03:09
2	Ca 317.933Radial†	253334.6	282993.9	487640	ug/L	487640	ppb	12:03:09
2	Fe 238.204 Radial†	17271.1	19284.5	190820	ug/L	190820	ppb	12:03:14
2	K 766.490 Radial†	2813.4	16.0	18.951	ug/L	18.951	ppb	12:03:09
2	Mg 279.077 IEC†	12798.5	14293.4	490420	ug/L	490420	ppb	12:03:14
2	Na 589.592 Radial†	-1185.8	14.3	4.9464	ug/L	4.9464	ppb	12:03:14
2	Sr 421.552†	474.5	534.7	-0.3678	ug/L	-0.3678	ppb	12:03:14
2	Sc 361.383	749852.4	749852.4	87.702	%			12:03:57
2	Y 371.029	632208.7	632208.7	86.342	%			12:03:57
2	Ag 328.068†	-10566.7	-12509.5	2.7052	ug/L	2.7052	ppb	12:03:57
2	As 188.979†	-101.3	-75.3	2.7231	ug/L	2.7231	ppb	12:04:17
2	B 249.677†	-66.8	708.4	-10.722	ug/L	-10.722	ppb	12:03:57
2	Ba 233.527†	-659.1	-744.1	-0.6465	ug/L	-0.6465	ppb	12:04:17
2	Be 313.107†	-4192.8	-392.4	-0.1739	ug/L	-0.1739	ppb	12:03:57
2	Cd 226.502†	1318.6	1747.5	-2.4354	ug/L	-2.4354	ppb	12:04:17
2	Co 228.616†	-7.0	92.0	-0.9885	ug/L	-0.9885	ppb	12:04:17
2	Cr 267.716†	-78.5	-205.1	1.3503	ug/L	1.3503	ppb	12:04:17
2	Cu 324.752†	4199.1	-3411.5	-0.3469	ug/L	-0.3469	ppb	12:03:57
2	Mn 257.610†	-269.9	-940.3	8.8968	ug/L	8.8968	ppb	12:03:57
2	Mo 202.031†	-249.1	-309.2	-1.4454	ug/L	-1.4454	ppb	12:04:17
2	Ni 231.604†	274.0	185.6	4.1070	ug/L	4.1070	ppb	12:04:17

2	P 214.914†	256.2	37.4	41.482 ug/L	41.482 ppb	12:04:17
2	Pb 220.353†	-1008.7	-1068.3	-12.049 ug/L	-12.049 ppb	12:04:17
2	S 181.975 Axial†	76.2	19.0	-80.434 ug/L	-80.434 ppb	12:04:17
2	Sb 206.836†	57.8	28.4	-3.9637 ug/L	-3.9637 ppb	12:04:17
2	Se 196.026†	-1131.9	-1257.5	24.114 ug/L	24.114 ppb	12:04:17
2	Si 251.611†	527.4	15.5	1.0046 ug/L	1.0046 ppb	12:04:17
2	Sn 189.927†	-398.9	-458.4	-15.851 ug/L	-15.851 ppb	12:04:17
2	Ti 334.940†	-13328.3	-13481.5	4.0983 ug/L	4.0983 ppb	12:03:57
2	Tl 190.801†	-100.3	-71.2	-5.8116 ug/L	-5.8116 ppb	12:04:17
2	U 409.014†	-1719.0	696.1	-3.3333 ug/L	-3.3333 ppb	12:03:57
2	V 292.402†	535.1	2358.9	-3.3105 ug/L	-3.3105 ppb	12:04:17
2	Zn 213.857†	3478.6	3145.3	-0.6949 ug/L	-0.6949 ppb	12:04:17
2	SiO2†	522.4	-16.1	0.2121 ug/L	0.2121 ppb	12:04:53
3	Sc Radial	3916.9	3916.9	89.1 %		12:03:25
3	Y RADIAL	4208.4	4208.4	89.81 %		12:03:25
3	Al 396.153Radial†	538009.2	603984.1	524460 ug/L	524460 ppb	12:03:20
3	Ca 317.933Radial†	253510.7	284584.6	490380 ug/L	490380 ppb	12:03:20
3	Fe 238.204 Radial†	17311.3	19424.7	192200 ug/L	192200 ppb	12:03:25
3	K 766.490 Radial†	2824.4	43.9	25.118 ug/L	25.118 ppb	12:03:20
3	Mg 279.077 IEC†	12868.3	14442.1	495520 ug/L	495520 ppb	12:03:25
3	Na 589.592 Radial†	-1175.3	19.6	6.7561 ug/L	6.7561 ppb	12:03:25
3	Sr 421.552†	418.2	474.1	-0.8638 ug/L	-0.8638 ppb	12:03:25
3	Sc 361.383	748787.9	748787.9	87.577 %		12:04:22
3	Y 371.029	631522.4	631522.4	86.248 %		12:04:22
3	Ag 328.068†	-10499.7	-12450.2	3.3808 ug/L	3.3808 ppb	12:04:22
3	As 188.979†	-99.3	-73.1	3.7050 ug/L	3.7050 ppb	12:04:42
3	B 249.677†	-24.1	756.9	-9.9052 ug/L	-9.9052 ppb	12:04:22
3	Ba 233.527†	-669.8	-757.4	-0.7107 ug/L	-0.7107 ppb	12:04:42
3	Be 313.107†	-4120.9	-317.1	-0.1489 ug/L	-0.1489 ppb	12:04:22
3	Cd 226.502†	1321.8	1753.3	-2.5193 ug/L	-2.5193 ppb	12:04:42
3	Co 228.616†	5.9	106.6	-0.7253 ug/L	-0.7253 ppb	12:04:42
3	Cr 267.716†	-77.4	-203.9	1.3855 ug/L	1.3855 ppb	12:04:42
3	Cu 324.752†	4381.7	-3196.2	0.3600 ug/L	0.3600 ppb	12:04:22
3	Mn 257.610†	-323.9	-1002.4	8.8741 ug/L	8.8741 ppb	12:04:22
3	Mo 202.031†	-218.8	-275.1	0.8649 ug/L	0.8649 ppb	12:04:42
3	Ni 231.604†	250.8	159.5	3.5298 ug/L	3.5298 ppb	12:04:42
3	P 214.914†	242.5	22.2	34.280 ug/L	34.280 ppb	12:04:42
3	Pb 220.353†	-991.4	-1050.2	-9.2609 ug/L	-9.2609 ppb	12:04:42
3	S 181.975 Axial†	77.3	20.4	-79.715 ug/L	-79.715 ppb	12:04:42
3	Sb 206.836†	63.8	35.4	-1.8668 ug/L	-1.8668 ppb	12:04:42
3	Se 196.026†	-1131.4	-1258.8	28.408 ug/L	28.408 ppb	12:04:42
3	Si 251.611†	535.8	26.0	1.2642 ug/L	1.2642 ppb	12:04:42
3	Sn 189.927†	-392.3	-451.5	-14.506 ug/L	-14.506 ppb	12:04:42
3	Ti 334.940†	-13391.0	-13574.6	4.0926 ug/L	4.0926 ppb	12:04:22
3	Tl 190.801†	-101.2	-72.4	-6.0261 ug/L	-6.0261 ppb	12:04:42
3	U 409.014†	-1635.1	789.1	-0.7468 ug/L	-0.7468 ppb	12:04:22
3	V 292.402†	483.2	2300.5	-3.7376 ug/L	-3.7376 ppb	12:04:42
3	Zn 213.857†	3520.3	3198.5	-0.4987 ug/L	-0.4987 ppb	12:04:42
3	SiO2†	533.1	-3.1	0.9292 ug/L	0.9292 ppb	12:04:58

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	750909.5	87.825	%	0.3279				0.37%
Sc Radial	3939.5	89.6	%	0.56				0.62%
Y 371.029	633395.0	86.504	%	0.3648				0.42%
Y RADIAL	4208.7	89.82	%	0.787				0.88%
Ag 328.068†	-12466.0	3.1797	ug/L	0.41250	3.1797	ppb	0.41250	12.97%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	598029.3	519290	ug/L	5610.4	519290	ppb	5610.4	1.08%
QC value within limits for Al 396.153Radial Recovery = 103.86%								
As 188.979†	-80.8	0.9063	ug/L	4.02722	0.9063	ppb	4.02722	444.38%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	758.8	-9.7870	ug/L	0.99896	-9.7870	ppb	0.99896	10.21%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	-737.2	-0.5758	ug/L	0.18091	-0.5758	ppb	0.18091	31.42%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-349.9	-0.1598	ug/L	0.01279	-0.1598	ppb	0.01279	8.00%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	282137.7	486160	ug/L	5116.0	486160	ppb	5116.0	1.05%

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   QC value within limits for Ca 317.933Radial  Recovery = 97.23%
Cd 226.502†          1743.9     -2.5498 ug/L       0.13231     -2.5498 ppb       0.13231   5.19%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†            85.9     -1.1135 ug/L       0.46340     -1.1135 ppb       0.46340  41.62%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†          -202.8      1.3875 ug/L       0.03824      1.3875 ppb       0.03824   2.76%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†          -3303.4     0.0131 ug/L       0.35361      0.0131 ppb       0.35361 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†    19365.2    191620 ug/L        716.8      191620 ppb         716.8   0.37%
   QC value within limits for Fe 238.204 Radial  Recovery = 95.81%
K 766.490 Radial†         5.5     16.739 ug/L       9.6762      16.739 ppb       9.6762  57.81%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†       14376.6     493280 ug/L       2605.8      493280 ppb       2605.8   0.53%
   QC value within limits for Mg 279.077 IEC  Recovery = 98.66%
Mn 257.610†          -964.2      8.8979 ug/L       0.02430      8.8979 ppb       0.02430   0.27%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†          -296.8     -0.5795 ug/L       1.25911     -0.5795 ppb       1.25911 217.27%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†      40.6     14.007 ug/L       14.1544      14.007 ppb       14.1544 101.06%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†           168.3      3.7249 ug/L       0.33088      3.7249 ppb       0.33088   8.88%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†             23.9      33.876 ug/L        7.8146      33.876 ppb        7.8146  23.07%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†          -1047.5    -10.084 ug/L        1.7090     -10.084 ppb        1.7090  16.95%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†       22.7     -76.043 ug/L        6.9921     -76.043 ppb        6.9921   9.19%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†            41.5      0.0916 ug/L       5.31245      0.0916 ppb       5.31245 >999.9%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†          -1242.6     34.051 ug/L       13.6625      34.051 ppb       13.6625  40.12%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†            20.6      1.1401 ug/L       0.13018      1.1401 ppb       0.13018  11.42%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†          -456.8     -15.749 ug/L        1.1956     -15.749 ppb        1.1956   7.59%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†           511.3     -0.5359 ug/L       0.28394     -0.5359 ppb       0.28394  52.98%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†         -13563.8      3.8904 ug/L       0.35506      3.8904 ppb       0.35506   9.13%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†           -74.1     -6.6382 ug/L       1.25053     -6.6382 ppb       1.25053  18.84%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†            746.6     -1.9366 ug/L       1.30559     -1.9366 ppb       1.30559  67.42%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†           2338.3     -3.4830 ug/L       0.22511     -3.4830 ppb       0.22511   6.46%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†          3165.4     -0.6661 ug/L       0.15500     -0.6661 ppb       0.15500  23.27%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                -26.7      -0.4766 ug/L       1.84899     -0.4766 ppb       1.84899 387.98%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Sequence No.: 10
Sample ID: ICSAB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 14
Date Collected: 1/8/2010 12:07:09
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: ICSAB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	3998.6	3998.6	90.9	%			12:09:22
1	Y RADIAL	4269.4	4269.4	91.11	%			12:09:22
1	Al 396.153Radial†	527829.7	580446.5	504000	ug/L	504000	ppb	12:09:02
1	Ca 317.933Radial†	249122.8	273943.0	472040	ug/L	472040	ppb	12:09:02
1	Fe 238.204 Radial†	17641.4	19390.5	191880	ug/L	191880	ppb	12:09:22
1	K 766.490 Radial†	25707.3	25143.0	5335.5	ug/L	5335.5	ppb	12:09:02
1	Mg 279.077 IEC†	12973.6	14262.6	489370	ug/L	489370	ppb	12:09:22
1	Na 589.592 Radial†	13312.3	15978.3	5515.6	ug/L	5515.6	ppb	12:09:02
1	Sr 421.552†	60166.2	66168.6	509.44	ug/L	509.44	ppb	12:09:02
1	Sc 361.383	758969.3	758969.3	88.768	%			12:10:20
1	Y 371.029	638295.1	638295.1	87.173	%			12:10:20
1	Ag 328.068†	44395.2	49551.4	272.54	ug/L	272.54	ppb	12:10:20
1	As 188.979†	1114.0	1295.2	490.50	ug/L	490.50	ppb	12:10:25
1	B 249.677†	21913.1	25470.3	498.22	ug/L	498.22	ppb	12:10:20
1	Ba 233.527†	58525.4	65938.1	492.47	ug/L	492.47	ppb	12:10:20
1	Be 313.107†	635950.9	720806.2	243.37	ug/L	243.37	ppb	12:10:20
1	Cd 226.502†	44591.1	50477.2	461.74	ug/L	461.74	ppb	12:10:25
1	Co 228.616†	21531.0	24355.3	458.18	ug/L	458.18	ppb	12:10:25
1	Cr 267.716†	40990.8	46061.7	471.58	ug/L	471.58	ppb	12:10:25
1	Cu 324.752†	170936.0	184365.1	554.58	ug/L	554.58	ppb	12:10:20
1	Mn 257.610†	406992.0	457856.2	496.20	ug/L	496.20	ppb	12:10:20
1	Mo 202.031†	6563.2	7368.4	488.71	ug/L	488.71	ppb	12:10:25
1	Ni 231.604†	18437.5	20643.5	456.70	ug/L	456.70	ppb	12:10:25
1	P 214.914†	4822.1	5177.6	2489.4	ug/L	2489.4	ppb	12:10:25
1	Pb 220.353†	2952.6	3408.1	458.74	ug/L	458.74	ppb	12:10:25
1	S 181.975 Axial†	2152.5	2357.0	2612.2	ug/L	2612.2	ppb	12:10:25
1	Sb 206.836†	1580.9	1743.5	526.96	ug/L	526.96	ppb	12:10:25
1	Se 196.026†	3286.8	3735.8	2583.4	ug/L	2583.4	ppb	12:10:25
1	Si 251.611†	159916.3	179564.7	5166.9	ug/L	5166.9	ppb	12:10:20
1	Sn 189.927†	2504.6	2817.9	477.94	ug/L	477.94	ppb	12:10:25
1	Ti 334.940†	270370.8	306296.8	508.83	ug/L	508.83	ppb	12:10:20
1	Tl 190.801†	1391.6	1610.9	465.86	ug/L	465.86	ppb	12:10:25
1	U 409.014†	13020.3	17323.9	489.34	ug/L	489.34	ppb	12:10:20
1	V 292.402†	70189.4	80819.2	498.25	ug/L	498.25	ppb	12:10:20
1	Zn 213.857†	55852.6	62098.5	483.06	ug/L	483.06	ppb	12:10:25
1	SiO2†	161828.5	181692.9	11262	ug/L	11262	ppb	12:10:52
2	Sc Radial	3975.3	3975.3	90.4	%			12:09:47
2	Y RADIAL	4243.1	4243.1	90.55	%			12:09:47
2	Al 396.153Radial†	534537.0	591269.9	513400	ug/L	513400	ppb	12:09:27
2	Ca 317.933Radial†	252332.2	279099.7	480930	ug/L	480930	ppb	12:09:27
2	Fe 238.204 Radial†	17612.8	19472.7	192690	ug/L	192690	ppb	12:09:47
2	K 766.490 Radial†	26055.6	25694.2	5452.5	ug/L	5452.5	ppb	12:09:27
2	Mg 279.077 IEC†	12969.4	14341.7	492090	ug/L	492090	ppb	12:09:47
2	Na 589.592 Radial†	13478.9	16248.4	5608.9	ug/L	5608.9	ppb	12:09:27
2	Sr 421.552†	60944.7	67417.7	519.06	ug/L	519.06	ppb	12:09:27
2	Sc 361.383	778762.2	778762.2	91.083	%			12:10:31
2	Y 371.029	653488.1	653488.1	89.248	%			12:10:31
2	Ag 328.068†	45476.3	49467.3	272.31	ug/L	272.31	ppb	12:10:31
2	As 188.979†	1153.1	1306.2	494.54	ug/L	494.54	ppb	12:10:36
2	B 249.677†	22427.8	25408.0	496.85	ug/L	496.85	ppb	12:10:31
2	Ba 233.527†	59925.5	65799.5	491.46	ug/L	491.46	ppb	12:10:31
2	Be 313.107†	651300.4	719450.0	242.92	ug/L	242.92	ppb	12:10:31
2	Cd 226.502†	44864.4	49500.5	452.36	ug/L	452.36	ppb	12:10:36
2	Co 228.616†	21592.4	23806.1	447.76	ug/L	447.76	ppb	12:10:36
2	Cr 267.716†	41084.0	44990.4	460.72	ug/L	460.72	ppb	12:10:36
2	Cu 324.752†	176367.3	185434.0	557.78	ug/L	557.78	ppb	12:10:31
2	Mn 257.610†	417072.4	457270.6	495.61	ug/L	495.61	ppb	12:10:31
2	Mo 202.031†	6602.2	7223.3	479.53	ug/L	479.53	ppb	12:10:36
2	Ni 231.604†	18604.0	20298.4	449.07	ug/L	449.07	ppb	12:10:36

2	P 214.914†	4764.7	4976.5	2391.9 ug/L	2391.9 ppb	12:10:36
2	Pb 220.353†	2984.7	3358.7	455.54 ug/L	455.54 ppb	12:10:36
2	S 181.975 Axial†	2135.2	2276.4	2517.6 ug/L	2517.6 ppb	12:10:36
2	Sb 206.836†	1645.6	1769.2	534.39 ug/L	534.39 ppb	12:10:36
2	Se 196.026†	3328.3	3687.3	2562.5 ug/L	2562.5 ppb	12:10:36
2	Si 251.611†	164126.7	179608.6	5168.4 ug/L	5168.4 ppb	12:10:31
2	Sn 189.927†	2488.1	2728.1	465.29 ug/L	465.29 ppb	12:10:36
2	Ti 334.940†	277520.6	306405.4	509.47 ug/L	509.47 ppb	12:10:31
2	Tl 190.801†	1424.4	1607.1	465.11 ug/L	465.11 ppb	12:10:36
2	U 409.014†	13550.3	17533.0	495.47 ug/L	495.47 ppb	12:10:31
2	V 292.402†	71915.0	80704.1	497.34 ug/L	497.34 ppb	12:10:31
2	Zn 213.857†	55978.5	60637.6	470.89 ug/L	470.89 ppb	12:10:36
2	SiO2†	161323.0	176504.5	10940 ug/L	10940 ppb	12:10:57
3	Sc Radial	4026.6	4026.6	91.6 %		12:10:12
3	Y RADIAL	4317.7	4317.7	92.14 %		12:10:12
3	Al 396.153Radial†	540267.9	589984.0	512280 ug/L	512280 ppb	12:09:52
3	Ca 317.933Radial†	254919.7	278364.0	479660 ug/L	479660 ppb	12:09:52
3	Fe 238.204 Radial†	17770.7	19396.5	191940 ug/L	191940 ppb	12:10:12
3	K 766.490 Radial†	26294.5	25587.3	5429.9 ug/L	5429.9 ppb	12:09:52
3	Mg 279.077 IEC†	13062.4	14260.2	489290 ug/L	489290 ppb	12:10:12
3	Na 589.592 Radial†	13652.6	16247.9	5608.7 ug/L	5608.7 ppb	12:09:52
3	Sr 421.552†	61660.3	67339.1	518.46 ug/L	518.46 ppb	12:09:52
3	Sc 361.383	763849.0	763849.0	89.339 %		12:10:41
3	Y 371.029	640862.9	640862.9	87.524 %		12:10:41
3	Ag 328.068†	44672.9	49542.8	272.41 ug/L	272.41 ppb	12:10:41
3	As 188.979†	1187.2	1369.1	516.62 ug/L	516.62 ppb	12:10:47
3	B 249.677†	22098.2	25519.8	499.22 ug/L	499.22 ppb	12:10:41
3	Ba 233.527†	58988.2	66035.0	493.18 ug/L	493.18 ppb	12:10:41
3	Be 313.107†	640102.8	720877.0	243.40 ug/L	243.40 ppb	12:10:41
3	Cd 226.502†	45242.3	50885.2	465.63 ug/L	465.63 ppb	12:10:47
3	Co 228.616†	21843.2	24549.7	461.86 ug/L	461.86 ppb	12:10:47
3	Cr 267.716†	41570.6	46415.8	475.18 ug/L	475.18 ppb	12:10:47
3	Cu 324.752†	172389.8	184762.3	555.76 ug/L	555.76 ppb	12:10:41
3	Mn 257.610†	410194.7	458512.1	496.91 ug/L	496.91 ppb	12:10:41
3	Mo 202.031†	6624.7	7390.0	490.10 ug/L	490.10 ppb	12:10:47
3	Ni 231.604†	18755.3	20866.5	461.64 ug/L	461.64 ppb	12:10:47
3	P 214.914†	4842.2	5165.4	2485.9 ug/L	2485.9 ppb	12:10:47
3	Pb 220.353†	2970.5	3406.8	460.47 ug/L	460.47 ppb	12:10:47
3	S 181.975 Axial†	2138.8	2326.1	2575.0 ug/L	2575.0 ppb	12:10:47
3	Sb 206.836†	1591.1	1743.6	526.68 ug/L	526.68 ppb	12:10:47
3	Se 196.026†	3372.9	3808.5	2622.1 ug/L	2622.1 ppb	12:10:47
3	Si 251.611†	161017.8	179646.7	5169.3 ug/L	5169.3 ppb	12:10:41
3	Sn 189.927†	2512.2	2808.4	477.29 ug/L	477.29 ppb	12:10:47
3	Ti 334.940†	272732.5	306994.5	510.33 ug/L	510.33 ppb	12:10:41
3	Tl 190.801†	1432.0	1646.1	475.88 ug/L	475.88 ppb	12:10:47
3	U 409.014†	13223.7	17457.9	493.31 ug/L	493.31 ppb	12:10:41
3	V 292.402†	70648.8	80828.3	498.32 ug/L	498.32 ppb	12:10:41
3	Zn 213.857†	56593.8	62526.2	486.56 ug/L	486.56 ppb	12:10:47
3	SiO2†	159936.5	178410.5	11058 ug/L	11058 ppb	12:11:03

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	767193.5	89.730	%	1.2060				1.34%
Sc Radial	4000.2	91.0	%	0.59				0.64%
Y 371.029	644215.3	87.982	%	1.1107				1.26%
Y RADIAL	4276.7	91.27	%	0.808				0.89%
Ag 328.068†	49520.5	272.42	ug/L	0.115	272.42	ppb	0.115	0.04%
QC value within limits for Ag 328.068 Recovery = 108.97%								
Al 396.153Radial†	587233.5	509890	ug/L	5134.4	509890	ppb	5134.4	1.01%
QC value within limits for Al 396.153Radial Recovery = 101.98%								
As 188.979†	1323.5	500.55	ug/L	14.063	500.55	ppb	14.063	2.81%
QC value within limits for As 188.979 Recovery = 100.11%								
B 249.677†	25466.0	498.10	ug/L	1.188	498.10	ppb	1.188	0.24%
QC value within limits for B 249.677 Recovery = 99.62%								
Ba 233.527†	65924.2	492.37	ug/L	0.864	492.37	ppb	0.864	0.18%
QC value within limits for Ba 233.527 Recovery = 98.47%								
Be 313.107†	720377.7	243.23	ug/L	0.271	243.23	ppb	0.271	0.11%
QC value within limits for Be 313.107 Recovery = 97.29%								
Ca 317.933Radial†	277135.6	477540	ug/L	4806.2	477540	ppb	4806.2	1.01%

QC value within limits for Ca 317.933Radial Recovery = 95.51%

Cd 226.502†	50287.6	459.91 ug/L	6.822	459.91 ppb	6.822	1.48%
QC value within limits for Cd 226.502 Recovery = 91.98%						
Co 228.616†	24237.0	455.94 ug/L	7.312	455.94 ppb	7.312	1.60%
QC value within limits for Co 228.616 Recovery = 91.19%						
Cr 267.716†	45822.6	469.16 ug/L	7.525	469.16 ppb	7.525	1.60%
QC value within limits for Cr 267.716 Recovery = 93.83%						
Cu 324.752†	184853.8	556.04 ug/L	1.619	556.04 ppb	1.619	0.29%
QC value within limits for Cu 324.752 Recovery = 111.21%						
Fe 238.204 Radial†	19419.9	192170 ug/L	452.9	192170 ppb	452.9	0.24%
QC value within limits for Fe 238.204 Radial Recovery = 96.09%						
K 766.490 Radial†	25474.8	5406.0 ug/L	62.06	5406.0 ppb	62.06	1.15%
QC value within limits for K 766.490 Radial Recovery = 108.12%						
Mg 279.077 IEC†	14288.2	490250 ug/L	1591.3	490250 ppb	1591.3	0.32%
QC value within limits for Mg 279.077 IEC Recovery = 98.05%						
Mn 257.610†	457879.6	496.24 ug/L	0.648	496.24 ppb	0.648	0.13%
QC value within limits for Mn 257.610 Recovery = 99.25%						
Mo 202.031†	7327.3	486.11 ug/L	5.743	486.11 ppb	5.743	1.18%
QC value within limits for Mo 202.031 Recovery = 97.22%						
Na 589.592 Radial†	16158.2	5577.7 ug/L	53.77	5577.7 ppb	53.77	0.96%
QC value within limits for Na 589.592 Radial Recovery = 111.55%						
Ni 231.604†	20602.8	455.80 ug/L	6.332	455.80 ppb	6.332	1.39%
QC value within limits for Ni 231.604 Recovery = 91.16%						
P 214.914†	5106.5	2455.7 ug/L	55.27	2455.7 ppb	55.27	2.25%
QC value within limits for P 214.914 Recovery = 98.23%						
Pb 220.353†	3391.2	458.25 ug/L	2.500	458.25 ppb	2.500	0.55%
QC value within limits for Pb 220.353 Recovery = 91.65%						
S 181.975 Axial†	2319.8	2568.3 ug/L	47.67	2568.3 ppb	47.67	1.86%
QC value within limits for S 181.975 Axial Recovery = 102.73%						
Sb 206.836†	1752.1	529.34 ug/L	4.373	529.34 ppb	4.373	0.83%
QC value within limits for Sb 206.836 Recovery = 105.87%						
Se 196.026†	3743.9	2589.3 ug/L	30.25	2589.3 ppb	30.25	1.17%
QC value within limits for Se 196.026 Recovery = 103.57%						
Si 251.611†	179606.7	5168.2 ug/L	1.17	5168.2 ppb	1.17	0.02%
QC value within limits for Si 251.611 Recovery = 103.36%						
Sn 189.927†	2784.8	473.51 ug/L	7.123	473.51 ppb	7.123	1.50%
QC value within limits for Sn 189.927 Recovery = 94.70%						
Sr 421.552†	66975.1	515.66 ug/L	5.388	515.66 ppb	5.388	1.04%
QC value within limits for Sr 421.552 Recovery = 103.13%						
Ti 334.940†	306565.5	509.54 ug/L	0.752	509.54 ppb	0.752	0.15%
QC value within limits for Ti 334.940 Recovery = 101.91%						
Tl 190.801†	1621.3	468.95 ug/L	6.015	468.95 ppb	6.015	1.28%
QC value within limits for Tl 190.801 Recovery = 93.79%						
U 409.014†	17438.3	492.71 ug/L	3.108	492.71 ppb	3.108	0.63%
QC value within limits for U 409.014 Recovery = 98.54%						
V 292.402†	80783.9	497.97 ug/L	0.544	497.97 ppb	0.544	0.11%
QC value within limits for V 292.402 Recovery = 99.59%						
Zn 213.857†	61754.1	480.17 ug/L	8.224	480.17 ppb	8.224	1.71%
QC value within limits for Zn 213.857 Recovery = 96.03%						
SiO2†	178869.3	11087 ug/L	162.9	11087 ppb	162.9	1.47%
QC value within limits for SiO2 Recovery = 103.66%						

All analyte(s) passed QC.

Sequence No.: 11
Sample ID: LR1
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 15
Date Collected: 1/8/2010 12:13:13
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	3898.3	3898.3	88.7	%			12:15:11
1	Y RADIAL	4233.2	4233.2	90.34	%			12:15:11
1	Al 396.153Radial†	518499.4	584851.2	507850	ug/L	507850	ppb	12:15:06
1	Ca 317.933Radial†	245332.7	276714.0	476820	ug/L	476820	ppb	12:15:06
1	Fe 238.204 Radial†	41019.3	46259.1	457730	ug/L	457730	ppb	12:15:11
1	K 766.490 Radial†	2783.2	12.5	-209.44	ug/L	-209.44	ppb	12:15:06
1	Mg 279.077 IEC†	12491.9	14086.2	483080	ug/L	483080	ppb	12:15:11
1	Na 589.592 Radial†	1375501.4	1552862.8	536040	ug/L	536040	ppb	12:15:06
1	Sr 421.552†	670.4	760.9	1.4886	ug/L	1.4886	ppb	12:15:11
1	Sc 361.383	750654.0	750654.0	87.796	%			12:15:39
1	Y 371.029	631793.4	631793.4	86.285	%			12:15:39
1	Ag 328.068†	-25270.3	-29244.2	7.4557	ug/L	7.4557	ppb	12:15:39
1	As 188.979†	-218.3	-208.4	-3.0429	ug/L	-3.0429	ppb	12:15:59
1	B 249.677†	1063.0	1995.3	-19.622	ug/L	-19.622	ppb	12:15:39
1	Ba 233.527†	-1817.0	-2062.1	-3.6245	ug/L	-3.6245	ppb	12:15:59
1	Be 313.107†	-11189.5	-8356.6	-2.8523	ug/L	-2.8523	ppb	12:15:39
1	Cd 226.502†	3412.3	4130.6	-6.4274	ug/L	-6.4274	ppb	12:15:59
1	Co 228.616†	192.0	318.6	-0.5650	ug/L	-0.5650	ppb	12:15:59
1	Cr 267.716†	87.0	-16.6	3.3565	ug/L	3.3565	ppb	12:15:59
1	Cu 324.752†	824.0	-7260.9	1.8938	ug/L	1.8938	ppb	12:15:39
1	Mn 257.610†	-26961.5	-31341.9	3.3637	ug/L	3.3637	ppb	12:15:39
1	Mo 202.031†	-523.5	-621.5	4.2050	ug/L	4.2050	ppb	12:15:59
1	Ni 231.604†	305.7	221.3	4.8951	ug/L	4.8951	ppb	12:15:59
1	P 214.914†	667.1	505.2	54.712	ug/L	54.712	ppb	12:15:59
1	Pb 220.353†	-735.7	-756.2	-3.7090	ug/L	-3.7090	ppb	12:15:59
1	S 181.975 Axial†	95.4	40.8	-52.945	ug/L	-52.945	ppb	12:15:59
1	Sb 206.836†	61.2	32.3	1.4064	ug/L	1.4064	ppb	12:15:59
1	Se 196.026†	-2622.6	-2954.0	-25.872	ug/L	-25.872	ppb	12:15:59
1	Si 251.611†	-439.2	-1086.1	-30.407	ug/L	-30.407	ppb	12:15:59
1	Sn 189.927†	-414.3	-475.5	-15.998	ug/L	-15.998	ppb	12:15:59
1	Ti 334.940†	-13308.3	-13442.4	-2.8454	ug/L	-2.8454	ppb	12:15:39
1	Tl 190.801†	-132.5	-107.8	-16.566	ug/L	-16.566	ppb	12:15:59
1	U 409.014†	429661.5	492044.6	14552	ug/L	14552	ppb	12:15:39
1	V 292.402†	1697.9	3682.6	-7.6835	ug/L	-7.6835	ppb	12:15:39
1	Zn 213.857†	6366.1	6429.9	12.879	ug/L	12.879	ppb	12:15:59
1	SiO2†	-616.0	-1313.4	-79.605	ug/L	-79.605	ppb	12:16:56
2	Sc Radial	4007.6	4007.6	91.1	%			12:15:21
2	Y RADIAL	4297.8	4297.8	91.72	%			12:15:21
2	Al 396.153Radial†	517198.3	567476.1	492760	ug/L	492760	ppb	12:15:16
2	Ca 317.933Radial†	244301.2	268036.5	461860	ug/L	461860	ppb	12:15:16
2	Fe 238.204 Radial†	41855.3	45914.7	454320	ug/L	454320	ppb	12:15:21
2	K 766.490 Radial†	2616.8	-255.8	-258.67	ug/L	-258.67	ppb	12:15:16
2	Mg 279.077 IEC†	12762.0	13998.4	480070	ug/L	480070	ppb	12:15:21
2	Na 589.592 Radial†	1365485.8	1499567.2	517640	ug/L	517640	ppb	12:15:16
2	Sr 421.552†	643.6	710.8	1.2388	ug/L	1.2388	ppb	12:15:21
2	Sc 361.383	745078.0	745078.0	87.143	%			12:16:05
2	Y 371.029	626526.5	626526.5	85.566	%			12:16:05
2	Ag 328.068†	-25102.1	-29266.6	6.4623	ug/L	6.4623	ppb	12:16:05
2	As 188.979†	-226.8	-220.0	-7.6526	ug/L	-7.6526	ppb	12:16:25
2	B 249.677†	890.8	1806.7	-23.054	ug/L	-23.054	ppb	12:16:05
2	Ba 233.527†	-1807.5	-2066.7	-3.7442	ug/L	-3.7442	ppb	12:16:25
2	Be 313.107†	-11079.6	-8325.9	-2.8427	ug/L	-2.8427	ppb	12:16:05
2	Cd 226.502†	3409.6	4156.6	-5.8388	ug/L	-5.8388	ppb	12:16:25
2	Co 228.616†	177.6	303.7	-0.7973	ug/L	-0.7973	ppb	12:16:25
2	Cr 267.716†	30.6	-80.5	2.6561	ug/L	2.6561	ppb	12:16:25
2	Cu 324.752†	832.3	-7244.4	1.7687	ug/L	1.7687	ppb	12:16:05
2	Mn 257.610†	-26663.2	-31229.5	3.1994	ug/L	3.1994	ppb	12:16:05
2	Mo 202.031†	-527.4	-630.4	3.3081	ug/L	3.3081	ppb	12:16:25
2	Ni 231.604†	364.7	291.6	6.4513	ug/L	6.4513	ppb	12:16:25

2	P 214.914†	672.8	517.4	58.300 ug/L	58.300 ppb	12:16:25
2	Pb 220.353†	-717.9	-742.0	-5.3202 ug/L	-5.3202 ppb	12:16:25
2	S 181.975 Axial†	128.3	79.4	-5.6242 ug/L	-5.6242 ppb	12:16:25
2	Sb 206.836†	65.9	38.2	3.4689 ug/L	3.4689 ppb	12:16:25
2	Se 196.026†	-2623.9	-2977.9	-50.936 ug/L	-50.936 ppb	12:16:25
2	Si 251.611†	-453.6	-1106.4	-30.943 ug/L	-30.943 ppb	12:16:25
2	Sn 189.927†	-445.2	-514.5	-23.502 ug/L	-23.502 ppb	12:16:25
2	Ti 334.940†	-13434.0	-13700.1	-4.0205 ug/L	-4.0205 ppb	12:16:05
2	Tl 190.801†	-112.8	-86.2	-10.976 ug/L	-10.976 ppb	12:16:25
2	U 409.014†	425644.4	491097.3	14525 ug/L	14525 ppb	12:16:05
2	V 292.402†	1667.0	3661.7	-7.4269 ug/L	-7.4269 ppb	12:16:05
2	Zn 213.857†	6353.1	6469.3	13.475 ug/L	13.475 ppb	12:16:25
2	SiO2†	-472.8	-1154.4	-69.619 ug/L	-69.619 ppb	12:17:01
3	Sc Radial	3962.6	3962.6	90.1 %		12:15:32
3	Y RADIAL	4219.7	4219.7	90.05 %		12:15:32
3	Al 396.153Radial†	522753.7	580081.7	503700 ug/L	503700 ppb	12:15:27
3	Ca 317.933Radial†	246627.5	273660.3	471550 ug/L	471550 ppb	12:15:27
3	Fe 238.204 Radial†	41301.5	45821.4	453400 ug/L	453400 ppb	12:15:32
3	K 766.490 Radial†	2702.3	-128.3	-236.90 ug/L	-236.90 ppb	12:15:27
3	Mg 279.077 IEC†	12566.9	13940.8	478090 ug/L	478090 ppb	12:15:32
3	Na 589.592 Radial†	1383850.0	1536950.2	530550 ug/L	530550 ppb	12:15:27
3	Sr 421.552†	687.2	767.2	1.5871 ug/L	1.5871 ppb	12:15:32
3	Sc 361.383	746303.2	746303.2	87.287 %		12:16:31
3	Y 371.029	628616.9	628616.9	85.852 %		12:16:31
3	Ag 328.068†	-25371.9	-29528.4	4.8458 ug/L	4.8458 ppb	12:16:31
3	As 188.979†	-224.1	-216.5	-6.5750 ug/L	-6.5750 ppb	12:16:51
3	B 249.677†	877.7	1790.1	-23.277 ug/L	-23.277 ppb	12:16:31
3	Ba 233.527†	-1812.0	-2068.4	-3.7811 ug/L	-3.7811 ppb	12:16:51
3	Be 313.107†	-11197.1	-8439.5	-2.8805 ug/L	-2.8805 ppb	12:16:31
3	Cd 226.502†	3407.3	4147.5	-5.8336 ug/L	-5.8336 ppb	12:16:51
3	Co 228.616†	212.7	343.7	-0.0316 ug/L	-0.0316 ppb	12:16:51
3	Cr 267.716†	46.0	-63.0	2.8031 ug/L	2.8031 ppb	12:16:51
3	Cu 324.752†	920.7	-7144.6	2.0165 ug/L	2.0165 ppb	12:16:31
3	Mn 257.610†	-26863.2	-31408.4	2.9543 ug/L	2.9543 ppb	12:16:31
3	Mo 202.031†	-537.6	-641.1	2.5407 ug/L	2.5407 ppb	12:16:51
3	Ni 231.604†	318.4	237.9	5.2614 ug/L	5.2614 ppb	12:16:51
3	P 214.914†	660.5	502.1	55.213 ug/L	55.213 ppb	12:16:51
3	Pb 220.353†	-751.9	-779.6	-6.7634 ug/L	-6.7634 ppb	12:16:51
3	S 181.975 Axial†	94.9	40.9	-52.019 ug/L	-52.019 ppb	12:16:51
3	Sb 206.836†	64.1	36.0	2.5519 ug/L	2.5519 ppb	12:16:51
3	Se 196.026†	-2631.7	-2981.9	-54.145 ug/L	-54.145 ppb	12:16:51
3	Si 251.611†	-443.8	-1094.3	-30.611 ug/L	-30.611 ppb	12:16:51
3	Sn 189.927†	-413.2	-477.0	-16.830 ug/L	-16.830 ppb	12:16:51
3	Ti 334.940†	-13312.5	-13535.6	-3.2734 ug/L	-3.2734 ppb	12:16:31
3	Tl 190.801†	-139.1	-116.2	-19.027 ug/L	-19.027 ppb	12:16:51
3	U 409.014†	427584.0	492517.6	14567 ug/L	14567 ppb	12:16:31
3	V 292.402†	1632.4	3618.9	-7.5291 ug/L	-7.5291 ppb	12:16:31
3	Zn 213.857†	6307.6	6405.2	13.067 ug/L	13.067 ppb	12:16:51
3	SiO2†	-496.5	-1180.6	-71.282 ug/L	-71.282 ppb	12:17:06

Mean Data: LR1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	747345.1	87.409	%	0.3427				0.39%
Sc Radial	3956.2	90.0	%	1.25				1.39%
Y 371.029	628978.9	85.901	%	0.3622				0.42%
Y RADIAL	4250.2	90.70	%	0.891				0.98%
Ag 328.068†	-29346.4	6.2546	ug/L	1.31730	6.2546	ppb	1.31730	21.06%
Al 396.153Radial†	577469.7	501440	ug/L	7795.2	501440	ppb	7795.2	1.55%
QC value within limits for Al 396.153Radial Recovery = 100.29%								
As 188.979†	-215.0	-5.7568	ug/L	2.41130	-5.7568	ppb	2.41130	41.89%
B 249.677†	1864.0	-21.984	ug/L	2.0491	-21.984	ppb	2.0491	9.32%
Ba 233.527†	-2065.7	-3.7166	ug/L	0.08187	-3.7166	ppb	0.08187	2.20%
Be 313.107†	-8374.0	-2.8585	ug/L	0.01961	-2.8585	ppb	0.01961	0.69%
Ca 317.933Radial†	272803.6	470080	ug/L	7584.8	470080	ppb	7584.8	1.61%
QC value within limits for Ca 317.933Radial Recovery = 94.02%								
Cd 226.502†	4144.9	-6.0333	ug/L	0.34132	-6.0333	ppb	0.34132	5.66%
Co 228.616†	322.0	-0.4646	ug/L	0.39258	-0.4646	ppb	0.39258	84.49%
Cr 267.716†	-53.3	2.9386	ug/L	0.36937	2.9386	ppb	0.36937	12.57%
Cu 324.752†	-7216.6	1.8930	ug/L	0.12389	1.8930	ppb	0.12389	6.54%

Fe 238.204 Radial†	45998.4	455150 ug/L	2280.9	455150 ppb	2280.9	0.50%
QC value within limits for Fe 238.204 Radial Recovery = 91.03%						
K 766.490 Radial†	-123.9	-235.00 ug/L	24.671	-235.00 ppb	24.671	10.50%
Mg 279.077 IEC†	14008.5	480410 ug/L	2511.6	480410 ppb	2511.6	0.52%
QC value within limits for Mg 279.077 IEC Recovery = 96.08%						
Mn 257.610†	-31326.6	3.1724 ug/L	0.20605	3.1724 ppb	0.20605	6.49%
Mo 202.031†	-631.0	3.3513 ug/L	0.83301	3.3513 ppb	0.83301	24.86%
Na 589.592 Radial†	1529793.4	528080 ug/L	9444.2	528080 ppb	9444.2	1.79%
QC value within limits for Na 589.592 Radial Recovery = 105.62%						
Ni 231.604†	250.2	5.5359 ug/L	0.81358	5.5359 ppb	0.81358	14.70%
P 214.914†	508.2	56.075 ug/L	1.9433	56.075 ppb	1.9433	3.47%
Pb 220.353†	-759.3	-5.2642 ug/L	1.52799	-5.2642 ppb	1.52799	29.03%
S 181.975 Axial†	53.7	-36.863 ug/L	27.0572	-36.863 ppb	27.0572	73.40%
Sb 206.836†	35.5	2.4757 ug/L	1.03338	2.4757 ppb	1.03338	41.74%
Se 196.026†	-2971.3	-43.651 ug/L	15.4805	-43.651 ppb	15.4805	35.46%
Si 251.611†	-1095.6	-30.654 ug/L	0.2705	-30.654 ppb	0.2705	0.88%
Sn 189.927†	-489.0	-18.777 ug/L	4.1133	-18.777 ppb	4.1133	21.91%
Sr 421.552†	746.3	1.4382 ug/L	0.17954	1.4382 ppb	0.17954	12.48%
Ti 334.940†	-13559.4	-3.3798 ug/L	0.59474	-3.3798 ppb	0.59474	17.60%
Tl 190.801†	-103.4	-15.523 ug/L	4.1257	-15.523 ppb	4.1257	26.58%
U 409.014†	491886.5	14548 ug/L	21.5	14548 ppb	21.5	0.15%
QC value within limits for U 409.014 Recovery = 96.99%						
V 292.402†	3654.4	-7.5465 ug/L	0.12917	-7.5465 ppb	0.12917	1.71%
Zn 213.857†	6434.8	13.140 ug/L	0.3045	13.140 ppb	0.3045	2.32%
SiO2†	-1216.1	-73.502 ug/L	5.3503	-73.502 ppb	5.3503	7.28%

All analyte(s) passed QC.

Sequence No.: 12
Sample ID: LR2
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 16
Date Collected: 1/8/2010 12:19:16
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: LR2

Rep1#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4240.4	4240.4	96.4	%			12:21:14
1	Y RADIAL	4522.0	4522.0	96.50	%			12:21:14
1	Al 396.153Radial†	520.3	539.2	56.268	ug/L	56.268	ppb	12:21:14
1	Ca 317.933Radial†	28.6	15.9	27.397	ug/L	27.397	ppb	12:21:34
1	Fe 238.204 Radial†	-17.0	-27.1	24.225	ug/L	24.225	ppb	12:21:34
1	K 766.490 Radial†	1339819.4	1386227.7	293620	ug/L	293620	ppb	12:21:09
1	Mg 279.077 IEC†	-5.3	-9.7	-138.97	ug/L	-138.97	ppb	12:21:34
1	Na 589.592 Radial†	-835.7	472.4	163.08	ug/L	163.08	ppb	12:21:14
1	Sr 421.552†	1227773.8	1273171.2	9886.6	ug/L	9886.6	ppb	12:21:09
1	Sc 361.383	842970.7	842970.7	98.593	%			12:22:51
1	Y 371.029	705906.6	705906.6	96.407	%			12:22:51
1	Ag 328.068†	-7601.2	-8170.8	3.2875	ug/L	3.2875	ppb	12:22:56
1	As 188.979†	27749.2	28185.4	10035	ug/L	10035	ppb	12:22:56
1	B 249.677†	235119.4	239259.6	4906.7	ug/L	4906.7	ppb	12:22:51
1	Ba 233.527†	1870957.5	1897667.8	14023	ug/L	14023	ppb	12:22:51
1	Be 313.107†	8312223.9	8435246.9	2855.9	ug/L	2855.9	ppb	12:22:45
1	Cd 226.502†	989799.6	1004170.3	9567.7	ug/L	9567.7	ppb	12:22:51
1	Co 228.616†	483089.6	490084.3	9271.7	ug/L	9271.7	ppb	12:22:56
1	Cr 267.716†	2302128.3	2334869.4	23711	ug/L	23711	ppb	12:22:51
1	Cu 324.752†	6603592.4	6689641.5	19768	ug/L	19768	ppb	12:22:45
1	Mn 257.610†	8691514.9	8814930.3	9360.3	ug/L	9360.3	ppb	12:22:45
1	Mo 202.031†	148633.2	150729.3	9620.9	ug/L	9620.9	ppb	12:22:56
1	Ni 231.604†	432621.9	438669.5	9705.2	ug/L	9705.2	ppb	12:22:51
1	P 214.914†	35166.2	35413.4	14446	ug/L	14446	ppb	12:22:56
1	Pb 220.353†	224150.2	227431.2	24076	ug/L	24076	ppb	12:22:56
1	S 181.975 Axial†	43787.2	44344.3	51010	ug/L	51010	ppb	12:22:56
1	Sb 206.836†	33197.0	33633.4	10058	ug/L	10058	ppb	12:22:56
1	Se 196.026†	19532.9	19844.8	10192	ug/L	10192	ppb	12:22:56
1	Si 251.611†	1634713.8	1657459.1	47500	ug/L	47500	ppb	12:22:51
1	Sn 189.927†	66924.6	67876.2	10263	ug/L	10263	ppb	12:22:56
1	Ti 334.940†	6012032.1	6099553.5	9642.0	ug/L	9642.0	ppb	12:22:45
1	Tl 190.801†	34371.1	34904.8	9788.2	ug/L	9788.2	ppb	12:22:56
1	U 409.014†	-1699.0	933.0	-18.031	ug/L	-18.031	ppb	12:22:51
1	V 292.402†	1537304.5	1560994.1	9956.3	ug/L	9956.3	ppb	12:22:51
1	Zn 213.857†	1656060.4	1678875.1	13792	ug/L	13792	ppb	12:22:51
1	SiO2†	1638688.2	1661464.3	102560	ug/L	102560	ppb	12:23:44
2	Sc Radial	4220.4	4220.4	96.0	%			12:21:44
2	Y RADIAL	4434.4	4434.4	94.63	%			12:21:44
2	Al 396.153Radial†	487.4	507.5	27.320	ug/L	27.320	ppb	12:21:44
2	Ca 317.933Radial†	21.3	8.4	14.551	ug/L	14.551	ppb	12:22:04
2	Fe 238.204 Radial†	-17.8	-28.0	16.539	ug/L	16.539	ppb	12:22:04
2	K 766.490 Radial†	1350475.4	1403905.1	297370	ug/L	297370	ppb	12:21:39
2	Mg 279.077 IEC†	-6.8	-11.3	-191.32	ug/L	-191.32	ppb	12:22:04
2	Na 589.592 Radial†	-1014.0	282.5	97.512	ug/L	97.512	ppb	12:21:44
2	Sr 421.552†	1233375.1	1285032.3	9978.7	ug/L	9978.7	ppb	12:21:39
2	Sc 361.383	840096.8	840096.8	98.257	%			12:23:11
2	Y 371.029	704049.7	704049.7	96.154	%			12:23:11
2	Ag 328.068†	-7572.8	-8168.2	3.3252	ug/L	3.3252	ppb	12:23:16
2	As 188.979†	27669.3	28200.4	10041	ug/L	10041	ppb	12:23:16
2	B 249.677†	234955.8	239908.9	4920.0	ug/L	4920.0	ppb	12:23:11
2	Ba 233.527†	1863376.0	1896443.4	14014	ug/L	14014	ppb	12:23:11
2	Be 313.107†	8335733.2	8488014.1	2873.8	ug/L	2873.8	ppb	12:23:05
2	Cd 226.502†	985042.0	1002762.6	9554.3	ug/L	9554.3	ppb	12:23:11
2	Co 228.616†	483062.9	491733.4	9302.9	ug/L	9302.9	ppb	12:23:16
2	Cr 267.716†	2294033.1	2334618.2	23708	ug/L	23708	ppb	12:23:11
2	Cu 324.752†	6627046.8	6736424.3	19906	ug/L	19906	ppb	12:23:05
2	Mn 257.610†	8711752.6	8865683.9	9414.2	ug/L	9414.2	ppb	12:23:05
2	Mo 202.031†	148649.0	151261.1	9654.9	ug/L	9654.9	ppb	12:23:16
2	Ni 231.604†	430933.3	438452.0	9700.4	ug/L	9700.4	ppb	12:23:11

2	P 214.914†	35118.1	35486.5	14460 ug/L	14460 ppb	12:23:16
2	Pb 220.353†	223868.6	227922.3	24128 ug/L	24128 ppb	12:23:16
2	S 181.975 Axial†	43764.2	44472.8	51158 ug/L	51158 ppb	12:23:16
2	Sb 206.836†	33203.6	33755.2	10096 ug/L	10096 ppb	12:23:16
2	Se 196.026†	19521.0	19900.4	10221 ug/L	10221 ppb	12:23:16
2	Si 251.611†	1628573.1	1656881.3	47482 ug/L	47482 ppb	12:23:11
2	Sn 189.927†	66789.5	67970.9	10278 ug/L	10278 ppb	12:23:16
2	Ti 334.940†	6031564.2	6140292.0	9706.4 ug/L	9706.4 ppb	12:23:05
2	Tl 190.801†	34383.8	35037.0	9825.7 ug/L	9825.7 ppb	12:23:16
2	U 409.014†	-1609.7	1018.0	-15.501 ug/L	-15.501 ppb	12:23:11
2	V 292.402†	1533309.6	1562262.2	9964.7 ug/L	9964.7 ppb	12:23:11
2	Zn 213.857†	1649675.4	1678122.8	13786 ug/L	13786 ppb	12:23:11
2	SiO2†	1634605.9	1662995.2	102650 ug/L	102650 ppb	12:23:51
3	Sc Radial	4212.8	4212.8	95.8 %		12:22:15
3	Y RADIAL	4480.2	4480.2	95.61 %		12:22:15
3	Al 396.153Radial†	511.4	533.5	56.053 ug/L	56.053 ppb	12:22:15
3	Ca 317.933Radial†	23.4	10.6	18.228 ug/L	18.228 ppb	12:22:35
3	Fe 238.204 Radial†	-18.3	-28.6	6.4520 ug/L	6.4520 ppb	12:22:35
3	K 766.490 Radial†	1335803.2	1391130.6	294660 ug/L	294660 ppb	12:22:10
3	Mg 279.077 IEC†	0.5	-3.7	66.538 ug/L	66.538 ppb	12:22:35
3	Na 589.592 Radial†	-983.6	312.4	107.83 ug/L	107.83 ppb	12:22:15
3	Sr 421.552†	1222534.0	1276036.4	9908.8 ug/L	9908.8 ppb	12:22:10
3	Sc 361.383	838843.7	838843.7	98.110 %		12:23:31
3	Y 371.029	703059.2	703059.2	96.018 %		12:23:31
3	Ag 328.068†	-7510.6	-8116.4	3.4915 ug/L	3.4915 ppb	12:23:36
3	As 188.979†	27142.6	27705.7	9867.3 ug/L	9867.3 ppb	12:23:36
3	B 249.677†	233661.2	238946.6	4900.5 ug/L	4900.5 ppb	12:23:31
3	Ba 233.527†	1858952.1	1894767.4	14002 ug/L	14002 ppb	12:23:31
3	Be 313.107†	8436329.7	8603221.8	2912.8 ug/L	2912.8 ppb	12:23:24
3	Cd 226.502†	981600.9	1000752.8	9535.2 ug/L	9535.2 ppb	12:23:31
3	Co 228.616†	475664.0	484926.4	9173.4 ug/L	9173.4 ppb	12:23:36
3	Cr 267.716†	2287328.3	2331272.1	23674 ug/L	23674 ppb	12:23:31
3	Cu 324.752†	6721433.0	6842704.4	20220 ug/L	20220 ppb	12:23:24
3	Mn 257.610†	8811972.4	8981079.5	9536.7 ug/L	9536.7 ppb	12:23:24
3	Mo 202.031†	146206.6	148997.6	9510.4 ug/L	9510.4 ppb	12:23:36
3	Ni 231.604†	429363.2	437506.8	9679.5 ug/L	9679.5 ppb	12:23:31
3	P 214.914†	34448.7	34857.6	14097 ug/L	14097 ppb	12:23:36
3	Pb 220.353†	220055.0	224375.7	23752 ug/L	23752 ppb	12:23:36
3	S 181.975 Axial†	42887.5	43645.7	50207 ug/L	50207 ppb	12:23:36
3	Sb 206.836†	32589.3	33179.6	9914.9 ug/L	9914.9 ppb	12:23:36
3	Se 196.026†	19118.3	19519.7	10025 ug/L	10025 ppb	12:23:36
3	Si 251.611†	1621018.6	1651657.4	47335 ug/L	47335 ppb	12:23:31
3	Sn 189.927†	65624.1	66884.6	10113 ug/L	10113 ppb	12:23:36
3	Ti 334.940†	6108517.5	6227897.9	9845.0 ug/L	9845.0 ppb	12:23:24
3	Tl 190.801†	33742.8	34435.9	9660.6 ug/L	9660.6 ppb	12:23:36
3	U 409.014†	-1716.0	907.2	-18.724 ug/L	-18.724 ppb	12:23:31
3	V 292.402†	1528720.9	1559916.4	9947.7 ug/L	9947.7 ppb	12:23:31
3	Zn 213.857†	1644094.4	1674942.4	13760 ug/L	13760 ppb	12:23:31
3	SiO2†	1613114.0	1643574.7	101450 ug/L	101450 ppb	12:23:58

Mean Data: LR2

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	840637.1	98.320	%	0.2475				0.25%
Sc Radial	4224.6	96.1	%	0.32				0.34%
Y 371.029	704338.5	96.193	%	0.1974				0.21%
Y RADIAL	4478.8	95.58	%	0.935				0.98%
Ag 328.068†	-8151.8	3.3681	ug/L	0.10851	3.3681	ppb	0.10851	3.22%
Al 396.153Radial†	526.7	46.547	ug/L	16.6513	46.547	ppb	16.6513	35.77%
As 188.979†	28030.5	9980.9	ug/L	98.46	9980.9	ppb	98.46	0.99%
QC value within limits for As 188.979 Recovery = 99.81%								
B 249.677†	239371.7	4909.0	ug/L	9.96	4909.0	ppb	9.96	0.20%
QC value within limits for B 249.677 Recovery = 98.18%								
Ba 233.527†	1896292.9	14013	ug/L	10.8	14013	ppb	10.8	0.08%
QC value within limits for Ba 233.527 Recovery = 93.42%								
Be 313.107†	8508827.6	2880.8	ug/L	29.09	2880.8	ppb	29.09	1.01%
QC value within limits for Be 313.107 Recovery = 96.03%								
Ca 317.933Radial†	11.6	20.059	ug/L	6.6160	20.059	ppb	6.6160	32.98%
Cd 226.502†	1002561.9	9552.4	ug/L	16.36	9552.4	ppb	16.36	0.17%
QC value within limits for Cd 226.502 Recovery = 95.52%								

Co 228.616†	488914.7	9249.3 ug/L	67.55	9249.3 ppb	67.55	0.73%
QC value within limits for Co 228.616 Recovery = 92.49%						
Cr 267.716†	2333586.5	23698 ug/L	20.4	23698 ppb	20.4	0.09%
QC value within limits for Cr 267.716 Recovery = 94.79%						
Cu 324.752†	6756256.7	19965 ug/L	231.8	19965 ppb	231.8	1.16%
QC value within limits for Cu 324.752 Recovery = 99.82%						
Fe 238.204 Radial†	-27.9	15.739 ug/L	8.9136	15.739 ppb	8.9136	56.63%
K 766.490 Radial†	1393754.5	295220 ug/L	1933.7	295220 ppb	1933.7	0.65%
QC value within limits for K 766.490 Radial Recovery = 98.41%						
Mg 279.077 IEC†	-8.2	-87.918 ug/L	136.2999	-87.918 ppb	136.2999	155.03%
Mn 257.610†	8887231.2	9437.1 ug/L	90.41	9437.1 ppb	90.41	0.96%
QC value within limits for Mn 257.610 Recovery = 94.37%						
Mo 202.031†	150329.4	9595.4 ug/L	75.55	9595.4 ppb	75.55	0.79%
QC value within limits for Mo 202.031 Recovery = 95.95%						
Na 589.592 Radial†	355.8	122.80 ug/L	35.256	122.80 ppb	35.256	28.71%
Ni 231.604†	438209.4	9695.0 ug/L	13.64	9695.0 ppb	13.64	0.14%
QC value within limits for Ni 231.604 Recovery = 96.95%						
P 214.914†	35252.5	14334 ug/L	205.6	14334 ppb	205.6	1.43%
QC value within limits for P 214.914 Recovery = 95.56%						
Pb 220.353†	226576.4	23986 ug/L	203.7	23986 ppb	203.7	0.85%
QC value within limits for Pb 220.353 Recovery = 95.94%						
S 181.975 Axial†	44154.3	50792 ug/L	512.0	50792 ppb	512.0	1.01%
QC value within limits for S 181.975 Axial Recovery = 101.58%						
Sb 206.836†	33522.8	10023 ug/L	95.5	10023 ppb	95.5	0.95%
QC value within limits for Sb 206.836 Recovery = 100.23%						
Se 196.026†	19755.0	10146 ug/L	105.6	10146 ppb	105.6	1.04%
QC value within limits for Se 196.026 Recovery = 101.46%						
Si 251.611†	1655332.6	47439 ug/L	90.5	47439 ppb	90.5	0.19%
QC value within limits for Si 251.611 Recovery = 94.88%						
Sn 189.927†	67577.2	10218 ug/L	91.0	10218 ppb	91.0	0.89%
QC value within limits for Sn 189.927 Recovery = 102.18%						
Sr 421.552†	1278080.0	9924.7 ug/L	48.06	9924.7 ppb	48.06	0.48%
QC value within limits for Sr 421.552 Recovery = 99.25%						
Ti 334.940†	6155914.5	9731.1 ug/L	103.77	9731.1 ppb	103.77	1.07%
QC value within limits for Ti 334.940 Recovery = 97.31%						
Tl 190.801†	34792.6	9758.2 ug/L	86.54	9758.2 ppb	86.54	0.89%
QC value within limits for Tl 190.801 Recovery = 97.58%						
U 409.014†	952.7	-17.419 ug/L	1.6966	-17.419 ppb	1.6966	9.74%
V 292.402†	1561057.6	9956.2 ug/L	8.49	9956.2 ppb	8.49	0.09%
QC value within limits for V 292.402 Recovery = 99.56%						
Zn 213.857†	1677313.5	13779 ug/L	17.4	13779 ppb	17.4	0.13%
QC value within limits for Zn 213.857 Recovery = 91.86%						
SiO2†	1656011.4	102220 ug/L	666.9	102220 ppb	666.9	0.65%
QC value within limits for SiO2 Recovery = 95.53%						

All analyte(s) passed QC.

Sequence No.: 13
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/8/2010 12:26:07
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4318.8	4318.8	98.2	%			12:28:00
1	Y RADIAL	4585.0	4585.0	97.85	%			12:28:00
1	Al 396.153Radial†	5533.5	5633.5	4870.9	ug/L	4870.9	ppb	12:28:00
1	Ca 317.933Radial†	2818.1	2855.5	4920.3	ug/L	4920.3	ppb	12:28:20
1	Fe 238.204 Radial†	503.3	503.0	4992.1	ug/L	4992.1	ppb	12:28:20
1	K 766.490 Radial†	26823.5	24183.2	5115.3	ug/L	5115.3	ppb	12:28:00
1	Mg 279.077 IEC†	148.8	147.3	5059.7	ug/L	5059.7	ppb	12:28:20
1	Na 589.592 Radial†	26849.6	28675.7	9898.7	ug/L	9898.7	ppb	12:28:00
1	Sr 421.552†	63179.3	64330.2	499.50	ug/L	499.50	ppb	12:28:00
1	Sc 361.383	868766.3	868766.3	101.61	%			12:29:19
1	Y 371.029	734737.2	734737.2	100.34	%			12:29:19
1	Ag 328.068†	113054.7	110802.4	481.11	ug/L	481.11	ppb	12:29:19
1	As 188.979†	1407.2	1425.2	507.51	ug/L	507.51	ppb	12:29:39
1	B 249.677†	24432.9	24830.3	509.77	ug/L	509.77	ppb	12:29:19
1	Ba 233.527†	66728.1	65678.3	485.78	ug/L	485.78	ppb	12:29:19
1	Be 313.107†	1467124.5	1448268.2	488.03	ug/L	488.03	ppb	12:29:19
1	Cd 226.502†	51718.6	51143.2	486.78	ug/L	486.78	ppb	12:29:19
1	Co 228.616†	25663.8	25357.1	479.84	ug/L	479.84	ppb	12:29:39
1	Cr 267.716†	48440.6	47557.5	483.39	ug/L	483.39	ppb	12:29:19
1	Cu 324.752†	173449.0	162501.5	480.44	ug/L	480.44	ppb	12:29:19
1	Mn 257.610†	468068.9	460020.4	488.88	ug/L	488.88	ppb	12:29:19
1	Mo 202.031†	7766.5	7618.2	486.74	ug/L	486.74	ppb	12:29:39
1	Ni 231.604†	22229.7	21750.6	481.20	ug/L	481.20	ppb	12:29:39
1	P 214.914†	5300.6	4961.9	2375.7	ug/L	2375.7	ppb	12:29:39
1	Pb 220.353†	4670.0	4677.9	496.54	ug/L	496.54	ppb	12:29:39
1	S 181.975 Axial†	929.1	846.6	972.85	ug/L	972.85	ppb	12:29:39
1	Sb 206.836†	1656.1	1592.4	492.48	ug/L	492.48	ppb	12:29:39
1	Se 196.026†	945.0	963.1	510.82	ug/L	510.82	ppb	12:29:39
1	Si 251.611†	85721.0	83777.0	2404.2	ug/L	2404.2	ppb	12:29:19
1	Sn 189.927†	3260.7	3205.4	485.26	ug/L	485.26	ppb	12:29:39
1	Ti 334.940†	307952.3	304789.1	482.10	ug/L	482.10	ppb	12:29:19
1	Tl 190.801†	1743.8	1759.3	493.53	ug/L	493.53	ppb	12:29:39
1	U 409.014†	12967.4	15418.1	456.24	ug/L	456.24	ppb	12:29:19
1	V 292.402†	75758.2	76306.7	487.42	ug/L	487.42	ppb	12:29:19
1	Zn 213.857†	60774.0	58990.0	483.55	ug/L	483.55	ppb	12:29:19
1	SiO2†	85358.0	83393.9	5154.9	ug/L	5154.9	ppb	12:30:39
2	Sc Radial	4311.0	4311.0	98.0	%			12:28:25
2	Y RADIAL	4544.5	4544.5	96.98	%			12:28:25
2	Al 396.153Radial†	5470.8	5579.8	4824.3	ug/L	4824.3	ppb	12:28:25
2	Ca 317.933Radial†	2843.4	2886.5	4973.8	ug/L	4973.8	ppb	12:28:45
2	Fe 238.204 Radial†	509.5	510.2	5063.2	ug/L	5063.2	ppb	12:28:45
2	K 766.490 Radial†	26398.0	23798.6	5033.9	ug/L	5033.9	ppb	12:28:25
2	Mg 279.077 IEC†	146.2	144.9	4979.0	ug/L	4979.0	ppb	12:28:45
2	Na 589.592 Radial†	26344.1	28209.5	9737.7	ug/L	9737.7	ppb	12:28:25
2	Sr 421.552†	62299.2	63548.7	493.43	ug/L	493.43	ppb	12:28:25
2	Sc 361.383	871254.0	871254.0	101.90	%			12:29:46
2	Y 371.029	737449.1	737449.1	100.72	%			12:29:46
2	Ag 328.068†	113392.8	110816.5	481.18	ug/L	481.18	ppb	12:29:46
2	As 188.979†	1402.9	1417.0	504.63	ug/L	504.63	ppb	12:30:06
2	B 249.677†	24409.9	24739.1	507.89	ug/L	507.89	ppb	12:29:46
2	Ba 233.527†	66703.8	65467.0	484.22	ug/L	484.22	ppb	12:29:46
2	Be 313.107†	1469468.7	1446445.9	487.41	ug/L	487.41	ppb	12:29:46
2	Cd 226.502†	51855.7	51132.4	486.67	ug/L	486.67	ppb	12:29:46
2	Co 228.616†	25675.5	25296.5	478.69	ug/L	478.69	ppb	12:30:06
2	Cr 267.716†	48605.1	47582.8	483.64	ug/L	483.64	ppb	12:29:46
2	Cu 324.752†	173452.9	162017.9	479.02	ug/L	479.02	ppb	12:29:46
2	Mn 257.610†	468468.6	459097.4	487.91	ug/L	487.91	ppb	12:29:46
2	Mo 202.031†	7778.2	7607.9	486.09	ug/L	486.09	ppb	12:30:06
2	Ni 231.604†	22230.3	21688.7	479.83	ug/L	479.83	ppb	12:30:06

2	P 214.914†	5317.8	4964.0	2376.8 ug/L	2376.8 ppb	12:30:06
2	Pb 220.353†	4640.1	4635.4	492.03 ug/L	492.03 ppb	12:30:06
2	S 181.975 Axial†	931.1	845.9	972.06 ug/L	972.06 ppb	12:30:06
2	Sb 206.836†	1671.6	1603.0	495.64 ug/L	495.64 ppb	12:30:06
2	Se 196.026†	957.4	972.7	515.92 ug/L	515.92 ppb	12:30:06
2	Si 251.611†	85728.6	83543.6	2397.6 ug/L	2397.6 ppb	12:29:46
2	Sn 189.927†	3250.8	3186.5	482.41 ug/L	482.41 ppb	12:30:06
2	Ti 334.940†	308524.0	304484.8	481.62 ug/L	481.62 ppb	12:29:46
2	Tl 190.801†	1730.4	1741.3	488.51 ug/L	488.51 ppb	12:30:06
2	U 409.014†	13209.1	15618.9	462.19 ug/L	462.19 ppb	12:29:46
2	V 292.402†	75840.1	76174.2	486.57 ug/L	486.57 ppb	12:29:46
2	Zn 213.857†	60999.3	59040.3	483.98 ug/L	483.98 ppb	12:29:46
2	SiO2†	85881.1	83667.2	5172.0 ug/L	5172.0 ppb	12:30:44
3	Sc Radial	4239.6	4239.6	96.4 %		12:28:50
3	Y RADIAL	4515.1	4515.1	96.35 %		12:28:50
3	Al 396.153Radial†	5465.4	5668.1	4901.2 ug/L	4901.2 ppb	12:28:50
3	Ca 317.933Radial†	2815.7	2906.5	5008.4 ug/L	5008.4 ppb	12:29:10
3	Fe 238.204 Radial†	504.2	513.5	5096.0 ug/L	5096.0 ppb	12:29:10
3	K 766.490 Radial†	26553.4	24413.3	5164.0 ug/L	5164.0 ppb	12:28:50
3	Mg 279.077 IEC†	146.1	147.4	5062.9 ug/L	5062.9 ppb	12:29:10
3	Na 589.592 Radial†	26165.2	28476.7	9830.0 ug/L	9830.0 ppb	12:28:50
3	Sr 421.552†	62217.3	64534.3	501.08 ug/L	501.08 ppb	12:28:50
3	Sc 361.383	877894.5	877894.5	102.68 %		12:30:14
3	Y 371.029	742978.2	742978.2	101.47 %		12:30:14
3	Ag 328.068†	114432.2	110987.1	481.93 ug/L	481.93 ppb	12:30:14
3	As 188.979†	1394.1	1398.0	497.94 ug/L	497.94 ppb	12:30:34
3	B 249.677†	24630.7	24772.9	508.59 ug/L	508.59 ppb	12:30:14
3	Ba 233.527†	67373.3	65623.8	485.38 ug/L	485.38 ppb	12:30:14
3	Be 313.107†	1484564.2	1450239.8	488.69 ug/L	488.69 ppb	12:30:14
3	Cd 226.502†	52344.5	51223.5	487.54 ug/L	487.54 ppb	12:30:14
3	Co 228.616†	25658.3	25089.1	474.75 ug/L	474.75 ppb	12:30:34
3	Cr 267.716†	48978.2	47585.4	483.67 ug/L	483.67 ppb	12:30:14
3	Cu 324.752†	175180.3	162412.7	480.18 ug/L	480.18 ppb	12:30:14
3	Mn 257.610†	472806.7	459844.8	488.71 ug/L	488.71 ppb	12:30:14
3	Mo 202.031†	7767.2	7539.4	481.72 ug/L	481.72 ppb	12:30:34
3	Ni 231.604†	22238.2	21531.3	476.35 ug/L	476.35 ppb	12:30:34
3	P 214.914†	5304.6	4911.6	2350.8 ug/L	2350.8 ppb	12:30:34
3	Pb 220.353†	4671.4	4631.5	491.62 ug/L	491.62 ppb	12:30:34
3	S 181.975 Axial†	936.9	844.6	970.60 ug/L	970.60 ppb	12:30:34
3	Sb 206.836†	1654.5	1573.9	486.67 ug/L	486.67 ppb	12:30:34
3	Se 196.026†	955.0	963.2	511.17 ug/L	511.17 ppb	12:30:34
3	Si 251.611†	86533.1	83690.7	2401.8 ug/L	2401.8 ppb	12:30:14
3	Sn 189.927†	3275.7	3186.6	482.43 ug/L	482.43 ppb	12:30:34
3	Ti 334.940†	311160.9	304762.6	482.06 ug/L	482.06 ppb	12:30:14
3	Tl 190.801†	1746.9	1744.6	489.44 ug/L	489.44 ppb	12:30:34
3	U 409.014†	13158.2	15471.3	457.80 ug/L	457.80 ppb	12:30:14
3	V 292.402†	76436.0	76191.5	486.61 ug/L	486.61 ppb	12:30:14
3	Zn 213.857†	61481.6	59057.3	484.13 ug/L	484.13 ppb	12:30:14
3	SiO2†	85600.6	82756.6	5115.5 ug/L	5115.5 ppb	12:30:49

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	872638.3	102.06	%	0.552				0.54%
Sc Radial	4289.8	97.6	%	0.99				1.02%
Y 371.029	738388.2	100.84	%	0.574				0.57%
Y RADIAL	4548.2	97.06	%	0.749				0.77%
Ag 328.068†	110868.7	481.41	ug/L	0.457	481.41	ppb	0.457	0.09%
QC value within limits for Ag 328.068 Recovery = 96.28%								
Al 396.153Radial†	5627.2	4865.5	ug/L	38.72	4865.5	ppb	38.72	0.80%
QC value within limits for Al 396.153Radial Recovery = 97.31%								
As 188.979†	1413.4	503.36	ug/L	4.906	503.36	ppb	4.906	0.97%
QC value within limits for As 188.979 Recovery = 100.67%								
B 249.677†	24780.8	508.75	ug/L	0.952	508.75	ppb	0.952	0.19%
QC value within limits for B 249.677 Recovery = 101.75%								
Ba 233.527†	65589.7	485.12	ug/L	0.810	485.12	ppb	0.810	0.17%
QC value within limits for Ba 233.527 Recovery = 97.02%								
Be 313.107†	1448318.0	488.04	ug/L	0.639	488.04	ppb	0.639	0.13%
QC value within limits for Be 313.107 Recovery = 97.61%								
Ca 317.933Radial†	2882.8	4967.5	ug/L	44.35	4967.5	ppb	44.35	0.89%

QC value within limits for Ca 317.933Radial Recovery = 99.35%

Cd 226.502†	51166.3	487.00 ug/L	0.469	487.00 ppb	0.469	0.10%
QC value within limits for Cd 226.502 Recovery = 97.40%						
Co 228.616†	25247.6	477.76 ug/L	2.666	477.76 ppb	2.666	0.56%
QC value within limits for Co 228.616 Recovery = 95.55%						
Cr 267.716†	47575.3	483.57 ug/L	0.156	483.57 ppb	0.156	0.03%
QC value within limits for Cr 267.716 Recovery = 96.71%						
Cu 324.752†	162310.7	479.88 ug/L	0.760	479.88 ppb	0.760	0.16%
QC value within limits for Cu 324.752 Recovery = 95.98%						
Fe 238.204 Radial†	508.9	5050.4 ug/L	53.15	5050.4 ppb	53.15	1.05%
QC value within limits for Fe 238.204 Radial Recovery = 101.01%						
K 766.490 Radial†	24131.7	5104.4 ug/L	65.77	5104.4 ppb	65.77	1.29%
QC value within limits for K 766.490 Radial Recovery = 102.09%						
Mg 279.077 IEC†	146.5	5033.9 ug/L	47.55	5033.9 ppb	47.55	0.94%
QC value within limits for Mg 279.077 IEC Recovery = 100.68%						
Mn 257.610†	459654.2	488.50 ug/L	0.518	488.50 ppb	0.518	0.11%
QC value within limits for Mn 257.610 Recovery = 97.70%						
Mo 202.031†	7588.5	484.85 ug/L	2.730	484.85 ppb	2.730	0.56%
QC value within limits for Mo 202.031 Recovery = 96.97%						
Na 589.592 Radial†	28453.9	9822.1 ug/L	80.76	9822.1 ppb	80.76	0.82%
QC value within limits for Na 589.592 Radial Recovery = 98.22%						
Ni 231.604†	21656.9	479.13 ug/L	2.500	479.13 ppb	2.500	0.52%
QC value within limits for Ni 231.604 Recovery = 95.83%						
P 214.914†	4945.8	2367.7 ug/L	14.71	2367.7 ppb	14.71	0.62%
QC value within limits for P 214.914 Recovery = 94.71%						
Pb 220.353†	4648.2	493.40 ug/L	2.731	493.40 ppb	2.731	0.55%
QC value within limits for Pb 220.353 Recovery = 98.68%						
S 181.975 Axial†	845.7	971.84 ug/L	1.142	971.84 ppb	1.142	0.12%
QC value within limits for S 181.975 Axial Recovery = 97.18%						
Sb 206.836†	1589.8	491.59 ug/L	4.548	491.59 ppb	4.548	0.93%
QC value within limits for Sb 206.836 Recovery = 98.32%						
Se 196.026†	966.3	512.63 ug/L	2.851	512.63 ppb	2.851	0.56%
QC value within limits for Se 196.026 Recovery = 102.53%						
Si 251.611†	83670.4	2401.2 ug/L	3.38	2401.2 ppb	3.38	0.14%
QC value within limits for Si 251.611 Recovery = 96.05%						
Sn 189.927†	3192.9	483.37 ug/L	1.638	483.37 ppb	1.638	0.34%
QC value within limits for Sn 189.927 Recovery = 96.67%						
Sr 421.552†	64137.7	498.00 ug/L	4.040	498.00 ppb	4.040	0.81%
QC value within limits for Sr 421.552 Recovery = 99.60%						
Ti 334.940†	304678.8	481.93 ug/L	0.268	481.93 ppb	0.268	0.06%
QC value within limits for Ti 334.940 Recovery = 96.39%						
Tl 190.801†	1748.4	490.49 ug/L	2.670	490.49 ppb	2.670	0.54%
QC value within limits for Tl 190.801 Recovery = 98.10%						
U 409.014†	15502.8	458.74 ug/L	3.086	458.74 ppb	3.086	0.67%
QC value within limits for U 409.014 Recovery = 91.75%						
V 292.402†	76224.1	486.87 ug/L	0.478	486.87 ppb	0.478	0.10%
QC value within limits for V 292.402 Recovery = 97.37%						
Zn 213.857†	59029.2	483.89 ug/L	0.301	483.89 ppb	0.301	0.06%
QC value within limits for Zn 213.857 Recovery = 96.78%						
SiO2†	83272.6	5147.4 ug/L	28.97	5147.4 ppb	28.97	0.56%
QC value within limits for SiO2 Recovery = 96.26%						

All analyte(s) passed QC.

Sequence No.: 14
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/8/2010 12:33:00
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4236.3	4236.3	96.3	%			12:34:52
1	Y RADIAL	4513.7	4513.7	96.33	%			12:34:52
1	Al 396.153Radial†	-23.4	-24.6	-21.380	ug/L	-21.380	ppb	12:34:52
1	Ca 317.933Radial†	14.3	1.0	1.8074	ug/L	1.8074	ppb	12:35:12
1	Fe 238.204 Radial†	7.4	-1.9	-18.324	ug/L	-18.324	ppb	12:35:12
1	K 766.490 Radial†	3584.3	593.6	125.75	ug/L	125.75	ppb	12:34:52
1	Mg 279.077 IEC†	2.8	-1.3	-44.153	ug/L	-44.153	ppb	12:35:12
1	Na 589.592 Radial†	-1249.5	42.0	14.498	ug/L	14.498	ppb	12:34:52
1	Sr 421.552†	-14.4	-10.3	-0.0800	ug/L	-0.0800	ppb	12:34:52
1	Sc 361.383	849893.5	849893.5	99.403	%			12:36:09
1	Y 371.029	727794.7	727794.7	99.397	%			12:36:09
1	Ag 328.068†	447.7	-10.7	-0.0498	ug/L	-0.0498	ppb	12:36:09
1	As 188.979†	-5.2	35.0	12.359	ug/L	12.359	ppb	12:36:29
1	B 249.677†	315.6	1102.0	22.709	ug/L	22.709	ppb	12:36:09
1	Ba 233.527†	26.7	34.3	0.2520	ug/L	0.2520	ppb	12:36:29
1	Be 313.107†	-4224.0	139.0	0.0470	ug/L	0.0470	ppb	12:36:09
1	Cd 226.502†	-197.7	45.1	0.4310	ug/L	0.4310	ppb	12:36:29
1	Co 228.616†	-86.5	12.9	0.2469	ug/L	0.2469	ppb	12:36:29
1	Cr 267.716†	125.1	10.3	0.1046	ug/L	0.1046	ppb	12:36:09
1	Cu 324.752†	8083.6	-67.2	-0.1996	ug/L	-0.1996	ppb	12:36:09
1	Mn 257.610†	621.1	-7.7	-0.0092	ug/L	-0.0092	ppb	12:36:09
1	Mo 202.031†	36.9	11.9	0.7579	ug/L	0.7579	ppb	12:36:29
1	Ni 231.604†	118.3	-7.9	-0.1746	ug/L	-0.1746	ppb	12:36:29
1	P 214.914†	261.0	7.9	3.9230	ug/L	3.9230	ppb	12:36:29
1	Pb 220.353†	-99.9	-18.6	-1.9717	ug/L	-1.9717	ppb	12:36:29
1	S 181.975 Axial†	63.5	-4.0	-4.5914	ug/L	-4.5914	ppb	12:36:29
1	Sb 206.836†	55.1	17.9	5.4916	ug/L	5.4916	ppb	12:36:29
1	Se 196.026†	-38.6	-5.7	-2.9629	ug/L	-2.9629	ppb	12:36:29
1	Si 251.611†	705.7	124.0	3.5203	ug/L	3.5203	ppb	12:36:29
1	Sn 189.927†	7.5	3.9	0.5906	ug/L	0.5906	ppb	12:36:29
1	Ti 334.940†	-1625.7	80.4	0.1287	ug/L	0.1287	ppb	12:36:09
1	Tl 190.801†	-35.4	7.6	2.1200	ug/L	2.1200	ppb	12:36:29
1	U 409.014†	-2751.8	-112.2	-3.3281	ug/L	-3.3281	ppb	12:36:09
1	V 292.402†	-1759.2	-21.1	-0.1267	ug/L	-0.1267	ppb	12:36:09
1	Zn 213.857†	910.0	94.4	0.7843	ug/L	0.7843	ppb	12:36:29
1	SiO2†	716.3	108.8	6.6320	ug/L	6.6320	ppb	12:37:25
2	Sc Radial	4316.1	4316.1	98.2	%			12:35:17
2	Y RADIAL	4584.1	4584.1	97.83	%			12:35:17
2	Al 396.153Radial†	6.3	6.1	5.2379	ug/L	5.2379	ppb	12:35:17
2	Ca 317.933Radial†	21.3	7.9	13.693	ug/L	13.693	ppb	12:35:37
2	Fe 238.204 Radial†	11.4	2.1	20.818	ug/L	20.818	ppb	12:35:37
2	K 766.490 Radial†	3665.3	607.2	128.64	ug/L	128.64	ppb	12:35:17
2	Mg 279.077 IEC†	-0.3	-4.5	-155.11	ug/L	-155.11	ppb	12:35:37
2	Na 589.592 Radial†	-1195.8	120.7	41.681	ug/L	41.681	ppb	12:35:17
2	Sr 421.552†	11.6	16.4	0.1275	ug/L	0.1275	ppb	12:35:17
2	Sc 361.383	853939.0	853939.0	99.876	%			12:36:35
2	Y 371.029	731602.8	731602.8	99.917	%			12:36:35
2	Ag 328.068†	509.6	49.1	0.2215	ug/L	0.2215	ppb	12:36:35
2	As 188.979†	-15.9	24.3	8.5735	ug/L	8.5735	ppb	12:36:55
2	B 249.677†	234.7	1019.5	21.005	ug/L	21.005	ppb	12:36:35
2	Ba 233.527†	24.1	31.6	0.2336	ug/L	0.2336	ppb	12:36:55
2	Be 313.107†	-4309.8	73.2	0.0248	ug/L	0.0248	ppb	12:36:35
2	Cd 226.502†	-234.8	8.8	0.0821	ug/L	0.0821	ppb	12:36:55
2	Co 228.616†	-101.8	-2.0	-0.0355	ug/L	-0.0355	ppb	12:36:55
2	Cr 267.716†	131.8	16.3	0.1669	ug/L	0.1669	ppb	12:36:35
2	Cu 324.752†	8219.3	30.1	0.0900	ug/L	0.0900	ppb	12:36:35
2	Mn 257.610†	621.8	-10.0	-0.0056	ug/L	-0.0056	ppb	12:36:35
2	Mo 202.031†	40.1	15.0	0.9568	ug/L	0.9568	ppb	12:36:55
2	Ni 231.604†	132.7	6.0	0.1324	ug/L	0.1324	ppb	12:36:55

2	P 214.914†	261.8	7.5	3.6772 ug/L	3.6772 ppb	12:36:55
2	Pb 220.353†	-94.1	-12.3	-1.3029 ug/L	-1.3029 ppb	12:36:55
2	S 181.975 Axial†	66.4	-1.4	-1.5659 ug/L	-1.5659 ppb	12:36:55
2	Sb 206.836†	54.5	17.1	5.2487 ug/L	5.2487 ppb	12:36:55
2	Se 196.026†	-31.8	1.3	0.7114 ug/L	0.7114 ppb	12:36:55
2	Si 251.611†	695.0	109.9	3.1093 ug/L	3.1093 ppb	12:36:55
2	Sn 189.927†	7.8	4.2	0.6317 ug/L	0.6317 ppb	12:36:55
2	Ti 334.940†	-1649.3	64.6	0.1042 ug/L	0.1042 ppb	12:36:35
2	Tl 190.801†	-57.9	-14.8	-4.1205 ug/L	-4.1205 ppb	12:36:55
2	U 409.014†	-2761.8	-109.0	-3.2401 ug/L	-3.2401 ppb	12:36:35
2	V 292.402†	-1746.0	0.5	0.0038 ug/L	0.0038 ppb	12:36:35
2	Zn 213.857†	922.0	102.0	0.8467 ug/L	0.8467 ppb	12:36:55
2	SiO2†	746.4	135.5	8.2821 ug/L	8.2821 ppb	12:37:30
3	Sc Radial	4372.8	4372.8	99.4 %		12:35:42
3	Y RADIAL	4637.3	4637.3	98.96 %		12:35:42
3	Al 396.153Radial†	3.4	3.1	2.6310 ug/L	2.6310 ppb	12:35:42
3	Ca 317.933Radial†	14.3	0.5	0.9184 ug/L	0.9184 ppb	12:36:02
3	Fe 238.204 Radial†	9.6	0.2	1.6440 ug/L	1.6440 ppb	12:36:02
3	K 766.490 Radial†	3383.0	274.9	58.249 ug/L	58.249 ppb	12:35:42
3	Mg 279.077 IEC†	0.4	-3.8	-129.46 ug/L	-129.46 ppb	12:36:02
3	Na 589.592 Radial†	-1268.7	63.1	21.798 ug/L	21.798 ppb	12:35:42
3	Sr 421.552†	7.7	12.4	0.0964 ug/L	0.0964 ppb	12:35:42
3	Sc 361.383	850941.2	850941.2	99.525 %		12:37:00
3	Y 371.029	729036.1	729036.1	99.566 %		12:37:00
3	Ag 328.068†	527.6	69.1	0.2986 ug/L	0.2986 ppb	12:37:00
3	As 188.979†	-4.7	35.5	12.527 ug/L	12.527 ppb	12:37:20
3	B 249.677†	261.4	1047.2	21.578 ug/L	21.578 ppb	12:37:00
3	Ba 233.527†	2.2	9.7	0.0702 ug/L	0.0702 ppb	12:37:20
3	Be 313.107†	-4295.1	72.8	0.0243 ug/L	0.0243 ppb	12:37:00
3	Cd 226.502†	-216.5	26.4	0.2516 ug/L	0.2516 ppb	12:37:20
3	Co 228.616†	-90.3	9.2	0.1763 ug/L	0.1763 ppb	12:37:20
3	Cr 267.716†	110.4	-4.7	-0.0478 ug/L	-0.0478 ppb	12:37:00
3	Cu 324.752†	8181.6	21.2	0.0628 ug/L	0.0628 ppb	12:37:00
3	Mn 257.610†	659.2	29.8	0.0342 ug/L	0.0342 ppb	12:37:00
3	Mo 202.031†	35.8	10.8	0.6877 ug/L	0.6877 ppb	12:37:20
3	Ni 231.604†	153.1	26.9	0.5951 ug/L	0.5951 ppb	12:37:20
3	P 214.914†	253.7	0.3	0.1125 ug/L	0.1125 ppb	12:37:20
3	Pb 220.353†	-103.9	-22.5	-2.3843 ug/L	-2.3843 ppb	12:37:20
3	S 181.975 Axial†	72.5	5.0	5.7753 ug/L	5.7753 ppb	12:37:20
3	Sb 206.836†	66.4	29.3	8.9231 ug/L	8.9231 ppb	12:37:20
3	Se 196.026†	-31.2	1.8	0.9110 ug/L	0.9110 ppb	12:37:20
3	Si 251.611†	735.8	153.4	4.3943 ug/L	4.3943 ppb	12:37:20
3	Sn 189.927†	0.4	-3.3	-0.4944 ug/L	-0.4944 ppb	12:37:20
3	Ti 334.940†	-1770.3	-62.9	-0.0984 ug/L	-0.0984 ppb	12:37:00
3	Tl 190.801†	-37.8	5.2	1.4546 ug/L	1.4546 ppb	12:37:20
3	U 409.014†	-2724.0	-80.8	-2.3998 ug/L	-2.3998 ppb	12:37:00
3	V 292.402†	-1816.7	-76.7	-0.4811 ug/L	-0.4811 ppb	12:37:00
3	Zn 213.857†	918.9	102.2	0.8455 ug/L	0.8455 ppb	12:37:20
3	SiO2†	763.4	155.3	9.5797 ug/L	9.5797 ppb	12:37:36

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
Sc 361.383	851591.2	99.601	%	0.2456				0.25%
Sc Radial	4308.4	98.0	%	1.56				1.59%
Y 371.029	729477.9	99.626	%	0.2652				0.27%
Y RADIAL	4578.4	97.71	%	1.323				1.35%
Ag 328.068†	35.8	0.1568	ug/L	0.18299	0.1568	ppb	0.18299	116.74%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-5.1	-4.5037	ug/L	14.67327	-4.5037	ppb	14.67327	325.81%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	31.6	11.153	ug/L	2.2355	11.153	ppb	2.2355	20.04%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	1056.2	21.764	ug/L	0.8674	21.764	ppb	0.8674	3.99%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	25.2	0.1853	ug/L	0.10005	0.1853	ppb	0.10005	54.00%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	95.0	0.0320	ug/L	0.01297	0.0320	ppb	0.01297	40.47%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	3.2	5.4730	ug/L	7.13285	5.4730	ppb	7.13285	130.33%

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   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†              26.8      0.2549 ug/L       0.17444      0.2549 ppb       0.17444  68.44%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               6.7      0.1292 ug/L       0.14697      0.1292 ppb       0.14697 113.72%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†               7.3      0.0746 ug/L       0.11043      0.0746 ppb       0.11043 148.07%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†              -5.3     -0.0156 ug/L       0.15991     -0.0156 ppb       0.15991 >999.9%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†        0.1      1.3795 ug/L      19.57243      1.3795 ppb      19.57243 >999.9%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†       491.9      104.21 ug/L       39.832       104.21 ppb       39.832  38.22%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†          -3.2     -109.57 ug/L       58.089     -109.57 ppb       58.089  53.01%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†               4.1      0.0065 ug/L       0.02411      0.0065 ppb       0.02411 371.95%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†              12.5      0.8008 ug/L       0.13959      0.8008 ppb       0.13959  17.43%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†       75.3      25.992 ug/L       14.0687      25.992 ppb       14.0687  54.13%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               8.3      0.1843 ug/L       0.38747      0.1843 ppb       0.38747 210.25%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                5.2      2.5709 ug/L       2.13255      2.5709 ppb       2.13255  82.95%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†             -17.8     -1.8863 ug/L       0.54572     -1.8863 ppb       0.54572  28.93%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†         -0.1     -0.1274 ug/L       5.33097     -0.1274 ppb       5.33097 >999.9%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†              21.4      6.5545 ug/L       2.05490      6.5545 ppb       2.05490  31.35%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†              -0.9     -0.4468 ug/L       2.18128     -0.4468 ppb       2.18128 488.17%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†             129.1      3.6746 ug/L       0.65628      3.6746 ppb       0.65628  17.86%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†               1.6      0.2426 ug/L       0.63865      0.2426 ppb       0.63865 263.23%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†               6.2      0.0480 ug/L       0.11193      0.0480 ppb       0.11193 233.39%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              27.4      0.0449 ug/L       0.12463      0.0449 ppb       0.12463 277.82%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†              -0.7     -0.1820 ug/L       3.42707     -0.1820 ppb       3.42707 >999.9%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†             -100.7     -2.9893 ug/L       0.51244     -2.9893 ppb       0.51244  17.14%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†              -32.4     -0.2013 ug/L       0.25087     -0.2013 ppb       0.25087 124.61%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†              99.6      0.8255 ug/L       0.03572      0.8255 ppb       0.03572   4.33%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                   133.2      8.1646 ug/L       1.47735      8.1646 ppb       1.47735  18.09%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

Analysis Begun

Start Time: 1/8/2010 12:43:29 Plasma On Time: 1/4/2010 06:33:21
Logged In Analyst: Optima3 Technique: ICP Continuous
Spectrometer Model: Optima 5300 DV, S/N 077C7090601Autosampler Model: S10

Sample Information File: C:\pe\Optima3\Sample Information\010810.sif
Batch ID:
Results Data Set: 010810
Results Library: C:\pe\Optima3\Results\Results.mdb

Method Loaded
Method Name: General Eng.2AX Method Last Saved: 1/8/2010 11:12:58
IEC File: 101209.iec MSF File:
Method Description:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Al 396.153Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
B 249.677	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Be 313.107	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Ca 317.933Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Cd 226.502	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cr 267.716	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Fe 238.204 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
K 766.490 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mg 279.077 IEC	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Mn 257.610	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Na 589.592 Radial	Lin Thru 0	Peak Area	Radial	Sc Radial	No
Ni 231.604	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
P 214.914	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
S 181.975 Axial	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sc 361.383	Lin Thru 0	Peak Area	Axial	n/a	n/a
Sc Radial	Lin, Calc Int	Peak Area	Radial	n/a	n/a
Se 196.026	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Si 251.611	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	Sc Radial	Yes
Ti 334.940	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
U 409.014	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y 371.029	Lin, Calc Int	Peak Area	Axial	n/a	n/a
Zn 213.857	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes
Y RADIAL	Lin, Calc Int	Peak Area	Radial	n/a	n/a
SiO2	Lin Thru 0	Peak Area	Axial	Sc 361.383	Yes

Sequence No.: 1 Autosampler Location: 38
Sample ID: 1202004435|936813|1 Date Collected: 1/8/2010 12:43:30
Analyst: HSC Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Replicate Data: 1202004435|936813|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4390.8	4390.8	99.9	%			12:45:23
1	Y RADIAL	4656.1	4656.1	99.36	%			12:45:23
1	Al 396.153Radial†	3.8	3.5	3.0111	ug/L	3.0111	ppb	12:45:23

1	Ca 317.933Radial†	9.0	-4.8	-8.3031 ug/L	-8.3031 ppb	12:45:43
1	Fe 238.204 Radial†	11.0	1.5	14.964 ug/L	14.964 ppb	12:45:43
1	K 766.490 Radial†	3375.6	253.6	53.711 ug/L	53.711 ppb	12:45:23
1	Mg 279.077 IEC†	4.3	0.1	4.5644 ug/L	4.5644 ppb	12:45:43
1	Na 589.592 Radial†	-1231.7	105.5	36.404 ug/L	36.404 ppb	12:45:23
1	Sr 421.552†	2.2	6.8	0.0531 ug/L	0.0531 ppb	12:45:23
1	Sc 361.383	860619.7	860619.7	100.66 %		12:46:40
1	Y 371.029	737272.1	737272.1	100.69 %		12:46:40
1	Ag 328.068†	496.3	32.0	0.1435 ug/L	0.1435 ppb	12:46:40
1	As 188.979†	-6.0	34.3	12.104 ug/L	12.104 ppb	12:47:00
1	B 249.677†	-70.9	714.0	14.711 ug/L	14.711 ppb	12:46:40
1	Ba 233.527†	11.7	19.0	0.1402 ug/L	0.1402 ppb	12:47:00
1	Be 313.107†	-4334.7	81.9	0.0279 ug/L	0.0279 ppb	12:46:40
1	Cd 226.502†	-230.2	15.2	0.1436 ug/L	0.1436 ppb	12:47:00
1	Co 228.616†	-87.6	12.9	0.2460 ug/L	0.2460 ppb	12:47:00
1	Cr 267.716†	119.8	3.4	0.0346 ug/L	0.0346 ppb	12:46:40
1	Cu 324.752†	8210.4	-42.7	-0.1253 ug/L	-0.1253 ppb	12:46:40
1	Mn 257.610†	701.4	64.3	0.0697 ug/L	0.0697 ppb	12:46:40
1	Mo 202.031†	36.3	10.9	0.6941 ug/L	0.6941 ppb	12:47:00
1	Ni 231.604†	124.3	-3.4	-0.0752 ug/L	-0.0752 ppb	12:47:00
1	P 214.914†	269.5	13.1	6.4802 ug/L	6.4802 ppb	12:47:00
1	Pb 220.353†	-83.3	-1.0	-0.1002 ug/L	-0.1002 ppb	12:47:00
1	S 181.975 Axial†	56.7	-11.6	-13.298 ug/L	-13.298 ppb	12:47:00
1	Sb 206.836†	52.4	14.6	4.5039 ug/L	4.5039 ppb	12:47:00
1	Se 196.026†	-31.6	1.7	0.9314 ug/L	0.9314 ppb	12:47:00
1	Si 251.611†	1027.3	434.7	12.500 ug/L	12.500 ppb	12:47:00
1	Sn 189.927†	15.2	11.5	1.7410 ug/L	1.7410 ppb	12:47:00
1	Ti 334.940†	-1600.0	126.3	0.2002 ug/L	0.2002 ppb	12:46:40
1	Tl 190.801†	-46.3	-2.8	-0.7881 ug/L	-0.7881 ppb	12:47:00
1	U 409.014†	-2731.4	-57.4	-1.7067 ug/L	-1.7067 ppb	12:46:40
1	V 292.402†	-1808.8	-48.3	-0.3003 ug/L	-0.3003 ppb	12:46:40
1	Zn 213.857†	937.8	110.6	0.9136 ug/L	0.9136 ppb	12:47:00
1	SiO2†	1086.8	467.9	28.986 ug/L	28.986 ppb	12:47:56
2	Sc Radial	4417.1	4417.1	100 %		12:45:48
2	Y RADIAL	4690.0	4690.0	100.1 %		12:45:48
2	Al 396.153Radial†	17.6	17.1	14.845 ug/L	14.845 ppb	12:45:48
2	Ca 317.933Radial†	13.5	-0.4	-0.6268 ug/L	-0.6268 ppb	12:46:08
2	Fe 238.204 Radial†	10.4	0.9	8.4641 ug/L	8.4641 ppb	12:46:08
2	K 766.490 Radial†	3258.6	117.0	24.773 ug/L	24.773 ppb	12:45:48
2	Mg 279.077 IEC†	3.8	-0.4	-14.487 ug/L	-14.487 ppb	12:46:08
2	Na 589.592 Radial†	-1273.1	71.6	24.722 ug/L	24.722 ppb	12:45:48
2	Sr 421.552†	26.2	30.7	0.2387 ug/L	0.2387 ppb	12:45:48
2	Sc 361.383	861878.0	861878.0	100.80 %		12:47:05
2	Y 371.029	737771.4	737771.4	100.76 %		12:47:05
2	Ag 328.068†	495.4	30.3	0.1333 ug/L	0.1333 ppb	12:47:05
2	As 188.979†	-15.9	24.5	8.6488 ug/L	8.6488 ppb	12:47:25
2	B 249.677†	-37.7	747.1	15.393 ug/L	15.393 ppb	12:47:05
2	Ba 233.527†	6.4	13.8	0.1034 ug/L	0.1034 ppb	12:47:25
2	Be 313.107†	-4481.8	-57.7	-0.0188 ug/L	-0.0188 ppb	12:47:05
2	Cd 226.502†	-217.6	28.1	0.2668 ug/L	0.2668 ppb	12:47:25
2	Co 228.616†	-87.0	13.6	0.2594 ug/L	0.2594 ppb	12:47:25
2	Cr 267.716†	119.5	2.9	0.0295 ug/L	0.0295 ppb	12:47:05
2	Cu 324.752†	8283.7	18.2	0.0541 ug/L	0.0541 ppb	12:47:05
2	Mn 257.610†	775.6	136.8	0.1464 ug/L	0.1464 ppb	12:47:05
2	Mo 202.031†	38.3	12.8	0.8184 ug/L	0.8184 ppb	12:47:25
2	Ni 231.604†	149.3	21.2	0.4687 ug/L	0.4687 ppb	12:47:25
2	P 214.914†	258.0	1.3	0.6306 ug/L	0.6306 ppb	12:47:25
2	Pb 220.353†	-72.6	9.8	1.0400 ug/L	1.0400 ppb	12:47:25
2	S 181.975 Axial†	69.9	1.4	1.6518 ug/L	1.6518 ppb	12:47:25
2	Sb 206.836†	50.0	12.1	3.7172 ug/L	3.7172 ppb	12:47:25
2	Se 196.026†	-29.3	4.0	2.0901 ug/L	2.0901 ppb	12:47:25
2	Si 251.611†	1046.3	452.1	13.015 ug/L	13.015 ppb	12:47:25
2	Sn 189.927†	4.0	0.4	0.0541 ug/L	0.0541 ppb	12:47:25
2	Ti 334.940†	-1542.6	185.6	0.2921 ug/L	0.2921 ppb	12:47:05
2	Tl 190.801†	-45.7	-2.1	-0.5910 ug/L	-0.5910 ppb	12:47:25
2	U 409.014†	-2569.4	107.3	3.1847 ug/L	3.1847 ppb	12:47:05
2	V 292.402†	-1667.6	94.5	0.6112 ug/L	0.6112 ppb	12:47:05
2	Zn 213.857†	945.4	116.8	0.9621 ug/L	0.9621 ppb	12:47:25
2	SiO2†	1055.0	434.8	26.957 ug/L	26.957 ppb	12:48:01
3	Sc Radial	4455.2	4455.2	101 %		12:46:13
3	Y RADIAL	4732.9	4732.9	101.0 %		12:46:13

3	Al 396.153Radial†	-20.4	-20.4	-17.748 ug/L	-17.748 ppb	12:46:13
3	Ca 317.933Radial†	16.2	2.2	3.8423 ug/L	3.8423 ppb	12:46:33
3	Fe 238.204 Radial†	12.9	3.2	31.885 ug/L	31.885 ppb	12:46:33
3	K 766.490 Radial†	3397.9	226.7	48.032 ug/L	48.032 ppb	12:46:13
3	Mg 279.077 IEC†	0.8	-3.4	-116.23 ug/L	-116.23 ppb	12:46:33
3	Na 589.592 Radial†	-1294.2	61.6	21.271 ug/L	21.271 ppb	12:46:13
3	Sr 421.552†	-9.7	-4.9	-0.0383 ug/L	-0.0383 ppb	12:46:13
3	Sc 361.383	861725.0	861725.0	100.79 %		12:47:31
3	Y 371.029	738696.7	738696.7	100.89 %		12:47:31
3	Ag 328.068†	507.3	42.3	0.1944 ug/L	0.1944 ppb	12:47:31
3	As 188.979†	-6.6	33.7	11.913 ug/L	11.913 ppb	12:47:51
3	B 249.677†	-40.4	744.4	15.336 ug/L	15.336 ppb	12:47:31
3	Ba 233.527†	-1.1	6.4	0.0486 ug/L	0.0486 ppb	12:47:51
3	Be 313.107†	-4441.1	-18.1	-0.0054 ug/L	-0.0054 ppb	12:47:31
3	Cd 226.502†	-235.1	10.7	0.0989 ug/L	0.0989 ppb	12:47:51
3	Co 228.616†	-98.5	2.2	0.0413 ug/L	0.0413 ppb	12:47:51
3	Cr 267.716†	107.7	-8.7	-0.0872 ug/L	-0.0872 ppb	12:47:31
3	Cu 324.752†	8218.2	-45.3	-0.1323 ug/L	-0.1323 ppb	12:47:31
3	Mn 257.610†	702.4	64.4	0.0737 ug/L	0.0737 ppb	12:47:31
3	Mo 202.031†	28.7	3.3	0.2132 ug/L	0.2132 ppb	12:47:51
3	Ni 231.604†	129.8	1.9	0.0418 ug/L	0.0418 ppb	12:47:51
3	P 214.914†	263.9	7.1	3.5271 ug/L	3.5271 ppb	12:47:51
3	Pb 220.353†	-80.9	1.6	0.1599 ug/L	0.1599 ppb	12:47:51
3	S 181.975 Axial†	69.8	1.4	1.5575 ug/L	1.5575 ppb	12:47:51
3	Sb 206.836†	53.8	15.9	4.8852 ug/L	4.8852 ppb	12:47:51
3	Se 196.026†	-40.1	-6.7	-3.3301 ug/L	-3.3301 ppb	12:47:51
3	Si 251.611†	1048.9	454.9	13.094 ug/L	13.094 ppb	12:47:51
3	Sn 189.927†	10.6	6.9	1.0402 ug/L	1.0402 ppb	12:47:51
3	Ti 334.940†	-1489.0	238.5	0.3777 ug/L	0.3777 ppb	12:47:31
3	Tl 190.801†	-46.0	-2.5	-0.6903 ug/L	-0.6903 ppb	12:47:51
3	U 409.014†	-2690.0	-12.8	-0.3836 ug/L	-0.3836 ppb	12:47:31
3	V 292.402†	-1713.1	49.0	0.3033 ug/L	0.3033 ppb	12:47:31
3	Zn 213.857†	961.6	133.0	1.1014 ug/L	1.1014 ppb	12:47:51
3	SiO2†	1113.0	492.6	30.547 ug/L	30.547 ppb	12:48:06

Mean Data: 1202004435|936813|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	861407.6	100.75	%	0.080				0.08%
Sc Radial	4421.0	101	%	0.7				0.73%
Y 371.029	737913.4	100.78	%	0.099				0.10%
Y RADIAL	4693.0	100.2	%	0.82				0.82%
Ag 328.068†	34.9	0.1571	ug/L	0.03274	0.1571	ppb	0.03274	20.84%
Al 396.153Radial†	0.1	0.0359	ug/L	16.49880	0.0359	ppb	16.49880	>999.9%
As 188.979†	30.8	10.889	ug/L	1.9421	10.889	ppb	1.9421	17.84%
B 249.677†	735.2	15.147	ug/L	0.3783	15.147	ppb	0.3783	2.50%
Ba 233.527†	13.1	0.0974	ug/L	0.04609	0.0974	ppb	0.04609	47.30%
Be 313.107†	2.0	0.0013	ug/L	0.02408	0.0013	ppb	0.02408	>999.9%
Ca 317.933Radial†	-1.0	-1.6959	ug/L	6.14289	-1.6959	ppb	6.14289	362.22%
Cd 226.502†	18.0	0.1698	ug/L	0.08698	0.1698	ppb	0.08698	51.23%
Co 228.616†	9.6	0.1822	ug/L	0.12224	0.1822	ppb	0.12224	67.09%
Cr 267.716†	-0.8	-0.0077	ug/L	0.06890	-0.0077	ppb	0.06890	896.58%
Cu 324.752†	-23.3	-0.0678	ug/L	0.10565	-0.0678	ppb	0.10565	155.76%
Fe 238.204 Radial†	1.9	18.438	ug/L	12.0905	18.438	ppb	12.0905	65.57%
K 766.490 Radial†	199.1	42.172	ug/L	15.3333	42.172	ppb	15.3333	36.36%
Mg 279.077 IEC†	-1.2	-42.052	ug/L	64.9461	-42.052	ppb	64.9461	154.44%
Mn 257.610†	88.5	0.0966	ug/L	0.04317	0.0966	ppb	0.04317	44.68%
Mo 202.031†	9.0	0.5752	ug/L	0.31962	0.5752	ppb	0.31962	55.56%
Na 589.592 Radial†	79.6	27.466	ug/L	7.9306	27.466	ppb	7.9306	28.87%
Ni 231.604†	6.6	0.1451	ug/L	0.28625	0.1451	ppb	0.28625	197.28%
P 214.914†	7.2	3.5460	ug/L	2.92484	3.5460	ppb	2.92484	82.48%
Pb 220.353†	3.5	0.3666	ug/L	0.59757	0.3666	ppb	0.59757	163.02%
S 181.975 Axial†	-2.9	-3.3628	ug/L	8.60396	-3.3628	ppb	8.60396	255.86%
Sb 206.836†	14.2	4.3688	ug/L	0.59561	4.3688	ppb	0.59561	13.63%
Se 196.026†	-0.3	-0.1029	ug/L	2.85430	-0.1029	ppb	2.85430	>999.9%
Si 251.611†	447.2	12.870	ug/L	0.3228	12.870	ppb	0.3228	2.51%
Sn 189.927†	6.2	0.9451	ug/L	0.84743	0.9451	ppb	0.84743	89.67%
Sr 421.552†	10.9	0.0845	ug/L	0.14117	0.0845	ppb	0.14117	167.11%
Ti 334.940†	183.4	0.2900	ug/L	0.08878	0.2900	ppb	0.08878	30.62%
Tl 190.801†	-2.5	-0.6898	ug/L	0.09854	-0.6898	ppb	0.09854	14.29%

U 409.014†	12.4	0.3648 ug/L	2.53011	0.3648 ppb	2.53011	693.54%
V 292.402†	31.7	0.2047 ug/L	0.46369	0.2047 ppb	0.46369	226.48%
Zn 213.857†	120.1	0.9924 ug/L	0.09750	0.9924 ppb	0.09750	9.82%
SiO2†	465.1	28.830 ug/L	1.7999	28.830 ppb	1.7999	6.24%

Sequence No.: 2
Sample ID: 1202004436|936813|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 39
Date Collected: 1/8/2010 12:50:17
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004436|936813|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4441.9	4441.9	101	%			12:52:10
1	Y RADIAL	4699.2	4699.2	100.3	%			12:52:10
1	Al 396.153Radial†	6125.3	6063.3	5243.1	ug/L	5243.1	ppb	12:52:10
1	Ca 317.933Radial†	3020.6	2976.5	5128.8	ug/L	5128.8	ppb	12:52:30
1	Fe 238.204 Radial†	549.5	534.5	5304.3	ug/L	5304.3	ppb	12:52:30
1	K 766.490 Radial†	28668.9	25253.7	5343.7	ug/L	5343.7	ppb	12:52:10
1	Mg 279.077 IEC†	158.8	153.0	5255.8	ug/L	5255.8	ppb	12:52:30
1	Na 589.592 Radial†	14762.6	15953.1	5506.9	ug/L	5506.9	ppb	12:52:10
1	Sr 421.552†	71036.0	70326.2	546.06	ug/L	546.06	ppb	12:52:10
1	Sc 361.383	873900.5	873900.5	102.21	%			12:53:29
1	Y 371.029	738912.7	738912.7	100.92	%			12:53:29
1	Ag 328.068†	121450.1	118362.6	513.91	ug/L	513.91	ppb	12:53:29
1	As 188.979†	1464.3	1472.9	524.71	ug/L	524.71	ppb	12:53:49
1	B 249.677†	25160.3	25400.7	521.42	ug/L	521.42	ppb	12:53:29
1	Ba 233.527†	74430.8	72828.6	538.62	ug/L	538.62	ppb	12:53:29
1	Be 313.107†	1583694.8	1553834.6	523.61	ug/L	523.61	ppb	12:53:29
1	Cd 226.502†	55210.3	54260.3	516.45	ug/L	516.45	ppb	12:53:29
1	Co 228.616†	27167.8	26680.2	504.85	ug/L	504.85	ppb	12:53:49
1	Cr 267.716†	51833.9	50597.4	514.29	ug/L	514.29	ppb	12:53:29
1	Cu 324.752†	187814.6	175553.6	519.03	ug/L	519.03	ppb	12:53:29
1	Mn 257.610†	506348.2	494765.5	525.81	ug/L	525.81	ppb	12:53:29
1	Mo 202.031†	8222.5	8019.5	512.38	ug/L	512.38	ppb	12:53:49
1	Ni 231.604†	23668.8	23030.0	509.51	ug/L	509.51	ppb	12:53:49
1	P 214.914†	1474.1	1187.6	507.65	ug/L	507.65	ppb	12:53:49
1	Pb 220.353†	4959.7	4934.3	523.77	ug/L	523.77	ppb	12:53:49
1	S 181.975 Axial†	4668.0	4499.2	5174.5	ug/L	5174.5	ppb	12:53:49
1	Sb 206.836†	1779.6	1703.7	526.97	ug/L	526.97	ppb	12:53:49
1	Se 196.026†	977.2	989.2	525.26	ug/L	525.26	ppb	12:53:49
1	Si 251.611†	180235.4	175751.8	5055.9	ug/L	5055.9	ppb	12:53:29
1	Sn 189.927†	3591.0	3509.7	531.30	ug/L	531.30	ppb	12:53:49
1	Ti 334.940†	335217.1	329683.7	521.46	ug/L	521.46	ppb	12:53:29
1	Tl 190.801†	1845.9	1849.2	518.89	ug/L	518.89	ppb	12:53:49
1	U 409.014†	15289.9	17615.5	521.38	ug/L	521.38	ppb	12:53:29
1	V 292.402†	82057.5	82031.7	523.90	ug/L	523.90	ppb	12:53:29
1	Zn 213.857†	63747.2	61547.5	504.44	ug/L	504.44	ppb	12:53:29
1	SiO2†	180260.3	175750.2	10891	ug/L	10891	ppb	12:54:50
2	Sc Radial	4396.7	4396.7	100.0	%			12:52:35
2	Y RADIAL	4656.8	4656.8	99.38	%			12:52:35
2	Al 396.153Radial†	6052.5	6052.8	5234.0	ug/L	5234.0	ppb	12:52:35
2	Ca 317.933Radial†	3037.0	3023.6	5210.0	ug/L	5210.0	ppb	12:52:55
2	Fe 238.204 Radial†	552.9	543.4	5393.1	ug/L	5393.1	ppb	12:52:55
2	K 766.490 Radial†	28671.9	25548.1	5406.1	ug/L	5406.1	ppb	12:52:35
2	Mg 279.077 IEC†	155.8	151.6	5208.9	ug/L	5208.9	ppb	12:52:55
2	Na 589.592 Radial†	14644.2	15984.8	5517.8	ug/L	5517.8	ppb	12:52:35
2	Sr 421.552†	70469.1	70481.4	547.26	ug/L	547.26	ppb	12:52:35
2	Sc 361.383	870767.3	870767.3	101.84	%			12:53:56
2	Y 371.029	737309.2	737309.2	100.70	%			12:53:56
2	Ag 328.068†	121061.9	118408.9	514.14	ug/L	514.14	ppb	12:53:56
2	As 188.979†	1455.3	1469.2	523.42	ug/L	523.42	ppb	12:54:17
2	B 249.677†	25057.8	25388.6	521.16	ug/L	521.16	ppb	12:53:56
2	Ba 233.527†	74078.7	72744.9	538.01	ug/L	538.01	ppb	12:53:56
2	Be 313.107†	1577895.1	1553715.3	523.57	ug/L	523.57	ppb	12:53:56
2	Cd 226.502†	55085.8	54332.4	517.13	ug/L	517.13	ppb	12:53:56
2	Co 228.616†	27073.1	26682.9	504.90	ug/L	504.90	ppb	12:54:17
2	Cr 267.716†	51784.6	50731.4	515.65	ug/L	515.65	ppb	12:53:56
2	Cu 324.752†	186854.1	175271.6	518.20	ug/L	518.20	ppb	12:53:56
2	Mn 257.610†	504074.8	494315.9	525.34	ug/L	525.34	ppb	12:53:56
2	Mo 202.031†	8178.3	8005.0	511.47	ug/L	511.47	ppb	12:54:17
2	Ni 231.604†	23557.8	23004.4	508.94	ug/L	508.94	ppb	12:54:17

2	P 214.914†	1469.3	1188.1	507.89 ug/L	507.89 ppb	12:54:17
2	Pb 220.353†	4943.5	4935.8	523.92 ug/L	523.92 ppb	12:54:17
2	S 181.975 Axial†	4648.1	4496.1	5170.9 ug/L	5170.9 ppb	12:54:17
2	Sb 206.836†	1774.8	1705.2	527.31 ug/L	527.31 ppb	12:54:17
2	Se 196.026†	972.1	987.7	524.75 ug/L	524.75 ppb	12:54:17
2	Si 251.611†	179619.0	175781.1	5056.8 ug/L	5056.8 ppb	12:53:56
2	Sn 189.927†	3552.1	3484.2	527.45 ug/L	527.45 ppb	12:54:17
2	Ti 334.940†	333563.1	329239.8	520.76 ug/L	520.76 ppb	12:53:56
2	Tl 190.801†	1838.4	1848.3	518.63 ug/L	518.63 ppb	12:54:17
2	U 409.014†	15203.4	17584.3	520.45 ug/L	520.45 ppb	12:53:56
2	V 292.402†	81757.5	82026.0	523.83 ug/L	523.83 ppb	12:53:56
2	Zn 213.857†	63483.5	61513.1	504.16 ug/L	504.16 ppb	12:53:56
2	SiO2†	179570.9	175708.0	10888 ug/L	10888 ppb	12:54:55
3	Sc Radial	4403.0	4403.0	100 %		12:53:00
3	Y RADIAL	4645.1	4645.1	99.13 %		12:53:00
3	Al 396.153Radial†	6036.0	6027.6	5211.8 ug/L	5211.8 ppb	12:53:00
3	Ca 317.933Radial†	3061.9	3044.0	5245.3 ug/L	5245.3 ppb	12:53:20
3	Fe 238.204 Radial†	557.1	546.9	5427.5 ug/L	5427.5 ppb	12:53:20
3	K 766.490 Radial†	28352.3	25187.6	5329.7 ug/L	5329.7 ppb	12:53:00
3	Mg 279.077 IEC†	159.5	155.0	5327.5 ug/L	5327.5 ppb	12:53:20
3	Na 589.592 Radial†	14499.4	15819.0	5460.6 ug/L	5460.6 ppb	12:53:00
3	Sr 421.552†	70177.7	70088.8	544.21 ug/L	544.21 ppb	12:53:00
3	Sc 361.383	862044.7	862044.7	100.82 %		12:54:24
3	Y 371.029	729927.5	729927.5	99.688 %		12:54:24
3	Ag 328.068†	119625.1	118186.7	513.20 ug/L	513.20 ppb	12:54:24
3	As 188.979†	1477.4	1505.6	536.28 ug/L	536.28 ppb	12:54:44
3	B 249.677†	24658.6	25241.7	518.11 ug/L	518.11 ppb	12:54:24
3	Ba 233.527†	73384.6	72792.5	538.36 ug/L	538.36 ppb	12:54:24
3	Be 313.107†	1560354.1	1551994.4	522.99 ug/L	522.99 ppb	12:54:24
3	Cd 226.502†	54495.1	54293.8	516.76 ug/L	516.76 ppb	12:54:24
3	Co 228.616†	27217.0	27094.6	512.71 ug/L	512.71 ppb	12:54:44
3	Cr 267.716†	51114.9	50581.7	514.13 ug/L	514.13 ppb	12:54:24
3	Cu 324.752†	184721.1	175012.5	517.43 ug/L	517.43 ppb	12:54:24
3	Mn 257.610†	498733.9	494026.7	525.03 ug/L	525.03 ppb	12:54:24
3	Mo 202.031†	8210.1	8117.8	518.67 ug/L	518.67 ppb	12:54:44
3	Ni 231.604†	23710.2	23389.5	517.46 ug/L	517.46 ppb	12:54:44
3	P 214.914†	1479.1	1212.3	520.10 ug/L	520.10 ppb	12:54:44
3	Pb 220.353†	4977.1	5018.3	532.66 ug/L	532.66 ppb	12:54:44
3	S 181.975 Axial†	4698.9	4592.6	5282.0 ug/L	5282.0 ppb	12:54:44
3	Sb 206.836†	1777.3	1725.4	533.87 ug/L	533.87 ppb	12:54:44
3	Se 196.026†	976.4	1001.6	532.00 ug/L	532.00 ppb	12:54:44
3	Si 251.611†	177639.5	175602.3	5051.5 ug/L	5051.5 ppb	12:54:24
3	Sn 189.927†	3595.3	3562.3	539.27 ug/L	539.27 ppb	12:54:44
3	Ti 334.940†	329975.9	328995.9	520.38 ug/L	520.38 ppb	12:54:24
3	Tl 190.801†	1864.7	1892.7	530.95 ug/L	530.95 ppb	12:54:44
3	U 409.014†	14821.7	17356.8	513.69 ug/L	513.69 ppb	12:54:24
3	V 292.402†	81023.3	82110.1	524.45 ug/L	524.45 ppb	12:54:24
3	Zn 213.857†	62737.8	61404.1	503.20 ug/L	503.20 ppb	12:54:24
3	SiO2†	176599.8	174545.2	10815 ug/L	10815 ppb	12:55:00

Mean Data: 1202004436|936813|1

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	868904.2	101.63	%	0.719				0.71%
Sc Radial	4413.9	100	%	0.6				0.55%
Y 371.029	735383.1	100.43	%	0.654				0.65%
Y RADIAL	4667.1	99.60	%	0.607				0.61%
Ag 328.068†	118319.4	513.75	ug/L	0.490	513.75	ppb	0.490	0.10%
Al 396.153Radial†	6047.9	5229.6	ug/L	16.08	5229.6	ppb	16.08	0.31%
As 188.979†	1482.6	528.14	ug/L	7.082	528.14	ppb	7.082	1.34%
B 249.677†	25343.7	520.23	ug/L	1.842	520.23	ppb	1.842	0.35%
Ba 233.527†	72788.7	538.33	ug/L	0.309	538.33	ppb	0.309	0.06%
Be 313.107†	1553181.4	523.39	ug/L	0.347	523.39	ppb	0.347	0.07%
Ca 317.933Radial†	3014.7	5194.7	ug/L	59.70	5194.7	ppb	59.70	1.15%
Cd 226.502†	54295.5	516.78	ug/L	0.339	516.78	ppb	0.339	0.07%
Co 228.616†	26819.2	507.49	ug/L	4.521	507.49	ppb	4.521	0.89%
Cr 267.716†	50636.8	514.69	ug/L	0.834	514.69	ppb	0.834	0.16%
Cu 324.752†	175279.3	518.22	ug/L	0.796	518.22	ppb	0.796	0.15%
Fe 238.204 Radial†	541.6	5375.0	ug/L	63.57	5375.0	ppb	63.57	1.18%
K 766.490 Radial†	25329.8	5359.8	ug/L	40.65	5359.8	ppb	40.65	0.76%

Mg 279.077 IEC†	153.2	5264.1 ug/L	59.77	5264.1 ppb	59.77	1.14%
Mn 257.610†	494369.4	525.39 ug/L	0.390	525.39 ppb	0.390	0.07%
Mo 202.031†	8047.4	514.17 ug/L	3.922	514.17 ppb	3.922	0.76%
Na 589.592 Radial†	15919.0	5495.1 ug/L	30.37	5495.1 ppb	30.37	0.55%
Ni 231.604†	23141.3	511.97 ug/L	4.764	511.97 ppb	4.764	0.93%
P 214.914†	1196.0	511.88 ug/L	7.122	511.88 ppb	7.122	1.39%
Pb 220.353†	4962.8	526.78 ug/L	5.089	526.78 ppb	5.089	0.97%
S 181.975 Axial†	4529.3	5209.1 ug/L	63.12	5209.1 ppb	63.12	1.21%
Sb 206.836†	1711.4	529.38 ug/L	3.892	529.38 ppb	3.892	0.74%
Se 196.026†	992.8	527.34 ug/L	4.046	527.34 ppb	4.046	0.77%
Si 251.611†	175711.7	5054.7 ug/L	2.84	5054.7 ppb	2.84	0.06%
Sn 189.927†	3518.8	532.67 ug/L	6.028	532.67 ppb	6.028	1.13%
Sr 421.552†	70298.8	545.84 ug/L	1.536	545.84 ppb	1.536	0.28%
Ti 334.940†	329306.5	520.87 ug/L	0.547	520.87 ppb	0.547	0.11%
Tl 190.801†	1863.4	522.82 ug/L	7.041	522.82 ppb	7.041	1.35%
U 409.014†	17518.9	518.51 ug/L	4.199	518.51 ppb	4.199	0.81%
V 292.402†	82055.9	524.06 ug/L	0.340	524.06 ppb	0.340	0.06%
Zn 213.857†	61488.2	503.93 ug/L	0.652	503.93 ppb	0.652	0.13%
SiO2†	175334.4	10865 ug/L	42.6	10865 ppb	42.6	0.39%

Sequence No.: 3
Sample ID: 243493001|936813|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 40
Date Collected: 1/8/2010 12:57:10
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 243493001|936813|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4398.4	4398.4	100	%			12:59:03
1	Y RADIAL	4699.7	4699.7	100.3	%			12:59:03
1	Al 396.153Radial†	13.7	13.3	11.558	ug/L	11.558	ppb	12:59:03
1	Ca 317.933Radial†	27.4	13.6	23.398	ug/L	23.398	ppb	12:59:23
1	Fe 238.204 Radial†	13.7	4.2	41.851	ug/L	41.851	ppb	12:59:23
1	K 766.490 Radial†	3875.8	747.8	158.37	ug/L	158.37	ppb	12:59:03
1	Mg 279.077 IEC†	1.1	-3.2	-108.19	ug/L	-108.19	ppb	12:59:23
1	Na 589.592 Radial†	-979.6	359.6	124.14	ug/L	124.14	ppb	12:59:03
1	Sr 421.552†	43.0	47.6	0.3695	ug/L	0.3695	ppb	12:59:03
1	Sc 361.383	858434.1	858434.1	100.40	%			13:00:20
1	Y 371.029	734128.3	734128.3	100.26	%			13:00:20
1	Ag 328.068†	455.9	-7.0	-0.0144	ug/L	-0.0144	ppb	13:00:20
1	As 188.979†	-8.6	31.7	11.199	ug/L	11.199	ppb	13:00:40
1	B 249.677†	753.4	1534.9	31.622	ug/L	31.622	ppb	13:00:20
1	Ba 233.527†	46.8	54.0	0.3996	ug/L	0.3996	ppb	13:00:40
1	Be 313.107†	-4412.0	-5.9	-0.0007	ug/L	-0.0007	ppb	13:00:20
1	Cd 226.502†	-244.7	0.2	-0.0019	ug/L	-0.0019	ppb	13:00:40
1	Co 228.616†	-88.1	12.2	0.2282	ug/L	0.2282	ppb	13:00:40
1	Cr 267.716†	162.5	46.2	0.4703	ug/L	0.4703	ppb	13:00:20
1	Cu 324.752†	8529.3	295.7	0.8760	ug/L	0.8760	ppb	13:00:20
1	Mn 257.610†	1460.5	822.1	0.8792	ug/L	0.8792	ppb	13:00:20
1	Mo 202.031†	26.5	1.2	0.0799	ug/L	0.0799	ppb	13:00:40
1	Ni 231.604†	159.1	31.5	0.6977	ug/L	0.6977	ppb	13:00:40
1	P 214.914†	257.8	2.1	0.8834	ug/L	0.8834	ppb	13:00:40
1	Pb 220.353†	-105.7	-23.4	-2.4781	ug/L	-2.4781	ppb	13:00:40
1	S 181.975 Axial†	102.2	33.9	38.990	ug/L	38.990	ppb	13:00:40
1	Sb 206.836†	50.5	12.8	3.9075	ug/L	3.9075	ppb	13:00:40
1	Se 196.026†	-26.0	7.3	3.8483	ug/L	3.8483	ppb	13:00:40
1	Si 251.611†	46347.2	45576.0	1314.3	ug/L	1314.3	ppb	13:00:20
1	Sn 189.927†	4.7	1.0	0.1594	ug/L	0.1594	ppb	13:00:40
1	Ti 334.940†	-1301.6	419.4	0.6659	ug/L	0.6659	ppb	13:00:20
1	Tl 190.801†	-56.9	-13.4	-3.7363	ug/L	-3.7363	ppb	13:00:40
1	U 409.014†	-2762.3	-95.1	-2.8298	ug/L	-2.8298	ppb	13:00:20
1	V 292.402†	-1763.9	-8.1	-0.0653	ug/L	-0.0653	ppb	13:00:20
1	Zn 213.857†	1006.1	181.0	1.4920	ug/L	1.4920	ppb	13:00:40
1	SiO2†	46245.9	45449.2	2823.1	ug/L	2823.1	ppb	13:01:36
2	Sc Radial	4420.5	4420.5	101	%			12:59:28
2	Y RADIAL	4687.8	4687.8	100.0	%			12:59:28
2	Al 396.153Radial†	18.0	17.6	15.263	ug/L	15.263	ppb	12:59:28
2	Ca 317.933Radial†	29.5	15.5	26.786	ug/L	26.786	ppb	12:59:48
2	Fe 238.204 Radial†	10.0	0.4	4.3107	ug/L	4.3107	ppb	12:59:48
2	K 766.490 Radial†	3817.8	670.8	142.07	ug/L	142.07	ppb	12:59:28
2	Mg 279.077 IEC†	1.7	-2.6	-88.220	ug/L	-88.220	ppb	12:59:48
2	Na 589.592 Radial†	-1068.5	276.1	95.305	ug/L	95.305	ppb	12:59:28
2	Sr 421.552†	28.7	33.2	0.2572	ug/L	0.2572	ppb	12:59:28
2	Sc 361.383	853023.6	853023.6	99.769	%			13:00:45
2	Y 371.029	729864.1	729864.1	99.679	%			13:00:45
2	Ag 328.068†	451.5	-8.5	-0.0315	ug/L	-0.0315	ppb	13:00:45
2	As 188.979†	-15.4	24.8	8.7628	ug/L	8.7628	ppb	13:01:05
2	B 249.677†	825.3	1611.8	33.210	ug/L	33.210	ppb	13:00:45
2	Ba 233.527†	32.6	40.1	0.2974	ug/L	0.2974	ppb	13:01:05
2	Be 313.107†	-4295.6	82.9	0.0294	ug/L	0.0294	ppb	13:00:45
2	Cd 226.502†	-216.6	26.8	0.2551	ug/L	0.2551	ppb	13:01:05
2	Co 228.616†	-82.4	17.4	0.3280	ug/L	0.3280	ppb	13:01:05
2	Cr 267.716†	131.8	16.4	0.1687	ug/L	0.1687	ppb	13:00:45
2	Cu 324.752†	8543.4	363.8	1.0751	ug/L	1.0751	ppb	13:00:45
2	Mn 257.610†	1507.9	878.8	0.9352	ug/L	0.9352	ppb	13:00:45
2	Mo 202.031†	32.1	7.0	0.4466	ug/L	0.4466	ppb	13:01:05
2	Ni 231.604†	143.7	17.1	0.3781	ug/L	0.3781	ppb	13:01:05

2	P 214.914†	273.2	19.2	9.2610 ug/L	9.2610 ppb	13:01:05
2	Pb 220.353†	-99.3	-17.6	-1.8642 ug/L	-1.8642 ppb	13:01:05
2	S 181.975 Axial†	95.3	27.6	31.770 ug/L	31.770 ppb	13:01:05
2	Sb 206.836†	43.2	5.8	1.7577 ug/L	1.7577 ppb	13:01:05
2	Se 196.026†	-30.9	2.1	1.1028 ug/L	1.1028 ppb	13:01:05
2	Si 251.611†	45912.5	45433.1	1310.1 ug/L	1310.1 ppb	13:00:45
2	Sn 189.927†	-6.8	-10.4	-1.5751 ug/L	-1.5751 ppb	13:01:05
2	Ti 334.940†	-1207.9	505.2	0.8017 ug/L	0.8017 ppb	13:00:45
2	Tl 190.801†	-45.1	-2.0	-0.5591 ug/L	-0.5591 ppb	13:01:05
2	U 409.014†	-2734.8	-84.9	-2.5223 ug/L	-2.5223 ppb	13:00:45
2	V 292.402†	-1665.5	79.4	0.4983 ug/L	0.4983 ppb	13:00:45
2	Zn 213.857†	1004.9	186.1	1.5378 ug/L	1.5378 ppb	13:01:05
2	SiO2†	46370.2	45865.9	2849.0 ug/L	2849.0 ppb	13:01:41
3	Sc Radial	4447.9	4447.9	101 %		12:59:53
3	Y RADIAL	4755.5	4755.5	101.5 %		12:59:53
3	Al 396.153Radial†	-5.7	-6.0	-5.1919 ug/L	-5.1919 ppb	12:59:53
3	Ca 317.933Radial†	37.0	22.7	39.178 ug/L	39.178 ppb	13:00:13
3	Fe 238.204 Radial†	11.3	1.6	16.258 ug/L	16.258 ppb	13:00:13
3	K 766.490 Radial†	3943.3	771.5	163.39 ug/L	163.39 ppb	12:59:53
3	Mg 279.077 IEC†	4.0	-0.2	-8.2487 ug/L	-8.2487 ppb	13:00:13
3	Na 589.592 Radial†	-1029.5	321.2	110.87 ug/L	110.87 ppb	12:59:53
3	Sr 421.552†	42.5	46.7	0.3619 ug/L	0.3619 ppb	12:59:53
3	Sc 361.383	850428.2	850428.2	99.465 %		13:01:11
3	Y 371.029	727536.9	727536.9	99.361 %		13:01:11
3	Ag 328.068†	412.3	-46.6	-0.1898 ug/L	-0.1898 ppb	13:01:11
3	As 188.979†	-21.8	18.3	6.4575 ug/L	6.4575 ppb	13:01:31
3	B 249.677†	733.4	1521.9	31.357 ug/L	31.357 ppb	13:01:11
3	Ba 233.527†	42.1	49.8	0.3696 ug/L	0.3696 ppb	13:01:31
3	Be 313.107†	-4332.1	33.0	0.0124 ug/L	0.0124 ppb	13:01:11
3	Cd 226.502†	-237.4	5.3	0.0484 ug/L	0.0484 ppb	13:01:31
3	Co 228.616†	-87.4	12.1	0.2272 ug/L	0.2272 ppb	13:01:31
3	Cr 267.716†	187.1	72.5	0.7385 ug/L	0.7385 ppb	13:01:11
3	Cu 324.752†	8450.7	296.7	0.8775 ug/L	0.8775 ppb	13:01:11
3	Mn 257.610†	1491.2	866.7	0.9221 ug/L	0.9221 ppb	13:01:11
3	Mo 202.031†	27.9	2.8	0.1794 ug/L	0.1794 ppb	13:01:31
3	Ni 231.604†	125.9	-0.3	-0.0069 ug/L	-0.0069 ppb	13:01:31
3	P 214.914†	261.4	8.1	3.8655 ug/L	3.8655 ppb	13:01:31
3	Pb 220.353†	-94.7	-13.4	-1.4199 ug/L	-1.4199 ppb	13:01:31
3	S 181.975 Axial†	91.8	24.4	28.113 ug/L	28.113 ppb	13:01:31
3	Sb 206.836†	50.6	13.4	4.0847 ug/L	4.0847 ppb	13:01:31
3	Se 196.026†	-27.7	5.3	2.7441 ug/L	2.7441 ppb	13:01:31
3	Si 251.611†	45663.2	45322.9	1306.9 ug/L	1306.9 ppb	13:01:11
3	Sn 189.927†	8.3	4.7	0.7158 ug/L	0.7158 ppb	13:01:31
3	Ti 334.940†	-1296.6	412.3	0.6557 ug/L	0.6557 ppb	13:01:11
3	Tl 190.801†	-53.2	-10.3	-2.8579 ug/L	-2.8579 ppb	13:01:31
3	U 409.014†	-2763.2	-121.9	-3.6215 ug/L	-3.6215 ppb	13:01:11
3	V 292.402†	-1613.9	126.1	0.7868 ug/L	0.7868 ppb	13:01:11
3	Zn 213.857†	994.1	178.3	1.4726 ug/L	1.4726 ppb	13:01:31
3	SiO2†	45811.1	45445.7	2822.9 ug/L	2822.9 ppb	13:01:46

Mean Data: 243493001|936813|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	853962.0	99.878	%	0.4777				0.48%
Sc Radial	4422.3	101	%	0.6				0.56%
Y 371.029	730509.8	99.767	%	0.4565				0.46%
Y RADIAL	4714.4	100.6	%	0.77				0.77%
Ag 328.068†	-20.7	-0.0786	ug/L	0.09671	-0.0786	ppb	0.09671	123.11%
Al 396.153Radial†	8.3	7.2096	ug/L	10.89862	7.2096	ppb	10.89862	151.17%
As 188.979†	25.0	8.8064	ug/L	2.37100	8.8064	ppb	2.37100	26.92%
B 249.677†	1556.2	32.063	ug/L	1.0023	32.063	ppb	1.0023	3.13%
Ba 233.527†	48.0	0.3555	ug/L	0.05256	0.3555	ppb	0.05256	14.78%
Be 313.107†	36.6	0.0137	ug/L	0.01511	0.0137	ppb	0.01511	110.21%
Ca 317.933Radial†	17.3	29.788	ug/L	8.3072	29.788	ppb	8.3072	27.89%
Cd 226.502†	10.8	0.1005	ug/L	0.13624	0.1005	ppb	0.13624	135.52%
Co 228.616†	13.9	0.2611	ug/L	0.05795	0.2611	ppb	0.05795	22.19%
Cr 267.716†	45.0	0.4591	ug/L	0.28506	0.4591	ppb	0.28506	62.08%
Cu 324.752†	318.7	0.9429	ug/L	0.11451	0.9429	ppb	0.11451	12.14%
Fe 238.204 Radial†	2.1	20.807	ug/L	19.1789	20.807	ppb	19.1789	92.18%
K 766.490 Radial†	730.0	154.61	ug/L	11.143	154.61	ppb	11.143	7.21%

Mg 279.077 IEC†	-2.0	-68.221 ug/L	52.8893	-68.221 ppb	52.8893	77.53%
Mn 257.610†	855.9	0.9122 ug/L	0.02932	0.9122 ppb	0.02932	3.21%
Mo 202.031†	3.7	0.2353 ug/L	0.18964	0.2353 ppb	0.18964	80.60%
Na 589.592 Radial†	319.0	110.10 ug/L	14.433	110.10 ppb	14.433	13.11%
Ni 231.604†	16.1	0.3563 ug/L	0.35279	0.3563 ppb	0.35279	99.01%
P 214.914†	9.8	4.6700 ug/L	4.24631	4.6700 ppb	4.24631	90.93%
Pb 220.353†	-18.1	-1.9207 ug/L	0.53139	-1.9207 ppb	0.53139	27.67%
S 181.975 Axial†	28.7	32.958 ug/L	5.5352	32.958 ppb	5.5352	16.79%
Sb 206.836†	10.7	3.2500 ug/L	1.29540	3.2500 ppb	1.29540	39.86%
Se 196.026†	4.9	2.5651 ug/L	1.38146	2.5651 ppb	1.38146	53.86%
Si 251.611†	45444.0	1310.4 ug/L	3.66	1310.4 ppb	3.66	0.28%
Sn 189.927†	-1.6	-0.2333 ug/L	1.19489	-0.2333 ppb	1.19489	512.19%
Sr 421.552†	42.5	0.3295 ug/L	0.06275	0.3295 ppb	0.06275	19.04%
Ti 334.940†	445.6	0.7078 ug/L	0.08151	0.7078 ppb	0.08151	11.52%
Tl 190.801†	-8.6	-2.3844 ug/L	1.64065	-2.3844 ppb	1.64065	68.81%
U 409.014†	-100.6	-2.9912 ug/L	0.56710	-2.9912 ppb	0.56710	18.96%
V 292.402†	65.8	0.4066 ug/L	0.43341	0.4066 ppb	0.43341	106.59%
Zn 213.857†	181.8	1.5008 ug/L	0.03347	1.5008 ppb	0.03347	2.23%
SiO2†	45587.0	2831.7 ug/L	15.02	2831.7 ppb	15.02	0.53%

Sequence No.: 5
Sample ID: 1202004437|936813|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 42
Date Collected: 1/8/2010 13:10:43
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004437|936813|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4243.0	4243.0	96.5	%			13:12:56
1	Y RADIAL	4697.1	4697.1	100.2	%			13:12:36
1	Al 396.153Radial†	20.0	20.4	17.689	ug/L	17.689	ppb	13:12:36
1	Ca 317.933Radial†	19.1	6.0	10.313	ug/L	10.313	ppb	13:12:56
1	Fe 238.204 Radial†	11.6	2.5	24.731	ug/L	24.731	ppb	13:12:56
1	K 766.490 Radial†	3314.4	307.9	65.229	ug/L	65.229	ppb	13:12:36
1	Mg 279.077 IEC†	1.5	-2.6	-89.729	ug/L	-89.729	ppb	13:12:56
1	Na 589.592 Radial†	-1247.3	46.3	15.992	ug/L	15.992	ppb	13:12:36
1	Sr 421.552†	35.5	41.4	0.3218	ug/L	0.3218	ppb	13:12:36
1	Sc 361.383	851105.8	851105.8	99.544	%			13:13:53
1	Y 371.029	727813.4	727813.4	99.399	%			13:13:53
1	Ag 328.068†	407.8	-51.4	-0.2175	ug/L	-0.2175	ppb	13:13:53
1	As 188.979†	-18.1	22.1	7.7897	ug/L	7.7897	ppb	13:14:13
1	B 249.677†	-282.1	501.2	10.324	ug/L	10.324	ppb	13:13:53
1	Ba 233.527†	4.2	11.7	0.0866	ug/L	0.0866	ppb	13:14:13
1	Be 313.107†	-4315.8	52.8	0.0185	ug/L	0.0185	ppb	13:13:53
1	Cd 226.502†	-238.5	4.4	0.0396	ug/L	0.0396	ppb	13:14:13
1	Co 228.616†	-105.9	-6.5	-0.1221	ug/L	-0.1221	ppb	13:14:13
1	Cr 267.716†	99.8	-15.3	-0.1565	ug/L	-0.1565	ppb	13:13:53
1	Cu 324.752†	8195.1	33.2	0.0995	ug/L	0.0995	ppb	13:13:53
1	Mn 257.610†	876.7	248.1	0.2676	ug/L	0.2676	ppb	13:13:53
1	Mo 202.031†	35.3	10.2	0.6545	ug/L	0.6545	ppb	13:14:13
1	Ni 231.604†	149.1	22.8	0.5056	ug/L	0.5056	ppb	13:14:13
1	P 214.914†	267.7	14.3	6.9974	ug/L	6.9974	ppb	13:14:13
1	Pb 220.353†	-102.6	-21.2	-2.2388	ug/L	-2.2388	ppb	13:14:13
1	S 181.975 Axial†	63.6	-4.0	-4.6240	ug/L	-4.6240	ppb	13:14:13
1	Sb 206.836†	54.9	17.7	5.3973	ug/L	5.3973	ppb	13:14:13
1	Se 196.026†	-22.8	10.2	5.3226	ug/L	5.3226	ppb	13:14:13
1	Si 251.611†	924.0	342.4	9.8424	ug/L	9.8424	ppb	13:14:13
1	Sn 189.927†	1.1	-2.5	-0.3810	ug/L	-0.3810	ppb	13:14:13
1	Ti 334.940†	-1470.0	239.1	0.3770	ug/L	0.3770	ppb	13:13:53
1	Tl 190.801†	-50.1	-7.1	-1.9856	ug/L	-1.9856	ppb	13:14:13
1	U 409.014†	-2498.8	146.0	4.3323	ug/L	4.3323	ppb	13:13:53
1	V 292.402†	-1755.0	-14.3	-0.0784	ug/L	-0.0784	ppb	13:13:53
1	Zn 213.857†	945.1	128.3	1.0591	ug/L	1.0591	ppb	13:14:13
1	SiO2†	977.5	370.1	22.922	ug/L	22.922	ppb	13:15:09
2	Sc Radial	4227.4	4227.4	96.1	%			13:13:21
2	Y RADIAL	4615.8	4615.8	98.50	%			13:13:01
2	Al 396.153Radial†	-12.3	-13.1	-11.422	ug/L	-11.422	ppb	13:13:01
2	Ca 317.933Radial†	17.1	4.0	6.8315	ug/L	6.8315	ppb	13:13:21
2	Fe 238.204 Radial†	11.1	2.1	20.461	ug/L	20.461	ppb	13:13:21
2	K 766.490 Radial†	3242.8	246.1	52.140	ug/L	52.140	ppb	13:13:01
2	Mg 279.077 IEC†	4.2	0.2	6.5512	ug/L	6.5512	ppb	13:13:21
2	Na 589.592 Radial†	-1258.9	29.5	10.175	ug/L	10.175	ppb	13:13:01
2	Sr 421.552†	-6.5	-2.2	-0.0168	ug/L	-0.0168	ppb	13:13:01
2	Sc 361.383	855769.6	855769.6	100.09	%			13:14:18
2	Y 371.029	731322.9	731322.9	99.878	%			13:14:18
2	Ag 328.068†	353.3	-108.1	-0.4617	ug/L	-0.4617	ppb	13:14:18
2	As 188.979†	-23.7	16.6	5.8681	ug/L	5.8681	ppb	13:14:38
2	B 249.677†	-210.1	574.6	11.837	ug/L	11.837	ppb	13:14:18
2	Ba 233.527†	5.1	12.6	0.0930	ug/L	0.0930	ppb	13:14:38
2	Be 313.107†	-4365.5	26.8	0.0095	ug/L	0.0095	ppb	13:14:18
2	Cd 226.502†	-234.4	9.8	0.0913	ug/L	0.0913	ppb	13:14:38
2	Co 228.616†	-96.0	4.0	0.0757	ug/L	0.0757	ppb	13:14:38
2	Cr 267.716†	123.2	7.5	0.0758	ug/L	0.0758	ppb	13:14:18
2	Cu 324.752†	8188.4	-18.3	-0.0532	ug/L	-0.0532	ppb	13:14:18
2	Mn 257.610†	882.3	248.9	0.2662	ug/L	0.2662	ppb	13:14:18
2	Mo 202.031†	30.8	5.5	0.3536	ug/L	0.3536	ppb	13:14:38
2	Ni 231.604†	131.8	4.8	0.1058	ug/L	0.1058	ppb	13:14:38

2	P 214.914†	272.7	17.7	8.7547 ug/L	8.7547 ppb	13:14:38
2	Pb 220.353†	-97.4	-15.5	-1.6429 ug/L	-1.6429 ppb	13:14:38
2	S 181.975 Axial†	63.6	-4.3	-4.9592 ug/L	-4.9592 ppb	13:14:38
2	Sb 206.836†	59.3	21.8	6.6865 ug/L	6.6865 ppb	13:14:38
2	Se 196.026†	-32.9	0.2	0.1749 ug/L	0.1749 ppb	13:14:38
2	Si 251.611†	911.2	324.5	9.3303 ug/L	9.3303 ppb	13:14:38
2	Sn 189.927†	12.6	9.0	1.3570 ug/L	1.3570 ppb	13:14:38
2	Ti 334.940†	-1570.6	146.7	0.2313 ug/L	0.2313 ppb	13:14:18
2	Tl 190.801†	-45.0	-1.8	-0.5034 ug/L	-0.5034 ppb	13:14:38
2	U 409.014†	-2580.2	78.3	2.3218 ug/L	2.3218 ppb	13:14:18
2	V 292.402†	-1756.7	-6.4	-0.0338 ug/L	-0.0338 ppb	13:14:18
2	Zn 213.857†	949.0	127.0	1.0480 ug/L	1.0480 ppb	13:14:38
2	SiO2†	978.9	366.3	22.691 ug/L	22.691 ppb	13:15:14
3	Sc Radial	4211.6	4211.6	95.8 %		13:13:46
3	Y RADIAL	4700.5	4700.5	100.3 %		13:13:26
3	Al 396.153Radial†	-19.8	-21.1	-18.295 ug/L	-18.295 ppb	13:13:26
3	Ca 317.933Radial†	16.0	2.9	4.9436 ug/L	4.9436 ppb	13:13:46
3	Fe 238.204 Radial†	11.7	2.7	27.054 ug/L	27.054 ppb	13:13:46
3	K 766.490 Radial†	3223.5	238.6	50.550 ug/L	50.550 ppb	13:13:26
3	Mg 279.077 IEC†	1.2	-3.0	-102.81 ug/L	-102.81 ppb	13:13:46
3	Na 589.592 Radial†	-1268.0	15.1	5.2005 ug/L	5.2005 ppb	13:13:26
3	Sr 421.552†	10.6	15.7	0.1215 ug/L	0.1215 ppb	13:13:26
3	Sc 361.383	855654.3	855654.3	100.08 %		13:14:44
3	Y 371.029	731787.9	731787.9	99.942 %		13:14:44
3	Ag 328.068†	380.1	-81.3	-0.3451 ug/L	-0.3451 ppb	13:14:44
3	As 188.979†	-28.0	12.3	4.3417 ug/L	4.3417 ppb	13:15:04
3	B 249.677†	-243.0	541.7	11.158 ug/L	11.158 ppb	13:14:44
3	Ba 233.527†	6.7	14.2	0.1052 ug/L	0.1052 ppb	13:15:04
3	Be 313.107†	-4451.7	-59.9	-0.0193 ug/L	-0.0193 ppb	13:14:44
3	Cd 226.502†	-240.2	3.9	0.0351 ug/L	0.0351 ppb	13:15:04
3	Co 228.616†	-97.4	2.6	0.0484 ug/L	0.0484 ppb	13:15:04
3	Cr 267.716†	108.6	-7.1	-0.0733 ug/L	-0.0733 ppb	13:14:44
3	Cu 324.752†	8106.0	-99.6	-0.2929 ug/L	-0.2929 ppb	13:14:44
3	Mn 257.610†	811.0	177.8	0.1934 ug/L	0.1934 ppb	13:14:44
3	Mo 202.031†	27.4	2.1	0.1381 ug/L	0.1381 ppb	13:15:04
3	Ni 231.604†	151.9	24.9	0.5518 ug/L	0.5518 ppb	13:15:04
3	P 214.914†	278.2	23.4	11.537 ug/L	11.537 ppb	13:15:04
3	Pb 220.353†	-75.4	6.5	0.6774 ug/L	0.6774 ppb	13:15:04
3	S 181.975 Axial†	64.6	-3.3	-3.7692 ug/L	-3.7692 ppb	13:15:04
3	Sb 206.836†	58.8	21.3	6.4950 ug/L	6.4950 ppb	13:15:04
3	Se 196.026†	-23.1	10.0	5.2158 ug/L	5.2158 ppb	13:15:04
3	Si 251.611†	924.5	338.0	9.7282 ug/L	9.7282 ppb	13:15:04
3	Sn 189.927†	0.9	-2.7	-0.4047 ug/L	-0.4047 ppb	13:15:04
3	Ti 334.940†	-1454.2	262.8	0.4145 ug/L	0.4145 ppb	13:14:44
3	Tl 190.801†	-56.4	-13.2	-3.6794 ug/L	-3.6794 ppb	13:15:04
3	U 409.014†	-2534.3	123.9	3.6749 ug/L	3.6749 ppb	13:14:44
3	V 292.402†	-1760.5	-10.4	-0.0636 ug/L	-0.0636 ppb	13:14:44
3	Zn 213.857†	949.7	127.9	1.0563 ug/L	1.0563 ppb	13:15:04
3	SiO2†	981.6	369.1	22.885 ug/L	22.885 ppb	13:15:19

Mean Data: 1202004437|936813|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	854176.6	99.903	%	0.3111				0.31%
Sc Radial	4227.3	96.1	%	0.36				0.37%
Y 371.029	730308.1	99.740	%	0.2968				0.30%
Y RADIAL	4671.1	99.68	%	1.024				1.03%
Ag 328.068†	-80.2	-0.3415	ug/L	0.12214	-0.3415	ppb	0.12214	35.77%
Al 396.153Radial†	-4.6	-4.0096	ug/L	19.10315	-4.0096	ppb	19.10315	476.43%
As 188.979†	17.0	5.9998	ug/L	1.72776	5.9998	ppb	1.72776	28.80%
B 249.677†	539.1	11.106	ug/L	0.7579	11.106	ppb	0.7579	6.82%
Ba 233.527†	12.8	0.0949	ug/L	0.00943	0.0949	ppb	0.00943	9.93%
Be 313.107†	6.6	0.0029	ug/L	0.01977	0.0029	ppb	0.01977	685.89%
Ca 317.933Radial†	4.3	7.3626	ug/L	2.72365	7.3626	ppb	2.72365	36.99%
Cd 226.502†	6.0	0.0553	ug/L	0.03123	0.0553	ppb	0.03123	56.43%
Co 228.616†	0.0	0.0007	ug/L	0.10718	0.0007	ppb	0.10718	>999.9%
Cr 267.716†	-5.0	-0.0513	ug/L	0.11770	-0.0513	ppb	0.11770	229.41%
Cu 324.752†	-28.2	-0.0822	ug/L	0.19779	-0.0822	ppb	0.19779	240.60%
Fe 238.204 Radial†	2.4	24.082	ug/L	3.3439	24.082	ppb	3.3439	13.89%
K 766.490 Radial†	264.2	55.973	ug/L	8.0553	55.973	ppb	8.0553	14.39%

Mg 279.077 IEC†	-1.8	-61.994 ug/L	59.7212	-61.994 ppb	59.7212	96.33%
Mn 257.610†	224.9	0.2424 ug/L	0.04244	0.2424 ppb	0.04244	17.51%
Mo 202.031†	5.9	0.3821 ug/L	0.25938	0.3821 ppb	0.25938	67.89%
Na 589.592 Radial†	30.3	10.456 ug/L	5.4013	10.456 ppb	5.4013	51.66%
Ni 231.604†	17.5	0.3877 ug/L	0.24522	0.3877 ppb	0.24522	63.24%
P 214.914†	18.4	9.0964 ug/L	2.28903	9.0964 ppb	2.28903	25.16%
Pb 220.353†	-10.1	-1.0681 ug/L	1.54075	-1.0681 ppb	1.54075	144.25%
S 181.975 Axial†	-3.9	-4.4508 ug/L	0.61362	-4.4508 ppb	0.61362	13.79%
Sb 206.836†	20.3	6.1929 ug/L	0.69567	6.1929 ppb	0.69567	11.23%
Se 196.026†	6.8	3.5711 ug/L	2.94169	3.5711 ppb	2.94169	82.38%
Si 251.611†	335.0	9.6336 ug/L	0.26882	9.6336 ppb	0.26882	2.79%
Sn 189.927†	1.3	0.1905 ug/L	1.01033	0.1905 ppb	1.01033	530.49%
Sr 421.552†	18.3	0.1421 ug/L	0.17024	0.1421 ppb	0.17024	119.77%
Ti 334.940†	216.2	0.3410 ug/L	0.09675	0.3410 ppb	0.09675	28.38%
Tl 190.801†	-7.4	-2.0561 ug/L	1.58917	-2.0561 ppb	1.58917	77.29%
U 409.014†	116.1	3.4430 ug/L	1.02513	3.4430 ppb	1.02513	29.77%
V 292.402†	-10.4	-0.0586 ug/L	0.02268	-0.0586 ppb	0.02268	38.69%
Zn 213.857†	127.7	1.0545 ug/L	0.00573	1.0545 ppb	0.00573	0.54%
SiO2†	368.5	22.833 ug/L	0.1243	22.833 ppb	0.1243	0.54%

Sequence No.: 6
Sample ID: 1202004438|936813|1
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 43
Date Collected: 1/8/2010 13:17:29
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004438|936813|1

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4367.3	4367.3	99.3	%			13:19:22
1	Y RADIAL	4639.9	4639.9	99.02	%			13:19:22
1	Al 396.153Radial†	5989.9	6030.5	5214.7	ug/L	5214.7	ppb	13:19:22
1	Ca 317.933Radial†	3001.1	3007.9	5183.0	ug/L	5183.0	ppb	13:19:42
1	Fe 238.204 Radial†	542.2	536.5	5324.0	ug/L	5324.0	ppb	13:19:42
1	K 766.490 Radial†	28232.8	25299.3	5353.4	ug/L	5353.4	ppb	13:19:22
1	Mg 279.077 IEC†	155.0	151.8	5217.3	ug/L	5217.3	ppb	13:19:42
1	Na 589.592 Radial†	13930.1	15364.5	5303.7	ug/L	5303.7	ppb	13:19:22
1	Sr 421.552†	68821.4	69297.4	538.07	ug/L	538.07	ppb	13:19:22
1	Sc 361.383	875383.1	875383.1	102.38	%			13:20:41
1	Y 371.029	739579.3	739579.3	101.01	%			13:20:41
1	Ag 328.068†	121219.3	117935.9	512.07	ug/L	512.07	ppb	13:20:41
1	As 188.979†	1442.3	1448.9	516.27	ug/L	516.27	ppb	13:21:01
1	B 249.677†	24823.1	25029.7	513.78	ug/L	513.78	ppb	13:20:41
1	Ba 233.527†	72981.9	71290.2	527.27	ug/L	527.27	ppb	13:20:41
1	Be 313.107†	1569244.0	1537096.2	517.98	ug/L	517.98	ppb	13:20:41
1	Cd 226.502†	55005.6	53968.9	513.67	ug/L	513.67	ppb	13:20:41
1	Co 228.616†	27092.9	26562.0	502.61	ug/L	502.61	ppb	13:21:01
1	Cr 267.716†	51710.7	50391.1	512.19	ug/L	512.19	ppb	13:20:41
1	Cu 324.752†	187822.9	175250.5	518.13	ug/L	518.13	ppb	13:20:41
1	Mn 257.610†	505514.6	493112.3	524.05	ug/L	524.05	ppb	13:20:41
1	Mo 202.031†	8182.9	7967.2	509.05	ug/L	509.05	ppb	13:21:01
1	Ni 231.604†	23598.3	22922.0	507.12	ug/L	507.12	ppb	13:21:01
1	P 214.914†	1483.6	1194.3	511.03	ug/L	511.03	ppb	13:21:01
1	Pb 220.353†	4942.1	4908.8	521.06	ug/L	521.06	ppb	13:21:01
1	S 181.975 Axial†	4652.5	4476.3	5148.2	ug/L	5148.2	ppb	13:21:01
1	Sb 206.836†	1778.7	1699.8	525.68	ug/L	525.68	ppb	13:21:01
1	Se 196.026†	967.6	978.2	519.69	ug/L	519.69	ppb	13:21:01
1	Si 251.611†	180140.3	175360.3	5044.7	ug/L	5044.7	ppb	13:20:41
1	Sn 189.927†	3560.2	3473.7	525.86	ug/L	525.86	ppb	13:21:01
1	Ti 334.940†	335323.3	329231.9	520.75	ug/L	520.75	ppb	13:20:41
1	Tl 190.801†	1838.4	1838.8	516.00	ug/L	516.00	ppb	13:21:01
1	U 409.014†	15256.2	17557.2	519.66	ug/L	519.66	ppb	13:20:41
1	V 292.402†	81933.0	81774.1	522.22	ug/L	522.22	ppb	13:20:41
1	Zn 213.857†	63434.0	61136.0	501.06	ug/L	501.06	ppb	13:20:41
1	SiO2†	178771.7	173997.6	10782	ug/L	10782	ppb	13:22:01
2	Sc Radial	4378.8	4378.8	99.6	%			13:19:47
2	Y RADIAL	4635.5	4635.5	98.92	%			13:19:47
2	Al 396.153Radial†	6010.9	6035.9	5219.3	ug/L	5219.3	ppb	13:19:47
2	Ca 317.933Radial†	3024.2	3023.1	5209.3	ug/L	5209.3	ppb	13:20:07
2	Fe 238.204 Radial†	546.3	539.1	5350.0	ug/L	5350.0	ppb	13:20:07
2	K 766.490 Radial†	28464.7	25457.5	5387.0	ug/L	5387.0	ppb	13:19:47
2	Mg 279.077 IEC†	151.1	147.5	5069.5	ug/L	5069.5	ppb	13:20:07
2	Na 589.592 Radial†	14066.6	15464.7	5338.3	ug/L	5338.3	ppb	13:19:47
2	Sr 421.552†	69129.5	69425.0	539.06	ug/L	539.06	ppb	13:19:47
2	Sc 361.383	873456.8	873456.8	102.16	%			13:21:08
2	Y 371.029	739292.5	739292.5	100.97	%			13:21:08
2	Ag 328.068†	120295.6	117292.9	509.30	ug/L	509.30	ppb	13:21:08
2	As 188.979†	1451.3	1460.9	520.48	ug/L	520.48	ppb	13:21:28
2	B 249.677†	24695.9	24958.6	512.31	ug/L	512.31	ppb	13:21:08
2	Ba 233.527†	72434.4	70911.4	524.47	ug/L	524.47	ppb	13:21:08
2	Be 313.107†	1559320.8	1530762.8	515.84	ug/L	515.84	ppb	13:21:08
2	Cd 226.502†	54594.6	53685.0	510.97	ug/L	510.97	ppb	13:21:08
2	Co 228.616†	27114.9	26642.0	504.13	ug/L	504.13	ppb	13:21:28
2	Cr 267.716†	51297.1	50097.7	509.21	ug/L	509.21	ppb	13:21:08
2	Cu 324.752†	186668.4	174524.9	515.99	ug/L	515.99	ppb	13:21:08
2	Mn 257.610†	502219.5	490975.8	521.79	ug/L	521.79	ppb	13:21:08
2	Mo 202.031†	8200.4	8002.0	511.27	ug/L	511.27	ppb	13:21:28
2	Ni 231.604†	23594.7	22969.3	508.16	ug/L	508.16	ppb	13:21:28

2	P 214.914†	1468.9	1183.2	505.91 ug/L	505.91 ppb	13:21:28
2	Pb 220.353†	4957.2	4934.3	523.76 ug/L	523.76 ppb	13:21:28
2	S 181.975 Axial†	4665.2	4498.7	5174.0 ug/L	5174.0 ppb	13:21:28
2	Sb 206.836†	1770.1	1695.2	524.46 ug/L	524.46 ppb	13:21:28
2	Se 196.026†	955.8	968.7	514.90 ug/L	514.90 ppb	13:21:28
2	Si 251.611†	178776.6	174413.5	5017.3 ug/L	5017.3 ppb	13:21:08
2	Sn 189.927†	3579.0	3499.8	529.80 ug/L	529.80 ppb	13:21:28
2	Ti 334.940†	333105.4	327783.2	518.46 ug/L	518.46 ppb	13:21:08
2	Tl 190.801†	1847.3	1851.4	519.48 ug/L	519.48 ppb	13:21:28
2	U 409.014†	15097.8	17435.0	516.03 ug/L	516.03 ppb	13:21:08
2	V 292.402†	81357.5	81387.3	519.80 ug/L	519.80 ppb	13:21:08
2	Zn 213.857†	62900.0	60749.9	497.86 ug/L	497.86 ppb	13:21:08
2	SiO2†	177978.2	173605.9	10757 ug/L	10757 ppb	13:22:06
3	Sc Radial	4329.9	4329.9	98.5 %		13:20:12
3	Y RADIAL	4606.2	4606.2	98.30 %		13:20:12
3	Al 396.153Radial†	5931.2	6023.0	5208.2 ug/L	5208.2 ppb	13:20:12
3	Ca 317.933Radial†	3000.8	3033.6	5227.4 ug/L	5227.4 ppb	13:20:32
3	Fe 238.204 Radial†	543.3	542.3	5381.8 ug/L	5381.8 ppb	13:20:32
3	K 766.490 Radial†	28079.1	25388.4	5372.3 ug/L	5372.3 ppb	13:20:12
3	Mg 279.077 IEC†	155.8	154.0	5292.7 ug/L	5292.7 ppb	13:20:32
3	Na 589.592 Radial†	13785.0	15338.2	5294.6 ug/L	5294.6 ppb	13:20:12
3	Sr 421.552†	68161.0	69224.6	537.50 ug/L	537.50 ppb	13:20:12
3	Sc 361.383	866335.8	866335.8	101.33 %		13:21:36
3	Y 371.029	732386.3	732386.3	100.02 %		13:21:36
3	Ag 328.068†	119587.1	117561.5	510.47 ug/L	510.47 ppb	13:21:36
3	As 188.979†	1444.1	1465.4	522.09 ug/L	522.09 ppb	13:21:56
3	B 249.677†	24509.5	24973.3	512.61 ug/L	512.61 ppb	13:21:36
3	Ba 233.527†	72131.4	71195.1	526.56 ug/L	526.56 ppb	13:21:36
3	Be 313.107†	1551561.0	1535650.8	517.49 ug/L	517.49 ppb	13:21:36
3	Cd 226.502†	54412.0	53944.1	513.43 ug/L	513.43 ppb	13:21:36
3	Co 228.616†	26847.0	26595.7	503.25 ug/L	503.25 ppb	13:21:56
3	Cr 267.716†	51162.0	50377.0	512.05 ug/L	512.05 ppb	13:21:36
3	Cu 324.752†	185408.6	174783.5	516.75 ug/L	516.75 ppb	13:21:36
3	Mn 257.610†	499889.5	492717.0	523.64 ug/L	523.64 ppb	13:21:36
3	Mo 202.031†	8113.5	7982.2	510.01 ug/L	510.01 ppb	13:21:56
3	Ni 231.604†	23392.2	22959.3	507.94 ug/L	507.94 ppb	13:21:56
3	P 214.914†	1478.6	1204.6	516.27 ug/L	516.27 ppb	13:21:56
3	Pb 220.353†	4898.3	4916.0	521.82 ug/L	521.82 ppb	13:21:56
3	S 181.975 Axial†	4611.8	4483.6	5156.6 ug/L	5156.6 ppb	13:21:56
3	Sb 206.836†	1748.1	1687.7	522.04 ug/L	522.04 ppb	13:21:56
3	Se 196.026†	945.9	966.7	513.98 ug/L	513.98 ppb	13:21:56
3	Si 251.611†	177954.6	175040.6	5035.5 ug/L	5035.5 ppb	13:21:36
3	Sn 189.927†	3532.2	3482.3	527.17 ug/L	527.17 ppb	13:21:56
3	Ti 334.940†	330879.4	328266.5	519.23 ug/L	519.23 ppb	13:21:36
3	Tl 190.801†	1823.6	1842.9	517.13 ug/L	517.13 ppb	13:21:56
3	U 409.014†	14936.8	17397.6	514.91 ug/L	514.91 ppb	13:21:36
3	V 292.402†	80856.0	81546.9	520.79 ug/L	520.79 ppb	13:21:36
3	Zn 213.857†	62714.6	61073.0	500.53 ug/L	500.53 ppb	13:21:36
3	SiO2†	178523.4	175576.0	10880 ug/L	10880 ppb	13:22:12

Mean Data: 1202004438|936813|1

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	871725.2	101.96	%	0.557				0.55%
Sc Radial	4358.6	99.1	%	0.58				0.59%
Y 371.029	737086.1	100.67	%	0.556				0.55%
Y RADIAL	4627.2	98.75	%	0.390				0.40%
Ag 328.068†	117596.8	510.61	ug/L	1.392	510.61	ppb	1.392	0.27%
Al 396.153Radial†	6029.8	5214.1	ug/L	5.57	5214.1	ppb	5.57	0.11%
As 188.979†	1458.4	519.61	ug/L	3.005	519.61	ppb	3.005	0.58%
B 249.677†	24987.2	512.90	ug/L	0.778	512.90	ppb	0.778	0.15%
Ba 233.527†	71132.2	526.10	ug/L	1.457	526.10	ppb	1.457	0.28%
Be 313.107†	1534503.3	517.10	ug/L	1.118	517.10	ppb	1.118	0.22%
Ca 317.933Radial†	3021.5	5206.5	ug/L	22.33	5206.5	ppb	22.33	0.43%
Cd 226.502†	53866.0	512.69	ug/L	1.497	512.69	ppb	1.497	0.29%
Co 228.616†	26599.9	503.33	ug/L	0.764	503.33	ppb	0.764	0.15%
Cr 267.716†	50288.6	511.15	ug/L	1.681	511.15	ppb	1.681	0.33%
Cu 324.752†	174853.0	516.96	ug/L	1.086	516.96	ppb	1.086	0.21%
Fe 238.204 Radial†	539.3	5351.9	ug/L	28.95	5351.9	ppb	28.95	0.54%
K 766.490 Radial†	25381.7	5370.9	ug/L	16.82	5370.9	ppb	16.82	0.31%

Mg 279.077 IEC†	151.1	5193.2 ug/L	113.53	5193.2 ppb	113.53	2.19%
Mn 257.610†	492268.4	523.16 ug/L	1.205	523.16 ppb	1.205	0.23%
Mo 202.031†	7983.8	510.11 ug/L	1.114	510.11 ppb	1.114	0.22%
Na 589.592 Radial†	15389.1	5312.2 ug/L	23.05	5312.2 ppb	23.05	0.43%
Ni 231.604†	22950.2	507.74 ug/L	0.551	507.74 ppb	0.551	0.11%
P 214.914†	1194.0	511.07 ug/L	5.178	511.07 ppb	5.178	1.01%
Pb 220.353†	4919.7	522.21 ug/L	1.391	522.21 ppb	1.391	0.27%
S 181.975 Axial†	4486.2	5159.6 ug/L	13.13	5159.6 ppb	13.13	0.25%
Sb 206.836†	1694.3	524.06 ug/L	1.852	524.06 ppb	1.852	0.35%
Se 196.026†	971.2	516.19 ug/L	3.065	516.19 ppb	3.065	0.59%
Si 251.611†	174938.1	5032.5 ug/L	13.92	5032.5 ppb	13.92	0.28%
Sn 189.927†	3485.3	527.61 ug/L	2.007	527.61 ppb	2.007	0.38%
Sr 421.552†	69315.7	538.21 ug/L	0.788	538.21 ppb	0.788	0.15%
Ti 334.940†	328427.2	519.48 ug/L	1.165	519.48 ppb	1.165	0.22%
Tl 190.801†	1844.4	517.54 ug/L	1.774	517.54 ppb	1.774	0.34%
U 409.014†	17463.3	516.86 ug/L	2.481	516.86 ppb	2.481	0.48%
V 292.402†	81569.4	520.94 ug/L	1.215	520.94 ppb	1.215	0.23%
Zn 213.857†	60986.3	499.82 ug/L	1.711	499.82 ppb	1.711	0.34%
SiO2†	174393.2	10806 ug/L	64.8	10806 ppb	64.8	0.60%

Sequence No.: 7
Sample ID: 1202004439|936813|5
Analyst: HSC
Initial Sample Wt:
Dilution:

Autosampler Location: 44
Date Collected: 1/8/2010 13:24:22
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1202004439|936813|5

Repl#	Analyte	Net Intensity	Corrected Intensity	Conc.	Calib. Units	Conc.	Sample Units	Analysis Time
1	Sc Radial	4306.7	4306.7	97.9	%			13:26:15
1	Y RADIAL	4547.0	4547.0	97.04	%			13:26:15
1	Al 396.153Radial†	-17.0	-17.7	-15.404	ug/L	-15.404	ppb	13:26:15
1	Ca 317.933Radial†	17.9	4.5	7.7959	ug/L	7.7959	ppb	13:26:35
1	Fe 238.204 Radial†	11.6	2.4	23.703	ug/L	23.703	ppb	13:26:35
1	K 766.490 Radial†	3221.8	162.6	34.451	ug/L	34.451	ppb	13:26:15
1	Mg 279.077 IEC†	5.1	1.0	33.020	ug/L	33.020	ppb	13:26:35
1	Na 589.592 Radial†	-1295.1	16.7	5.7538	ug/L	5.7538	ppb	13:26:15
1	Sr 421.552†	-0.9	3.8	0.0291	ug/L	0.0291	ppb	13:26:15
1	Sc 361.383	859874.2	859874.2	100.57	%			13:27:32
1	Y 371.029	734319.6	734319.6	100.29	%			13:27:32
1	Ag 328.068†	464.9	1.1	0.0129	ug/L	0.0129	ppb	13:27:32
1	As 188.979†	-30.5	9.9	3.5101	ug/L	3.5101	ppb	13:27:52
1	B 249.677†	-258.9	527.1	10.858	ug/L	10.858	ppb	13:27:32
1	Ba 233.527†	3.4	10.8	0.0820	ug/L	0.0820	ppb	13:27:52
1	Be 313.107†	-4354.8	58.2	0.0200	ug/L	0.0200	ppb	13:27:32
1	Cd 226.502†	-231.2	14.1	0.1316	ug/L	0.1316	ppb	13:27:52
1	Co 228.616†	-85.9	14.5	0.2754	ug/L	0.2754	ppb	13:27:52
1	Cr 267.716†	87.5	-28.6	-0.2893	ug/L	-0.2893	ppb	13:27:32
1	Cu 324.752†	8294.9	48.5	0.1444	ug/L	0.1444	ppb	13:27:32
1	Mn 257.610†	828.4	191.2	0.2048	ug/L	0.2048	ppb	13:27:32
1	Mo 202.031†	34.9	9.4	0.6054	ug/L	0.6054	ppb	13:27:52
1	Ni 231.604†	120.3	-7.3	-0.1619	ug/L	-0.1619	ppb	13:27:52
1	P 214.914†	279.6	23.3	11.465	ug/L	11.465	ppb	13:27:52
1	Pb 220.353†	-86.5	-4.1	-0.4405	ug/L	-0.4405	ppb	13:27:52
1	S 181.975 Axial†	70.1	1.9	2.1520	ug/L	2.1520	ppb	13:27:52
1	Sb 206.836†	43.4	5.7	1.7807	ug/L	1.7807	ppb	13:27:52
1	Se 196.026†	-32.2	1.1	0.6421	ug/L	0.6421	ppb	13:27:52
1	Si 251.611†	702.6	112.7	3.2269	ug/L	3.2269	ppb	13:27:52
1	Sn 189.927†	6.6	3.0	0.4497	ug/L	0.4497	ppb	13:27:52
1	Ti 334.940†	-1589.2	135.6	0.2139	ug/L	0.2139	ppb	13:27:32
1	Tl 190.801†	-50.7	-7.3	-2.0246	ug/L	-2.0246	ppb	13:27:52
1	U 409.014†	-2580.2	90.6	2.6888	ug/L	2.6888	ppb	13:27:32
1	V 292.402†	-1658.8	99.4	0.6371	ug/L	0.6371	ppb	13:27:32
1	Zn 213.857†	883.2	57.1	0.4702	ug/L	0.4702	ppb	13:27:52
1	SiO2†	742.7	126.7	7.8195	ug/L	7.8195	ppb	13:28:48
2	Sc Radial	4412.6	4412.6	100	%			13:26:40
2	Y RADIAL	4708.4	4708.4	100.5	%			13:26:40
2	Al 396.153Radial†	1.2	0.9	0.7544	ug/L	0.7544	ppb	13:26:40
2	Ca 317.933Radial†	19.0	5.2	8.8997	ug/L	8.8997	ppb	13:27:00
2	Fe 238.204 Radial†	10.0	0.5	4.7533	ug/L	4.7533	ppb	13:27:00
2	K 766.490 Radial†	3289.3	150.9	31.962	ug/L	31.962	ppb	13:26:40
2	Mg 279.077 IEC†	2.0	-2.3	-77.637	ug/L	-77.637	ppb	13:27:00
2	Na 589.592 Radial†	-1259.1	84.3	29.105	ug/L	29.105	ppb	13:26:40
2	Sr 421.552†	-5.3	-0.7	-0.0053	ug/L	-0.0053	ppb	13:26:40
2	Sc 361.383	854498.3	854498.3	99.941	%			13:27:57
2	Y 371.029	730605.6	730605.6	99.780	%			13:27:57
2	Ag 328.068†	437.8	-23.0	-0.0986	ug/L	-0.0986	ppb	13:27:57
2	As 188.979†	-34.4	5.8	2.0398	ug/L	2.0398	ppb	13:28:17
2	B 249.677†	-281.5	502.8	10.361	ug/L	10.361	ppb	13:27:57
2	Ba 233.527†	0.5	7.9	0.0595	ug/L	0.0595	ppb	13:28:17
2	Be 313.107†	-4357.9	27.9	0.0100	ug/L	0.0100	ppb	13:27:57
2	Cd 226.502†	-238.1	5.7	0.0538	ug/L	0.0538	ppb	13:28:17
2	Co 228.616†	-106.0	-6.2	-0.1163	ug/L	-0.1163	ppb	13:28:17
2	Cr 267.716†	101.3	-14.3	-0.1452	ug/L	-0.1452	ppb	13:27:57
2	Cu 324.752†	8273.2	78.7	0.2328	ug/L	0.2328	ppb	13:27:57
2	Mn 257.610†	788.4	156.4	0.1680	ug/L	0.1680	ppb	13:27:57
2	Mo 202.031†	29.9	4.7	0.3024	ug/L	0.3024	ppb	13:28:17
2	Ni 231.604†	132.8	6.0	0.1334	ug/L	0.1334	ppb	13:28:17

2	P 214.914†	267.0	12.5	6.1355 ug/L	6.1355 ppb	13:28:17
2	Pb 220.353†	-85.4	-3.6	-0.3786 ug/L	-0.3786 ppb	13:28:17
2	S 181.975 Axial†	67.6	-0.2	-0.2822 ug/L	-0.2822 ppb	13:28:17
2	Sb 206.836†	44.8	7.3	2.2514 ug/L	2.2514 ppb	13:28:17
2	Se 196.026†	-29.9	3.2	1.6624 ug/L	1.6624 ppb	13:28:17
2	Si 251.611†	711.9	126.5	3.6298 ug/L	3.6298 ppb	13:28:17
2	Sn 189.927†	5.4	1.7	0.2645 ug/L	0.2645 ppb	13:28:17
2	Ti 334.940†	-1530.2	184.8	0.2916 ug/L	0.2916 ppb	13:27:57
2	Tl 190.801†	-58.7	-15.6	-4.3353 ug/L	-4.3353 ppb	13:28:17
2	U 409.014†	-2554.7	100.0	2.9691 ug/L	2.9691 ppb	13:27:57
2	V 292.402†	-1678.2	69.5	0.4456 ug/L	0.4456 ppb	13:27:57
2	Zn 213.857†	884.4	63.8	0.5287 ug/L	0.5287 ppb	13:28:17
2	SiO2†	731.8	120.4	7.4450 ug/L	7.4450 ppb	13:28:53
3	Sc Radial	4374.9	4374.9	99.5 %		13:27:05
3	Y RADIAL	4659.4	4659.4	99.44 %		13:27:05
3	Al 396.153Radial†	2.1	1.8	1.5618 ug/L	1.5618 ppb	13:27:05
3	Ca 317.933Radial†	16.2	2.5	4.2297 ug/L	4.2297 ppb	13:27:25
3	Fe 238.204 Radial†	7.3	-2.1	-20.870 ug/L	-20.870 ppb	13:27:25
3	K 766.490 Radial†	3406.1	296.6	62.827 ug/L	62.827 ppb	13:27:05
3	Mg 279.077 IEC†	6.3	2.1	73.764 ug/L	73.764 ppb	13:27:25
3	Na 589.592 Radial†	-1288.1	44.3	15.299 ug/L	15.299 ppb	13:27:05
3	Sr 421.552†	22.8	27.6	0.2142 ug/L	0.2142 ppb	13:27:05
3	Sc 361.383	861551.6	861551.6	100.77 %		13:28:22
3	Y 371.029	734046.3	734046.3	100.25 %		13:28:22
3	Ag 328.068†	333.9	-129.8	-0.5656 ug/L	-0.5656 ppb	13:28:22
3	As 188.979†	-33.0	7.5	2.6286 ug/L	2.6286 ppb	13:28:43
3	B 249.677†	-283.3	503.3	10.375 ug/L	10.375 ppb	13:28:22
3	Ba 233.527†	-5.9	1.6	0.0122 ug/L	0.0122 ppb	13:28:43
3	Be 313.107†	-4372.7	48.9	0.0167 ug/L	0.0167 ppb	13:28:22
3	Cd 226.502†	-239.5	6.2	0.0615 ug/L	0.0615 ppb	13:28:43
3	Co 228.616†	-98.7	2.0	0.0391 ug/L	0.0391 ppb	13:28:43
3	Cr 267.716†	92.8	-23.6	-0.2389 ug/L	-0.2389 ppb	13:28:22
3	Cu 324.752†	8246.0	-16.1	-0.0486 ug/L	-0.0486 ppb	13:28:22
3	Mn 257.610†	750.2	112.0	0.1155 ug/L	0.1155 ppb	13:28:22
3	Mo 202.031†	32.1	6.6	0.4212 ug/L	0.4212 ppb	13:28:43
3	Ni 231.604†	135.0	7.0	0.1555 ug/L	0.1555 ppb	13:28:43
3	P 214.914†	258.1	1.4	0.7298 ug/L	0.7298 ppb	13:28:43
3	Pb 220.353†	-79.6	2.9	0.3068 ug/L	0.3068 ppb	13:28:43
3	S 181.975 Axial†	54.9	-13.4	-15.427 ug/L	-15.427 ppb	13:28:43
3	Sb 206.836†	48.4	10.6	3.2320 ug/L	3.2320 ppb	13:28:43
3	Se 196.026†	-31.4	2.0	0.9447 ug/L	0.9447 ppb	13:28:43
3	Si 251.611†	712.9	121.6	3.4788 ug/L	3.4788 ppb	13:28:43
3	Sn 189.927†	3.6	-0.1	-0.0131 ug/L	-0.0131 ppb	13:28:43
3	Ti 334.940†	-1656.0	72.5	0.1151 ug/L	0.1151 ppb	13:28:22
3	Tl 190.801†	-57.0	-13.4	-3.7247 ug/L	-3.7247 ppb	13:28:43
3	U 409.014†	-2680.6	-4.1	-0.1176 ug/L	-0.1176 ppb	13:28:22
3	V 292.402†	-1717.6	44.2	0.2890 ug/L	0.2890 ppb	13:28:22
3	Zn 213.857†	895.4	67.5	0.5552 ug/L	0.5552 ppb	13:28:43
3	SiO2†	734.7	117.3	7.2262 ug/L	7.2262 ppb	13:28:58

Mean Data: 1202004439|936813|5

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	858641.4	100.43	%	0.431				0.43%
Sc Radial	4364.7	99.3	%	1.22				1.23%
Y 371.029	732990.5	100.11	%	0.283				0.28%
Y RADIAL	4638.3	98.98	%	1.766				1.78%
Ag 328.068†	-50.5	-0.2171	ug/L	0.30693	-0.2171	ppb	0.30693	141.37%
Al 396.153Radial†	-5.0	-4.3625	ug/L	9.57040	-4.3625	ppb	9.57040	219.38%
As 188.979†	7.7	2.7261	ug/L	0.74000	2.7261	ppb	0.74000	27.14%
B 249.677†	511.1	10.531	ug/L	0.2828	10.531	ppb	0.2828	2.69%
Ba 233.527†	6.8	0.0512	ug/L	0.03564	0.0512	ppb	0.03564	69.56%
Be 313.107†	45.0	0.0155	ug/L	0.00512	0.0155	ppb	0.00512	32.91%
Ca 317.933Radial†	4.0	6.9751	ug/L	2.44079	6.9751	ppb	2.44079	34.99%
Cd 226.502†	8.7	0.0823	ug/L	0.04285	0.0823	ppb	0.04285	52.05%
Co 228.616†	3.5	0.0661	ug/L	0.19728	0.0661	ppb	0.19728	298.62%
Cr 267.716†	-22.1	-0.2245	ug/L	0.07314	-0.2245	ppb	0.07314	32.58%
Cu 324.752†	37.0	0.1095	ug/L	0.14392	0.1095	ppb	0.14392	131.42%
Fe 238.204 Radial†	0.3	2.5286	ug/L	22.36967	2.5286	ppb	22.36967	884.66%
K 766.490 Radial†	203.4	43.080	ug/L	17.1462	43.080	ppb	17.1462	39.80%

Mg 279.077 IEC†	0.3	9.7157 ug/L	78.34453	9.7157 ppb	78.34453	806.37%
Mn 257.610†	153.2	0.1627 ug/L	0.04488	0.1627 ppb	0.04488	27.58%
Mo 202.031†	6.9	0.4430 ug/L	0.15267	0.4430 ppb	0.15267	34.46%
Na 589.592 Radial†	48.4	16.719 ug/L	11.7402	16.719 ppb	11.7402	70.22%
Ni 231.604†	1.9	0.0423 ug/L	0.17719	0.0423 ppb	0.17719	418.62%
P 214.914†	12.4	6.1101 ug/L	5.36766	6.1101 ppb	5.36766	87.85%
Pb 220.353†	-1.6	-0.1707 ug/L	0.41476	-0.1707 ppb	0.41476	242.92%
S 181.975 Axial†	-3.9	-4.5189 ug/L	9.52437	-4.5189 ppb	9.52437	210.77%
Sb 206.836†	7.9	2.4213 ug/L	0.74044	2.4213 ppb	0.74044	30.58%
Se 196.026†	2.1	1.0831 ug/L	0.52399	1.0831 ppb	0.52399	48.38%
Si 251.611†	120.3	3.4452 ug/L	0.20357	3.4452 ppb	0.20357	5.91%
Sn 189.927†	1.5	0.2337 ug/L	0.23293	0.2337 ppb	0.23293	99.67%
Sr 421.552†	10.2	0.0793 ug/L	0.11808	0.0793 ppb	0.11808	148.86%
Ti 334.940†	131.0	0.2069 ug/L	0.08848	0.2069 ppb	0.08848	42.77%
Tl 190.801†	-12.1	-3.3615 ug/L	1.19738	-3.3615 ppb	1.19738	35.62%
U 409.014†	62.2	1.8468 ug/L	1.70695	1.8468 ppb	1.70695	92.43%
V 292.402†	71.0	0.4572 ug/L	0.17436	0.4572 ppb	0.17436	38.13%
Zn 213.857†	62.8	0.5181 ug/L	0.04351	0.5181 ppb	0.04351	8.40%
SiO2†	121.5	7.4969 ug/L	0.30004	7.4969 ppb	0.30004	4.00%

Sequence No.: 8
Sample ID: CCV
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 7
Date Collected: 1/8/2010 13:31:08
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCV

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4379.5	4379.5	99.6	%			13:33:00
1	Y RADIAL	4638.0	4638.0	98.98	%			13:33:00
1	Al 396.153Radial†	5604.6	5626.8	4864.9	ug/L	4864.9	ppb	13:33:00
1	Ca 317.933Radial†	2829.2	2826.8	4870.9	ug/L	4870.9	ppb	13:33:20
1	Fe 238.204 Radial†	513.1	505.7	5019.2	ug/L	5019.2	ppb	13:33:20
1	K 766.490 Radial†	26798.9	23779.8	5029.8	ug/L	5029.8	ppb	13:33:00
1	Mg 279.077 IEC†	150.5	146.9	5046.6	ug/L	5046.6	ppb	13:33:20
1	Na 589.592 Radial†	27358.1	28807.2	9944.1	ug/L	9944.1	ppb	13:33:00
1	Sr 421.552†	64329.7	64593.3	501.54	ug/L	501.54	ppb	13:33:00
1	Sc 361.383	863976.2	863976.2	101.05	%			13:34:19
1	Y 371.029	728738.2	728738.2	99.525	%			13:34:19
1	Ag 328.068†	113960.6	112315.8	487.64	ug/L	487.64	ppb	13:34:19
1	As 188.979†	1396.2	1422.0	506.43	ug/L	506.43	ppb	13:34:39
1	B 249.677†	23266.8	23809.6	488.71	ug/L	488.71	ppb	13:34:19
1	Ba 233.527†	66919.8	66232.1	489.87	ug/L	489.87	ppb	13:34:19
1	Be 313.107†	1465940.2	1455101.3	490.34	ug/L	490.34	ppb	13:34:19
1	Cd 226.502†	51940.5	51645.0	491.56	ug/L	491.56	ppb	13:34:19
1	Co 228.616†	26129.1	25957.6	491.20	ug/L	491.20	ppb	13:34:39
1	Cr 267.716†	48558.4	47938.4	487.26	ug/L	487.26	ppb	13:34:19
1	Cu 324.752†	173980.0	163973.4	484.79	ug/L	484.79	ppb	13:34:19
1	Mn 257.610†	470923.1	465398.9	494.60	ug/L	494.60	ppb	13:34:19
1	Mo 202.031†	7828.6	7722.1	493.37	ug/L	493.37	ppb	13:34:39
1	Ni 231.604†	22455.0	22094.8	488.81	ug/L	488.81	ppb	13:34:39
1	P 214.914†	5403.8	5093.0	2439.8	ug/L	2439.8	ppb	13:34:39
1	Pb 220.353†	4712.8	4745.6	503.73	ug/L	503.73	ppb	13:34:39
1	S 181.975 Axial†	933.9	856.3	984.07	ug/L	984.07	ppb	13:34:39
1	Sb 206.836†	1679.2	1624.3	502.40	ug/L	502.40	ppb	13:34:39
1	Se 196.026†	965.5	988.6	523.96	ug/L	523.96	ppb	13:34:39
1	Si 251.611†	85892.2	84414.2	2422.5	ug/L	2422.5	ppb	13:34:19
1	Sn 189.927†	3301.0	3263.1	493.98	ug/L	493.98	ppb	13:34:39
1	Ti 334.940†	309707.7	308206.5	487.50	ug/L	487.50	ppb	13:34:19
1	Tl 190.801†	1765.3	1790.1	502.12	ug/L	502.12	ppb	13:34:39
1	U 409.014†	13425.8	15942.5	471.80	ug/L	471.80	ppb	13:34:19
1	V 292.402†	75828.7	76789.7	490.58	ug/L	490.58	ppb	13:34:19
1	Zn 213.857†	61026.1	59571.1	488.30	ug/L	488.30	ppb	13:34:19
1	SiO2†	86722.1	85209.5	5267.4	ug/L	5267.4	ppb	13:35:40
2	Sc Radial	4351.6	4351.6	99.0	%			13:33:25
2	Y RADIAL	4597.5	4597.5	98.11	%			13:33:25
2	Al 396.153Radial†	5592.8	5651.0	4886.0	ug/L	4886.0	ppb	13:33:25
2	Ca 317.933Radial†	2854.7	2870.8	4946.8	ug/L	4946.8	ppb	13:33:45
2	Fe 238.204 Radial†	515.0	510.9	5070.5	ug/L	5070.5	ppb	13:33:45
2	K 766.490 Radial†	26714.4	23867.4	5048.3	ug/L	5048.3	ppb	13:33:25
2	Mg 279.077 IEC†	147.4	144.8	4973.9	ug/L	4973.9	ppb	13:33:45
2	Na 589.592 Radial†	27185.2	28809.0	9944.7	ug/L	9944.7	ppb	13:33:25
2	Sr 421.552†	64191.3	64868.4	503.68	ug/L	503.68	ppb	13:33:25
2	Sc 361.383	862847.6	862847.6	100.92	%			13:34:47
2	Y 371.029	729271.2	729271.2	99.598	%			13:34:47
2	Ag 328.068†	113522.0	112028.7	486.42	ug/L	486.42	ppb	13:34:47
2	As 188.979†	1372.0	1399.8	498.61	ug/L	498.61	ppb	13:35:07
2	B 249.677†	23383.4	23955.3	491.71	ug/L	491.71	ppb	13:34:47
2	Ba 233.527†	66897.7	66296.8	490.35	ug/L	490.35	ppb	13:34:47
2	Be 313.107†	1463271.6	1454354.6	490.08	ug/L	490.08	ppb	13:34:47
2	Cd 226.502†	51859.1	51631.5	491.43	ug/L	491.43	ppb	13:34:47
2	Co 228.616†	25879.0	25743.6	487.15	ug/L	487.15	ppb	13:35:07
2	Cr 267.716†	48564.3	48007.1	487.95	ug/L	487.95	ppb	13:34:47
2	Cu 324.752†	173753.7	163974.3	484.80	ug/L	484.80	ppb	13:34:47
2	Mn 257.610†	469548.4	464646.3	493.81	ug/L	493.81	ppb	13:34:47
2	Mo 202.031†	7766.8	7671.0	490.12	ug/L	490.12	ppb	13:35:07
2	Ni 231.604†	22287.1	21957.5	485.78	ug/L	485.78	ppb	13:35:07

2	P 214.914†	5334.8	5031.6	2409.4 ug/L	2409.4 ppb	13:35:07
2	Pb 220.353†	4653.9	4693.4	498.19 ug/L	498.19 ppb	13:35:07
2	S 181.975 Axial†	932.7	856.4	984.17 ug/L	984.17 ppb	13:35:07
2	Sb 206.836†	1657.1	1604.6	496.27 ug/L	496.27 ppb	13:35:07
2	Se 196.026†	959.6	984.0	521.76 ug/L	521.76 ppb	13:35:07
2	Si 251.611†	85706.4	84341.2	2420.5 ug/L	2420.5 ppb	13:34:47
2	Sn 189.927†	3289.5	3256.0	492.91 ug/L	492.91 ppb	13:35:07
2	Ti 334.940†	308941.3	307848.0	486.93 ug/L	486.93 ppb	13:34:47
2	Tl 190.801†	1752.2	1779.5	499.16 ug/L	499.16 ppb	13:35:07
2	U 409.014†	13311.8	15846.9	468.95 ug/L	468.95 ppb	13:34:47
2	V 292.402†	75732.6	76792.7	490.53 ug/L	490.53 ppb	13:34:47
2	Zn 213.857†	60796.0	59422.1	487.09 ug/L	487.09 ppb	13:34:47
2	SiO2†	86356.1	84959.1	5252.0 ug/L	5252.0 ppb	13:35:45
3	Sc Radial	4412.6	4412.6	100 %		13:33:50
3	Y RADIAL	4662.7	4662.7	99.50 %		13:33:50
3	Al 396.153Radial†	5672.6	5652.5	4887.5 ug/L	4887.5 ppb	13:33:50
3	Ca 317.933Radial†	2842.8	2819.1	4857.7 ug/L	4857.7 ppb	13:34:11
3	Fe 238.204 Radial†	515.4	504.1	5003.1 ug/L	5003.1 ppb	13:34:11
3	K 766.490 Radial†	27063.8	23842.6	5043.1 ug/L	5043.1 ppb	13:33:50
3	Mg 279.077 IEC†	148.6	143.9	4944.2 ug/L	4944.2 ppb	13:34:11
3	Na 589.592 Radial†	27511.7	28754.9	9926.0 ug/L	9926.0 ppb	13:33:50
3	Sr 421.552†	64953.5	64731.8	502.62 ug/L	502.62 ppb	13:33:50
3	Sc 361.383	872611.0	872611.0	102.06 %		13:35:14
3	Y 371.029	736659.8	736659.8	100.61 %		13:35:14
3	Ag 328.068†	114764.9	111987.9	486.22 ug/L	486.22 ppb	13:35:14
3	As 188.979†	1380.3	1392.7	496.08 ug/L	496.08 ppb	13:35:34
3	B 249.677†	23602.8	23911.0	490.83 ug/L	490.83 ppb	13:35:14
3	Ba 233.527†	67449.1	66095.5	488.86 ug/L	488.86 ppb	13:35:14
3	Be 313.107†	1477056.1	1451637.6	489.17 ug/L	489.17 ppb	13:35:14
3	Cd 226.502†	52374.9	51561.9	490.77 ug/L	490.77 ppb	13:35:14
3	Co 228.616†	25829.0	25407.7	480.78 ug/L	480.78 ppb	13:35:34
3	Cr 267.716†	48923.3	47820.4	486.06 ug/L	486.06 ppb	13:35:14
3	Cu 324.752†	175863.9	164115.6	485.21 ug/L	485.21 ppb	13:35:14
3	Mn 257.610†	474022.0	463823.8	492.93 ug/L	492.93 ppb	13:35:14
3	Mo 202.031†	7776.4	7594.2	485.21 ug/L	485.21 ppb	13:35:34
3	Ni 231.604†	22283.5	21706.9	480.23 ug/L	480.23 ppb	13:35:34
3	P 214.914†	5317.9	4955.9	2371.9 ug/L	2371.9 ppb	13:35:34
3	Pb 220.353†	4669.6	4657.3	494.36 ug/L	494.36 ppb	13:35:34
3	S 181.975 Axial†	924.5	838.0	962.95 ug/L	962.95 ppb	13:35:34
3	Sb 206.836†	1652.2	1581.4	488.97 ug/L	488.97 ppb	13:35:34
3	Se 196.026†	945.5	959.6	509.05 ug/L	509.05 ppb	13:35:34
3	Si 251.611†	86693.4	84358.1	2421.1 ug/L	2421.1 ppb	13:35:14
3	Sn 189.927†	3256.6	3187.3	482.51 ug/L	482.51 ppb	13:35:34
3	Ti 334.940†	312453.7	307864.3	486.96 ug/L	486.96 ppb	13:35:14
3	Tl 190.801†	1729.7	1738.0	487.62 ug/L	487.62 ppb	13:35:34
3	U 409.014†	13543.2	15926.1	471.32 ug/L	471.32 ppb	13:35:14
3	V 292.402†	76583.3	76786.6	490.44 ug/L	490.44 ppb	13:35:14
3	Zn 213.857†	61361.1	59301.7	486.13 ug/L	486.13 ppb	13:35:14
3	SiO2†	85718.0	83376.4	5153.9 ug/L	5153.9 ppb	13:35:50

Mean Data: CCV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Sc 361.383	866478.3	101.34	%	0.625				0.62%
Sc Radial	4381.2	99.6	%	0.69				0.70%
Y 371.029	731556.4	99.910	%	0.6047				0.61%
Y RADIAL	4632.7	98.87	%	0.702				0.71%
Ag 328.068†	112110.8	486.76	ug/L	0.768	486.76	ppb	0.768	0.16%
QC value within limits for Ag 328.068 Recovery = 97.35%								
Al 396.153Radial†	5643.4	4879.4	ug/L	12.65	4879.4	ppb	12.65	0.26%
QC value within limits for Al 396.153Radial Recovery = 97.59%								
As 188.979†	1404.8	500.38	ug/L	5.397	500.38	ppb	5.397	1.08%
QC value within limits for As 188.979 Recovery = 100.08%								
B 249.677†	23892.0	490.42	ug/L	1.545	490.42	ppb	1.545	0.31%
QC value within limits for B 249.677 Recovery = 98.08%								
Ba 233.527†	66208.1	489.69	ug/L	0.759	489.69	ppb	0.759	0.16%
QC value within limits for Ba 233.527 Recovery = 97.94%								
Be 313.107†	1453697.9	489.86	ug/L	0.613	489.86	ppb	0.613	0.13%
QC value within limits for Be 313.107 Recovery = 97.97%								
Ca 317.933Radial†	2838.9	4891.8	ug/L	48.09	4891.8	ppb	48.09	0.98%

QC value within limits for Ca 317.933Radial Recovery = 97.84%

Cd 226.502†	51612.8	491.25 ug/L	0.425	491.25 ppb	0.425	0.09%
QC value within limits for Cd 226.502 Recovery = 98.25%						
Co 228.616†	25702.9	486.38 ug/L	5.253	486.38 ppb	5.253	1.08%
QC value within limits for Co 228.616 Recovery = 97.28%						
Cr 267.716†	47922.0	487.09 ug/L	0.959	487.09 ppb	0.959	0.20%
QC value within limits for Cr 267.716 Recovery = 97.42%						
Cu 324.752†	164021.1	484.93 ug/L	0.241	484.93 ppb	0.241	0.05%
QC value within limits for Cu 324.752 Recovery = 96.99%						
Fe 238.204 Radial†	506.9	5030.9 ug/L	35.19	5030.9 ppb	35.19	0.70%
QC value within limits for Fe 238.204 Radial Recovery = 100.62%						
K 766.490 Radial†	23829.9	5040.4 ug/L	9.56	5040.4 ppb	9.56	0.19%
QC value within limits for K 766.490 Radial Recovery = 100.81%						
Mg 279.077 IEC†	145.2	4988.2 ug/L	52.66	4988.2 ppb	52.66	1.06%
QC value within limits for Mg 279.077 IEC Recovery = 99.76%						
Mn 257.610†	464623.0	493.78 ug/L	0.837	493.78 ppb	0.837	0.17%
QC value within limits for Mn 257.610 Recovery = 98.76%						
Mo 202.031†	7662.4	489.57 ug/L	4.108	489.57 ppb	4.108	0.84%
QC value within limits for Mo 202.031 Recovery = 97.91%						
Na 589.592 Radial†	28790.3	9938.2 ug/L	10.61	9938.2 ppb	10.61	0.11%
QC value within limits for Na 589.592 Radial Recovery = 99.38%						
Ni 231.604†	21919.8	484.94 ug/L	4.350	484.94 ppb	4.350	0.90%
QC value within limits for Ni 231.604 Recovery = 96.99%						
P 214.914†	5026.8	2407.0 ug/L	34.00	2407.0 ppb	34.00	1.41%
QC value within limits for P 214.914 Recovery = 96.28%						
Pb 220.353†	4698.8	498.76 ug/L	4.710	498.76 ppb	4.710	0.94%
QC value within limits for Pb 220.353 Recovery = 99.75%						
S 181.975 Axial†	850.2	977.06 ug/L	12.220	977.06 ppb	12.220	1.25%
QC value within limits for S 181.975 Axial Recovery = 97.71%						
Sb 206.836†	1603.4	495.88 ug/L	6.723	495.88 ppb	6.723	1.36%
QC value within limits for Sb 206.836 Recovery = 99.18%						
Se 196.026†	977.4	518.25 ug/L	8.048	518.25 ppb	8.048	1.55%
QC value within limits for Se 196.026 Recovery = 103.65%						
Si 251.611†	84371.2	2421.3 ug/L	1.05	2421.3 ppb	1.05	0.04%
QC value within limits for Si 251.611 Recovery = 96.85%						
Sn 189.927†	3235.5	489.80 ug/L	6.335	489.80 ppb	6.335	1.29%
QC value within limits for Sn 189.927 Recovery = 97.96%						
Sr 421.552†	64731.1	502.61 ug/L	1.068	502.61 ppb	1.068	0.21%
QC value within limits for Sr 421.552 Recovery = 100.52%						
Ti 334.940†	307972.9	487.13 ug/L	0.319	487.13 ppb	0.319	0.07%
QC value within limits for Ti 334.940 Recovery = 97.43%						
Tl 190.801†	1769.2	496.30 ug/L	7.661	496.30 ppb	7.661	1.54%
QC value within limits for Tl 190.801 Recovery = 99.26%						
U 409.014†	15905.2	470.69 ug/L	1.523	470.69 ppb	1.523	0.32%
QC value within limits for U 409.014 Recovery = 94.14%						
V 292.402†	76789.7	490.52 ug/L	0.070	490.52 ppb	0.070	0.01%
QC value within limits for V 292.402 Recovery = 98.10%						
Zn 213.857†	59431.6	487.17 ug/L	1.086	487.17 ppb	1.086	0.22%
QC value within limits for Zn 213.857 Recovery = 97.43%						
SiO2†	84515.0	5224.4 ug/L	61.55	5224.4 ppb	61.55	1.18%
QC value within limits for SiO2 Recovery = 97.70%						

All analyte(s) passed QC.

Sequence No.: 9
Sample ID: CCB
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 8
Date Collected: 1/8/2010 13:37:59
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: CCB

Repl#	Analyte	Net Intensity	Corrected Intensity	Calib. Conc.	Calib. Units	Sample Conc.	Sample Units	Analysis Time
1	Sc Radial	4312.4	4312.4	98.1	%			13:39:52
1	Y RADIAL	4599.7	4599.7	98.16	%			13:39:52
1	Al 396.153Radial†	-20.4	-21.2	-18.382	ug/L	-18.382	ppb	13:39:52
1	Ca 317.933Radial†	13.5	-0.1	-0.1326	ug/L	-0.1326	ppb	13:40:12
1	Fe 238.204 Radial†	9.6	0.3	3.2649	ug/L	3.2649	ppb	13:40:12
1	K 766.490 Radial†	3339.9	278.7	59.043	ug/L	59.043	ppb	13:39:52
1	Mg 279.077 IEC†	6.7	2.6	88.037	ug/L	88.037	ppb	13:40:12
1	Na 589.592 Radial†	-1290.2	23.4	8.0867	ug/L	8.0867	ppb	13:39:52
1	Sr 421.552†	2.0	6.7	0.0519	ug/L	0.0519	ppb	13:39:52
1	Sc 361.383	856825.5	856825.5	100.21	%			13:41:09
1	Y 371.029	730877.0	730877.0	99.818	%			13:41:09
1	Ag 328.068†	300.5	-161.2	-0.6968	ug/L	-0.6968	ppb	13:41:09
1	As 188.979†	-32.8	7.5	2.6583	ug/L	2.6583	ppb	13:41:29
1	B 249.677†	-343.3	442.0	9.1073	ug/L	9.1073	ppb	13:41:09
1	Ba 233.527†	7.0	14.4	0.1073	ug/L	0.1073	ppb	13:41:29
1	Be 313.107†	-4482.5	-84.6	-0.0285	ug/L	-0.0285	ppb	13:41:09
1	Cd 226.502†	-227.5	17.0	0.1614	ug/L	0.1614	ppb	13:41:29
1	Co 228.616†	-118.8	-18.6	-0.3520	ug/L	-0.3520	ppb	13:41:29
1	Cr 267.716†	128.5	12.6	0.1274	ug/L	0.1274	ppb	13:41:09
1	Cu 324.752†	8324.2	107.1	0.3166	ug/L	0.3166	ppb	13:41:09
1	Mn 257.610†	607.1	-26.7	-0.0297	ug/L	-0.0297	ppb	13:41:09
1	Mo 202.031†	24.4	-0.9	-0.0543	ug/L	-0.0543	ppb	13:41:29
1	Ni 231.604†	130.7	3.5	0.0778	ug/L	0.0778	ppb	13:41:29
1	P 214.914†	276.6	21.4	10.499	ug/L	10.499	ppb	13:41:29
1	Pb 220.353†	-79.4	2.6	0.2745	ug/L	0.2745	ppb	13:41:29
1	S 181.975 Axial†	67.6	-0.4	-0.4966	ug/L	-0.4966	ppb	13:41:29
1	Sb 206.836†	32.6	-4.9	-1.4790	ug/L	-1.4790	ppb	13:41:29
1	Se 196.026†	-35.4	-2.2	-1.1237	ug/L	-1.1237	ppb	13:41:29
1	Si 251.611†	637.0	49.8	1.4119	ug/L	1.4119	ppb	13:41:29
1	Sn 189.927†	13.3	9.7	1.4623	ug/L	1.4623	ppb	13:41:29
1	Ti 334.940†	-1744.7	-25.1	-0.0417	ug/L	-0.0417	ppb	13:41:09
1	Tl 190.801†	-55.8	-12.5	-3.4951	ug/L	-3.4951	ppb	13:41:29
1	U 409.014†	-2507.7	153.8	4.5664	ug/L	4.5664	ppb	13:41:09
1	V 292.402†	-1695.9	56.4	0.3650	ug/L	0.3650	ppb	13:41:09
1	Zn 213.857†	841.3	18.4	0.1479	ug/L	0.1479	ppb	13:41:29
1	SiO2†	650.9	37.7	2.2925	ug/L	2.2925	ppb	13:42:25
2	Sc Radial	4329.9	4329.9	98.5	%			13:40:17
2	Y RADIAL	4601.3	4601.3	98.19	%			13:40:17
2	Al 396.153Radial†	-15.8	-16.4	-14.260	ug/L	-14.260	ppb	13:40:17
2	Ca 317.933Radial†	11.7	-1.9	-3.3562	ug/L	-3.3562	ppb	13:40:37
2	Fe 238.204 Radial†	9.5	0.1	1.1470	ug/L	1.1470	ppb	13:40:37
2	K 766.490 Radial†	3332.4	257.3	54.512	ug/L	54.512	ppb	13:40:17
2	Mg 279.077 IEC†	1.8	-2.4	-81.400	ug/L	-81.400	ppb	13:40:37
2	Na 589.592 Radial†	-1313.6	4.9	1.7055	ug/L	1.7055	ppb	13:40:17
2	Sr 421.552†	24.2	29.2	0.2267	ug/L	0.2267	ppb	13:40:17
2	Sc 361.383	848976.3	848976.3	99.295	%			13:41:34
2	Y 371.029	724487.3	724487.3	98.945	%			13:41:34
2	Ag 328.068†	499.7	42.2	0.1827	ug/L	0.1827	ppb	13:41:34
2	As 188.979†	-24.2	15.9	5.5987	ug/L	5.5987	ppb	13:41:54
2	B 249.677†	-323.7	458.5	9.4482	ug/L	9.4482	ppb	13:41:34
2	Ba 233.527†	-7.6	-0.2	-0.0015	ug/L	-0.0015	ppb	13:41:54
2	Be 313.107†	-4433.9	-77.0	-0.0258	ug/L	-0.0258	ppb	13:41:34
2	Cd 226.502†	-251.0	-8.8	-0.0842	ug/L	-0.0842	ppb	13:41:54
2	Co 228.616†	-95.6	3.7	0.0697	ug/L	0.0697	ppb	13:41:54
2	Cr 267.716†	133.1	18.5	0.1876	ug/L	0.1876	ppb	13:41:34
2	Cu 324.752†	8294.0	153.5	0.4535	ug/L	0.4535	ppb	13:41:34
2	Mn 257.610†	571.2	-57.3	-0.0592	ug/L	-0.0592	ppb	13:41:34
2	Mo 202.031†	28.6	3.5	0.2259	ug/L	0.2259	ppb	13:41:54
2	Ni 231.604†	110.4	-15.7	-0.3471	ug/L	-0.3471	ppb	13:41:54

2	P 214.914†	273.4	20.6	10.122 ug/L	10.122 ppb	13:41:54
2	Pb 220.353†	-90.1	-8.9	-0.9414 ug/L	-0.9414 ppb	13:41:54
2	S 181.975 Axial†	58.5	-8.9	-10.238 ug/L	-10.238 ppb	13:41:54
2	Sb 206.836†	57.1	20.0	6.1373 ug/L	6.1373 ppb	13:41:54
2	Se 196.026†	-31.3	1.6	0.8072 ug/L	0.8072 ppb	13:41:54
2	Si 251.611†	643.1	61.8	1.7548 ug/L	1.7548 ppb	13:41:54
2	Sn 189.927†	13.7	10.2	1.5430 ug/L	1.5430 ppb	13:41:54
2	Ti 334.940†	-1681.5	22.4	0.0355 ug/L	0.0355 ppb	13:41:34
2	Tl 190.801†	-40.5	2.4	0.6575 ug/L	0.6575 ppb	13:41:54
2	U 409.014†	-2654.5	-17.1	-0.5083 ug/L	-0.5083 ppb	13:41:34
2	V 292.402†	-1746.8	-10.5	-0.0660 ug/L	-0.0660 ppb	13:41:34
2	Zn 213.857†	869.1	54.1	0.4518 ug/L	0.4518 ppb	13:41:54
2	SiO2†	674.9	67.9	4.1596 ug/L	4.1596 ppb	13:42:30
3	Sc Radial	4220.6	4220.6	96.0 %		13:40:42
3	Y RADIAL	4483.5	4483.5	95.68 %		13:40:42
3	Al 396.153Radial†	-1.3	-1.7	-1.5059 ug/L	-1.5059 ppb	13:40:42
3	Ca 317.933Radial†	18.3	5.3	9.0523 ug/L	9.0523 ppb	13:41:02
3	Fe 238.204 Radial†	12.6	3.7	36.558 ug/L	36.558 ppb	13:41:02
3	K 766.490 Radial†	3163.8	169.3	35.865 ug/L	35.865 ppb	13:40:42
3	Mg 279.077 IEC†	3.9	-0.1	-4.0120 ug/L	-4.0120 ppb	13:41:02
3	Na 589.592 Radial†	-1274.3	11.3	3.9080 ug/L	3.9080 ppb	13:40:42
3	Sr 421.552†	-30.6	-27.3	-0.2119 ug/L	-0.2119 ppb	13:40:42
3	Sc 361.383	852816.4	852816.4	99.744 %		13:42:00
3	Y 371.029	727547.8	727547.8	99.363 %		13:42:00
3	Ag 328.068†	471.2	11.3	0.0625 ug/L	0.0625 ppb	13:42:00
3	As 188.979†	-28.2	12.0	4.2192 ug/L	4.2192 ppb	13:42:20
3	B 249.677†	-240.7	543.2	11.189 ug/L	11.189 ppb	13:42:00
3	Ba 233.527†	6.2	13.7	0.1027 ug/L	0.1027 ppb	13:42:20
3	Be 313.107†	-4463.7	-86.7	-0.0295 ug/L	-0.0295 ppb	13:42:00
3	Cd 226.502†	-224.0	19.4	0.1805 ug/L	0.1805 ppb	13:42:20
3	Co 228.616†	-106.2	-6.5	-0.1222 ug/L	-0.1222 ppb	13:42:20
3	Cr 267.716†	107.6	-7.8	-0.0774 ug/L	-0.0774 ppb	13:42:00
3	Cu 324.752†	8179.7	1.2	0.0054 ug/L	0.0054 ppb	13:42:00
3	Mn 257.610†	610.7	-20.3	-0.0179 ug/L	-0.0179 ppb	13:42:00
3	Mo 202.031†	33.0	7.9	0.5086 ug/L	0.5086 ppb	13:42:20
3	Ni 231.604†	111.4	-15.2	-0.3372 ug/L	-0.3372 ppb	13:42:20
3	P 214.914†	257.9	3.9	1.8934 ug/L	1.8934 ppb	13:42:20
3	Pb 220.353†	-75.1	6.6	0.6939 ug/L	0.6939 ppb	13:42:20
3	S 181.975 Axial†	66.0	-1.7	-1.9593 ug/L	-1.9593 ppb	13:42:20
3	Sb 206.836†	42.6	5.3	1.6306 ug/L	1.6306 ppb	13:42:20
3	Se 196.026†	-37.4	-4.4	-2.1448 ug/L	-2.1448 ppb	13:42:20
3	Si 251.611†	620.9	36.6	1.0347 ug/L	1.0347 ppb	13:42:20
3	Sn 189.927†	5.2	1.6	0.2424 ug/L	0.2424 ppb	13:42:20
3	Ti 334.940†	-1801.4	-90.1	-0.1422 ug/L	-0.1422 ppb	13:42:00
3	Tl 190.801†	-40.0	3.1	0.8497 ug/L	0.8497 ppb	13:42:20
3	U 409.014†	-2645.3	4.1	0.1165 ug/L	0.1165 ppb	13:42:00
3	V 292.402†	-1675.4	69.0	0.4371 ug/L	0.4371 ppb	13:42:00
3	Zn 213.857†	846.5	27.5	0.2279 ug/L	0.2279 ppb	13:42:20
3	SiO2†	672.8	62.7	3.8466 ug/L	3.8466 ppb	13:42:35

Mean Data: CCB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Sc 361.383	852872.7	99.751	%	0.4591				0.46%
Sc Radial	4287.6	97.5	%	1.34				1.37%
Y 371.029	727637.4	99.375	%	0.4365				0.44%
Y RADIAL	4561.5	97.35	%	1.442				1.48%
Ag 328.068†	-35.9	-0.1505	ug/L	0.47688	-0.1505	ppb	0.47688	316.78%
QC value within limits for Ag 328.068 Recovery = Not calculated								
Al 396.153Radial†	-13.1	-11.383	ug/L	8.7983	-11.383	ppb	8.7983	77.30%
QC value within limits for Al 396.153Radial Recovery = Not calculated								
As 188.979†	11.8	4.1587	ug/L	1.47115	4.1587	ppb	1.47115	35.37%
QC value within limits for As 188.979 Recovery = Not calculated								
B 249.677†	481.2	9.9147	ug/L	1.11641	9.9147	ppb	1.11641	11.26%
QC value within limits for B 249.677 Recovery = Not calculated								
Ba 233.527†	9.3	0.0695	ug/L	0.06152	0.0695	ppb	0.06152	88.51%
QC value within limits for Ba 233.527 Recovery = Not calculated								
Be 313.107†	-82.8	-0.0279	ug/L	0.00189	-0.0279	ppb	0.00189	6.76%
QC value within limits for Be 313.107 Recovery = Not calculated								
Ca 317.933Radial†	1.1	1.8545	ug/L	6.43846	1.8545	ppb	6.43846	347.18%

```
   QC value within limits for Ca 317.933Radial  Recovery = Not calculated
Cd 226.502†                9.2      0.0859 ug/L       0.14764      0.0859 ppb       0.14764 171.85%
   QC value within limits for Cd 226.502  Recovery = Not calculated
Co 228.616†               -7.2     -0.1349 ug/L       0.21114     -0.1349 ppb       0.21114 156.57%
   QC value within limits for Co 228.616  Recovery = Not calculated
Cr 267.716†                7.8      0.0792 ug/L       0.13892      0.0792 ppb       0.13892 175.40%
   QC value within limits for Cr 267.716  Recovery = Not calculated
Cu 324.752†               87.3      0.2585 ug/L       0.22965      0.2585 ppb       0.22965  88.83%
   QC value within limits for Cu 324.752  Recovery = Not calculated
Fe 238.204 Radial†         1.4     13.657 ug/L       19.8613      13.657 ppb       19.8613 145.43%
   QC value within limits for Fe 238.204 Radial  Recovery = Not calculated
K 766.490 Radial†        235.1     49.807 ug/L       12.2841      49.807 ppb       12.2841  24.66%
   QC value within limits for K 766.490 Radial  Recovery = Not calculated
Mg 279.077 IEC†            0.0      0.8750 ug/L      84.82427      0.8750 ppb      84.82427 >999.9%
   QC value within limits for Mg 279.077 IEC  Recovery = Not calculated
Mn 257.610†              -34.8     -0.0356 ug/L       0.02131     -0.0356 ppb       0.02131  59.86%
   QC value within limits for Mn 257.610  Recovery = Not calculated
Mo 202.031†                3.5      0.2267 ug/L       0.28146      0.2267 ppb       0.28146 124.14%
   QC value within limits for Mo 202.031  Recovery = Not calculated
Na 589.592 Radial†        13.2      4.5667 ug/L       3.24119      4.5667 ppb       3.24119  70.97%
   QC value within limits for Na 589.592 Radial  Recovery = Not calculated
Ni 231.604†               -9.1     -0.2021 ug/L       0.24252     -0.2021 ppb       0.24252 119.97%
   QC value within limits for Ni 231.604  Recovery = Not calculated
P 214.914†                15.3      7.5050 ug/L       4.86341      7.5050 ppb       4.86341  64.80%
   QC value within limits for P 214.914  Recovery = Not calculated
Pb 220.353†                0.1      0.0090 ug/L       0.84939      0.0090 ppb       0.84939 >999.9%
   QC value within limits for Pb 220.353  Recovery = Not calculated
S 181.975 Axial†          -3.7     -4.2312 ug/L       5.25305     -4.2312 ppb       5.25305 124.15%
   QC value within limits for S 181.975 Axial  Recovery = Not calculated
Sb 206.836†                6.8      2.0963 ug/L       3.82944      2.0963 ppb       3.82944 182.68%
   QC value within limits for Sb 206.836  Recovery = Not calculated
Se 196.026†               -1.7     -0.8205 ug/L       1.49918     -0.8205 ppb       1.49918 182.73%
   QC value within limits for Se 196.026  Recovery = Not calculated
Si 251.611†               49.4      1.4005 ug/L       0.36020      1.4005 ppb       0.36020  25.72%
   QC value within limits for Si 251.611  Recovery = Not calculated
Sn 189.927†                7.2      1.0826 ug/L       0.72870      1.0826 ppb       0.72870  67.31%
   QC value within limits for Sn 189.927  Recovery = Not calculated
Sr 421.552†                2.9      0.0223 ug/L       0.22080      0.0223 ppb       0.22080 992.15%
   QC value within limits for Sr 421.552  Recovery = Not calculated
Ti 334.940†              -30.9     -0.0495 ug/L       0.08908     -0.0495 ppb       0.08908 180.04%
   QC value within limits for Ti 334.940  Recovery = Not calculated
Tl 190.801†               -2.4     -0.6627 ug/L       2.45485     -0.6627 ppb       2.45485 370.46%
   QC value within limits for Tl 190.801  Recovery = Not calculated
U 409.014†                46.9      1.3915 ug/L       2.76723      1.3915 ppb       2.76723 198.86%
   QC value within limits for U 409.014  Recovery = Not calculated
V 292.402†                38.3      0.2453 ug/L       0.27206      0.2453 ppb       0.27206 110.89%
   QC value within limits for V 292.402  Recovery = Not calculated
Zn 213.857†               33.3      0.2759 ug/L       0.15754      0.2759 ppb       0.15754  57.10%
   QC value within limits for Zn 213.857  Recovery = Not calculated
SiO2†                     56.1      3.4329 ug/L       0.99992      3.4329 ppb       0.99992  29.13%
   QC value within limits for SiO2  Recovery = Not calculated
All analyte(s) passed QC.
```

ICPMS#3 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, January 08, 2010 14:18:16
Sample Description:
Method File: C:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\default\Sample.5395
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	696.8	696.817	27.116	3.9
	Mg	24.0	9116.1	9116.111	367.382	4.0
	Co	58.9	28445.7	28445.703	629.882	2.2
	Rh	102.9	81431.9	81431.876	1275.640	1.6
	In	114.9	127699.0	127699.041	2908.063	2.3
	Pb	208.0	79085.7	79085.743	1167.960	1.5
>	Ba	137.9	109775.9	109775.905	1463.228	1.3
	Ba++	69.0	2264.0	0.021	0.000	1.9
>	Ce	139.9	142718.1	142718.053	1914.210	1.3
	CeO	155.9	3741.1	0.026	0.001	3.2
	Bkgd	220.0	3.7	3.700	0.570	15.4

Current Optimization File Data

Current Value	Description
1.04	Nebulizer Gas Flow
7.50	Lens Voltage
1450.00	ICP RF Power
-1812.00	Analog Stage Voltage
950.00	Pulse Stage Voltage
70.00	Discriminator Threshold
-7.00	AC Rod Offset
60.00	Service DAC 1
0.00	Quadrupole Rod Offset
0.00	Exit Lens
0.90	Makeup Gas Flow [MGAS]
0.90	DRC Mode MGAS

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	5.3	423.3
Co	59	21	5.8	14010.2
In	115	21	6.0	64721.3

ICPMS#3 Instrument Tuning Report

File Name: 100108.tun
File Path: C:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.1	601	2070	0.624
Be	9.0	9.0	2077	2080	0.672
Mg	24.0	24.0	5700	2130	0.648
Mg	25.0	25.0	5892	2040	0.672
Mg	26.0	25.9	6205	2150	0.733
Co	58.9	59.0	14197	2140	0.697
Rh	102.9	102.9	24902	2180	0.703
In	114.9	114.9	27824	2180	0.729
Ce	139.9	139.9	33915	2220	0.701
Pb	206.0	206.0	49992	2280	0.746
Pb	207.0	207.0	50271	2300	0.752
Pb	208.0	208.0	50474	2310	0.714
U	238.1	238.1	57828	2350	0.699

ICPMS#3 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, January 08, 2010 15:20:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\Blank.001

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		356662	
[	Fe	57		ug/L		2162	
[>	Ge	74		ug/L		161981	
[	As	75		ug/L		464	
[	Se	77		ug/L		2802	
[	Se	82		ug/L		-1	
[	Kr	83		ug/L		31	
[>	Lu	175		ug/L		237318	
[	Pb	208		ug/L		159	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Simple Linear	
Fe	57	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Lu	175	Simple Linear	
Pb	208	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45					
⌊	Fe	57					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, January 08, 2010 15:22:54
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\Standard 1.002

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		360004	360003.897
[	Fe	57	1000.000	ug/L	1.635	69423	0.187
[>	Ge	74		ug/L		165140	165140.023
[	As	75	10.000	ug/L	6.113	5194	0.029
[	Se	77		ug/L		3129	0.002
[	Se	82	10.000	ug/L	8.670	459	0.003
[	Kr	83		ug/L		29	-0.000
[>	Lu	175		ug/L		242206	242206.425
[	Pb	208	10.000	ug/L	0.382	125467	0.517

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45					
⌊	Fe	57					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Friday, January 08, 2010 15:25:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\Standard 2.003

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		344818	344818.139
[	Fe	57	**9996.790**	ug/L	0.104	626053	1.810
[>	Ge	74		ug/L		159338	159337.597
[	As	75	**100.026**	ug/L	0.959	47224	0.294
[	Se	77		ug/L		6041	0.021
[	Se	82	**99.998**	ug/L	1.448	4425	0.028
[	Kr	83		ug/L		34	0.000
[>	Lu	175		ug/L		239915	239915.239
[	Pb	208	**99.953**	ug/L	1.513	1184676	4.937

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45					
⌊	Fe	57					
⌈>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175					
⌊	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Friday, January 08, 2010 15:27:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 1.004

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		346940	346939.839
[	Fe	57	**5025.707**	ug/L	0.216	317729	0.910
[>	Ge	74		ug/L		159757	159756.664
[	As	75	**47.757**	ug/L	2.955	22851	0.140
[	Se	77		ug/L		4181	0.009
[	Se	82	**50.358**	ug/L	1.108	2234	0.014
[	Kr	83		ug/L		24	-0.000
[>	Lu	175		ug/L		236894	236894.435
[	Pb	208	**52.587**	ug/L	0.377	615535	2.598

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		97.3			
	Fe	57	100.514				
>	Ge	74		98.6			
	As	75	95.514				
	Se	77					
	Se	82	100.715				
	Kr	83					
>	Lu	175		99.8			
	Pb	208	105.175				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Friday, January 08, 2010 15:29:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 2.005

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		346164	346164.202
[	Fe	57	**2.591**	ug/L	68.189	2260	0.000
[>	Ge	74		ug/L		159246	159246.226
[	As	75	**-0.184**	ug/L	400.731	374	-0.001
[	Se	77		ug/L		2218	-0.003
[	Se	82	**0.049**	ug/L	508.334	1	0.000
[	Kr	83		ug/L		28	-0.000
[>	Lu	175		ug/L		232111	232111.185
[	Pb	208	**0.031**	ug/L	33.826	512	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		97.1			
⌊	Fe	57					
⌈>	Ge	74		98.3			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		97.8			
⌊	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Friday, January 08, 2010 15:31:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 3.006

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		355504	355504.154
[	Fe	57	**111.901**	ug/L	1.856	9358	0.020
[>	Ge	74		ug/L		163425	163424.949
[	As	75	**5.526**	ug/L	3.325	3117	0.016
[	Se	77		ug/L		2773	-0.000
[	Se	82	**5.814**	ug/L	8.965	263	0.002
[	Kr	83		ug/L		28	-0.000
[>	Lu	175		ug/L		242551	242550.535
[	Pb	208	**2.234**	ug/L	2.137	26940	0.110

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Sc	45		99.7			
[	Fe	57	111.901				
[>	Ge	74		100.9			
[	As	75	110.529				
[	Se	77					
[	Se	82	116.289				
[	Kr	83					
[>	Lu	175		102.2			
[	Pb	208	111.719				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Friday, January 08, 2010 15:33:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 4.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		282291	282290.847
[	Fe	57	**113803.330**	ug/L	2.242	5816217	20.600
[>	Ge	74		ug/L		134986	134985.509
[	As	75	**-0.036**	ug/L	1004.541	373	-0.000
[	Se	77		ug/L		2808	0.004
[	Se	82	**-1.215**	ug/L	32.573	-46	-0.000
[	Kr	83		ug/L		108	0.001
[>	Lu	175		ug/L		196242	196241.763
[	Pb	208	**0.201**	ug/L	1.281	2076	0.010

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		79.1			
	Fe	57	113.803				
>	Ge	74		83.3			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		82.7			
	Pb	208	100.310				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Friday, January 08, 2010 15:35:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 5.008

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		276229	276228.874
[	Fe	57	**114867.543**	ug/L	1.110	5745173	20.793
[>	Ge	74		ug/L		132528	132527.541
[	As	75	**20.601**	ug/L	5.637	8392	0.060
[	Se	77		ug/L		3474	0.009
[	Se	82	**20.174**	ug/L	0.821	742	0.006
[	Kr	83		ug/L		107	0.001
[>	Lu	175		ug/L		194704	194703.958
[	Pb	208	**21.476**	ug/L	0.357	206675	1.061

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		77.4			
⌊	Fe	57	114.868				
⌈>	Ge	74		81.8			
|	As	75	103.007				
|	Se	77					
|	Se	82	100.872				
⌊	Kr	83					
⌈>	Lu	175		82.0			
⌊	Pb	208	106.315				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
Sc 45 Int Std for QC	Sc	45	

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, January 08, 2010 15:38:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 6.009

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Sc	45		ug/L		327584	327584.186
	Fe	57	5198.703	ug/L	0.584	310228	0.941
>	Ge	74		ug/L		155129	155128.507
	As	75	49.193	ug/L	0.694	22839	0.144
	Se	77		ug/L		3986	0.008
	Se	82	48.461	ug/L	0.595	2088	0.013
	Kr	83		ug/L		29	-0.000
>	Lu	175		ug/L		226292	226291.722
	Pb	208	52.221	ug/L	0.353	583897	2.580

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		91.8			
	Fe	57	103.974				
>	Ge	74		95.8			
	As	75	98.386				
	Se	77					
	Se	82	96.922				
	Kr	83					
>	Lu	175		95.4			
	Pb	208	104.441				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, January 08, 2010 15:40:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 7.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		330442	330441.528
[	Fe	57	13.686	ug/L	11.040	2822	0.002
[>	Ge	74		ug/L		154873	154873.296
[	As	75	-0.052	ug/L	1289.991	418	-0.000
[	Se	77		ug/L		2575	-0.001
[	Se	82	0.007	ug/L	2516.808	-0	0.000
[	Kr	83		ug/L		32	0.000
[>	Lu	175		ug/L		227639	227638.891
[	Pb	208	0.034	ug/L	14.657	534	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		92.6			
	Fe	57					
>	Ge	74		95.6			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		95.9			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Friday, January 08, 2010 15:42:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 10.011

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		282106	282105.994
[	Fe	57	**56185.945**	ug/L	0.775	2870937	10.170
[>	Ge	74		ug/L		137676	137675.879
[	As	75	**928.768**	ug/L	0.739	375571	2.725
[	Se	77		ug/L		17920	0.113
[	Se	82	**496.820**	ug/L	1.562	18994	0.138
[	Kr	83		ug/L		62	0.000
[>	Lu	175		ug/L		207977	207976.951
[	Pb	208	**5268.051**	ug/L	1.774	54106909	260.230

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
[>	Sc	45		79.1			
[	Fe	57	112.372				
[>	Ge	74		85.0			
|	As	75	92.877				
|	Se	77					
|	Se	82	99.364				
[	Kr	83					
[>	Lu	175		87.6			
[	Pb	208	105.361				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
Sc 45 Int Std for QC	Sc	45
QC Std 10	Fe	57LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#3 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Friday, January 08, 2010 15:44:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 11.012

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		319775	319775.200
[	Fe	57	**5174.945**	ug/L	0.801	301488	0.937
[>	Ge	74		ug/L		152533	152533.323
[	As	75	**50.190**	ug/L	2.264	22896	0.147
[	Se	77		ug/L		3924	0.008
[	Se	82	**50.615**	ug/L	1.161	2144	0.014
[	Kr	83		ug/L		27	-0.000
[>	Lu	175		ug/L		231118	231117.912
[	Pb	208	**53.179**	ug/L	0.850	607227	2.627

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		89.7			
	Fe	57	103.499				
>	Ge	74		94.2			
	As	75	100.381				
	Se	77					
	Se	82	101.230				
	Kr	83					
>	Lu	175		97.4			
	Pb	208	106.358				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Friday, January 08, 2010 15:46:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 12.013

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		329686	329686.066
[	Fe	57	**7.330**	ug/L	11.906	2436	0.001
[>	Ge	74		ug/L		154967	154967.227
[	As	75	**0.521**	ug/L	31.622	682	0.002
[	Se	77		ug/L		2320	-0.002
[	Se	82	**0.139**	ug/L	164.692	5	0.000
[	Kr	83		ug/L		31	0.000
[>	Lu	175		ug/L		228597	228597.127
[	Pb	208	**0.157**	ug/L	6.485	1925	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		92.4			
⌊	Fe	57					
⌈>	Ge	74		95.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		96.3			
⌊	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, January 08, 2010 16:11:06
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 6.024

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		323715	323714.528
[	Fe	57	**5234.791**	ug/L	0.869	308696	0.948
[>	Ge	74		ug/L		154111	154111.029
[	As	75	**49.440**	ug/L	2.840	22796	0.145
[	Se	77		ug/L		4528	0.012
[	Se	82	**50.793**	ug/L	2.690	2173	0.014
[	Kr	83		ug/L		32	0.000
[>	Lu	175		ug/L		221073	221072.660
[	Pb	208	**51.867**	ug/L	0.684	566571	2.562

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		90.8			
⌊	Fe	57	104.696				
⌈>	Ge	74		95.1			
|	As	75	98.881				
|	Se	77					
|	Se	82	101.585				
⌊	Kr	83					
⌈>	Lu	175		93.2			
⌊	Pb	208	103.733				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, January 08, 2010 16:13:19
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 7.025

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		335416	335416.392
[	Fe	57	**7.646**	ug/L	30.137	2498	0.001
[>	Ge	74		ug/L		155720	155720.107
[	As	75	**0.584**	ug/L	88.753	713	0.002
[	Se	77		ug/L		2794	0.001
[	Se	82	**0.093**	ug/L	128.784	3	0.000
[	Kr	83		ug/L		30	0.000
[>	Lu	175		ug/L		219843	219843.067
[	Pb	208	**0.037**	ug/L	9.911	549	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		94.0			
	Fe	57					
>	Ge	74		96.1			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		92.6			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, January 08, 2010 16:28:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 6.031

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		315530	315529.651
[	Fe	57	5323.039	ug/L	0.835	305944	0.964
[>	Ge	74		ug/L		150190	150189.692
[	As	75	50.629	ug/L	1.559	22739	0.149
[	Se	77		ug/L		4397	0.012
[	Se	82	52.197	ug/L	1.942	2177	0.014
[	Kr	83		ug/L		29	-0.000
[>	Lu	175		ug/L		215595	215595.359
[	Pb	208	52.578	ug/L	0.442	560071	2.597

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		88.5			
	Fe	57	106.461				
>	Ge	74		92.7			
	As	75	101.257				
	Se	77					
	Se	82	104.395				
	Kr	83					
>	Lu	175		90.8			
	Pb	208	105.155				

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, January 08, 2010 16:31:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 7.032

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		329181	329180.992
[	Fe	57	5.907	ug/L	25.623	2347	0.001
[>	Ge	74		ug/L		154211	154211.425
[	As	75	0.404	ug/L	288.263	624	0.001
[	Se	77		ug/L		2787	0.001
[	Se	82	0.202	ug/L	163.493	8	0.000
[	Kr	83		ug/L		29	-0.000
[>	Lu	175		ug/L		218123	218122.894
[	Pb	208	0.040	ug/L	6.836	582	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		92.3			
	Fe	57					
>	Ge	74		95.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		91.9			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1202004440
Sample Date/Time: Friday, January 08, 2010 16:34:05
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 936815|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\1202004440.033

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		332276	332276.230
[	Fe	57	**14.719**	ug/L	5.375	2900	0.003
[>	Ge	74		ug/L		161153	161153.220
[	As	75	**2.688**	ug/L	43.583	1734	0.008
[	Se	77		ug/L		10610	0.049
[	Se	82	**0.060**	ug/L	229.964	2	0.000
[	Kr	83		ug/L		31	-0.000
[>	Lu	175		ug/L		221562	221561.561
[	Pb	208	**0.037**	ug/L	5.005	557	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		93.2			
	Fe	57					
>	Ge	74		99.5			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		93.4			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1202004441
Sample Date/Time: Friday, January 08, 2010 16:36:19
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 936815|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\1202004441.034

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		329482	329481.540
[	Fe	57	**2499.383**	ug/L	0.384	151062	0.452
[>	Ge	74		ug/L		161612	161611.661
[	As	75	**59.926**	ug/L	4.098	28884	0.176
[	Se	77		ug/L		12192	0.058
[	Se	82	**58.123**	ug/L	1.683	2609	0.016
[	Kr	83		ug/L		34	0.000
[>	Lu	175		ug/L		225263	225262.590
[	Pb	208	**59.628**	ug/L	1.972	663419	2.945

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		92.4			
⌊	Fe	57					
⌈>	Ge	74		99.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		94.9			
⌊	Pb	208					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 243493001
Sample Date/Time: Friday, January 08, 2010 16:38:35
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936815|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\243493001.035

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		326858	326857.962
[	Fe	57	**29.320**	ug/L	9.673	3716	0.005
[>	Ge	74		ug/L		159497	159497.042
[	As	75	**3.127**	ug/L	62.134	1917	0.009
[	Se	77		ug/L		9782	0.044
[	Se	82	**0.044**	ug/L	212.510	1	0.000
[	Kr	83		ug/L		35	0.000
[>	Lu	175		ug/L		221870	221869.806
[	Pb	208	**0.128**	ug/L	1.815	1549	0.006

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		91.6			
⌊	Fe	57					
⌈>	Ge	74		98.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		93.5			
⌊	Pb	208					

QC Out Of Limits

Measurement Type Analyte MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1202004442
Sample Date/Time: Friday, January 08, 2010 16:40:50
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 936815|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\1202004442.036

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		330232	330232.272
[	Fe	57	**33.264**	ug/L	1.264	3991	0.006
[>	Ge	74		ug/L		161031	161030.900
[	As	75	**3.735**	ug/L	44.151	2230	0.011
[	Se	77		ug/L		9474	0.042
[	Se	82	**-0.137**	ug/L	114.838	-7	-0.000
[	Kr	83		ug/L		37	0.000
[>	Lu	175		ug/L		222681	222681.004
[	Pb	208	**0.108**	ug/L	2.756	1342	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		92.6			
	Fe	57					
>	Ge	74		99.4			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		93.8			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1202004443
Sample Date/Time: Friday, January 08, 2010 16:43:07
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 936815|1|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\1202004443.037

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		326443	326443.245
[	Fe	57	**2650.189**	ug/L	2.484	158539	0.480
[>	Ge	74		ug/L		157406	157405.570
[	As	75	**98.734**	ug/L	0.418	46056	0.290
[	Se	77		ug/L		10110	0.047
[	Se	82	**23.704**	ug/L	3.814	1035	0.007
[	Kr	83		ug/L		36	0.000
[>	Lu	175		ug/L		222461	222460.655
[	Pb	208	**51.525**	ug/L	1.216	566374	2.545

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		91.5			
	Fe	57					
>	Ge	74		97.2			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		93.7			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: 1202004444
Sample Date/Time: Friday, January 08, 2010 16:45:24
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 936815|5|prb
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\1202004444.038

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		319068	319068.408
[	Fe	57	**12.923**	ug/L	25.000	2680	0.002
[>	Ge	74		ug/L		152039	152038.915
[	As	75	**1.823**	ug/L	49.807	1243	0.005
[	Se	77		ug/L		4252	0.011
[	Se	82	**0.173**	ug/L	82.272	7	0.000
[	Kr	83		ug/L		25	-0.000
[>	Lu	175		ug/L		216761	216760.559
[	Pb	208	**0.119**	ug/L	21.078	1423	0.006

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Sc	45Linear Thru Zero	
Fe	57Linear Thru Zero	1.0000
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Lu	175Linear Thru Zero	
Pb	208Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Sc	45		89.5			
	Fe	57					
>	Ge	74		93.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
>	Lu	175		91.3			
	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, January 08, 2010 16:47:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 6.039

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		316230	316229.765
[	Fe	57	**5219.267**	ug/L	0.334	300675	0.945
[>	Ge	74		ug/L		149973	149972.507
[	As	75	**50.241**	ug/L	4.770	22554	0.147
[	Se	77		ug/L		4484	0.013
[	Se	82	**50.978**	ug/L	2.156	2124	0.014
[	Kr	83		ug/L		31	0.000
[>	Lu	175		ug/L		220517	220516.799
[	Pb	208	**51.405**	ug/L	0.780	560063	2.539

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		88.7			
⌊	Fe	57	104.385				
⌈>	Ge	74		92.6			
|	As	75	100.482				
|	Se	77					
|	Se	82	101.957				
⌊	Kr	83					
⌈>	Lu	175		92.9			
⌊	Pb	208	102.811				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#3 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, January 08, 2010 16:49:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\misc.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 7.040

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Sc	45		ug/L		322647	322647.005
[	Fe	57	**7.169**	ug/L	15.172	2374	0.001
[>	Ge	74		ug/L		151636	151636.399
[	As	75	**0.077**	ug/L	1079.507	468	0.000
[	Se	77		ug/L		2851	0.002
[	Se	82	**0.031**	ug/L	351.022	1	0.000
[	Kr	83		ug/L		30	0.000
[>	Lu	175		ug/L		219394	219393.811
[	Pb	208	**0.034**	ug/L	4.992	511	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Sc	45	Linear Thru Zero	
Fe	57	Linear Thru Zero	1.0000
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Pb	208	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Sc	45		90.5			
⌊	Fe	57					
⌈>	Ge	74		93.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈>	Lu	175		92.4			
⌊	Pb	208					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Tuesday, January 05, 2010 16:41:24
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.1659
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	6765.8	6765.802	57.609	0.9
	Mg	24.0	68193.4	68193.393	823.453	1.2
	Co	58.9	127553.0	127553.017	1959.053	1.5
	Rh	102.9	238759.7	238759.748	1551.695	0.6
	In	114.9	307167.6	307167.618	2880.675	0.9
	Pb	208.0	331397.4	331397.405	4827.634	1.5
⌈>	Ba	137.9	301953.4	301953.363	1697.252	0.6
⌊	Ba++	69.0	8428.0	0.028	0.000	1.4
⌈>	Ce	139.9	377858.7	377858.702	5191.756	1.4
⌊	CeO	155.9	9907.6	0.026	0.000	0.9
	Bkgd	220.0	17.8	17.800	3.154	17.7

Current Optimization File Data

Current Value	Description
0.82	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	8.5	7374.2
Co	59	17	9.8	123046.6
In	115	17	10.8	306012.5

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	591	2065	0.593
Be	9.0	9.0	2049	2070	0.640
Mg	24.0	24.0	5689	2070	0.659
Mg	25.0	24.9	5917	2070	0.652
Mg	26.0	25.9	6164	2070	0.667
Co	58.9	58.9	14182	2105	0.638
Rh	102.9	102.9	24881	2165	0.626
In	114.9	114.9	27795	2185	0.624
Ce	139.9	139.9	33867	2200	0.643
Pb	206.0	206.0	49948	2270	0.672
Pb	207.0	207.0	50171	2235	0.691
Pb	208.0	208.0	50439	2260	0.719
U	238.1	238.0	57731	2275	0.731

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Wednesday, January 06, 2010 02:46:33
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\Blank.202

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7		ug/L		43	
|	Be	9		ug/L		17	
|	B	11		ug/L		700	
|	Na	23		ug/L		37718	
|	Mg	24		ug/L		3334	
|	Al	27		ug/L		7002	
|	P	31		ug/L		12891	
|	K	39		ug/L		936050	
|	Ca	43		ug/L		586	
\>	Sc	45		ug/L		1127850	
|	Ti	47		ug/L		644	
|	V	51		ug/L		23574	
|	Cr	52		ug/L		-3255	
|	Cr	53		ug/L		204543	
|	Mn	55		ug/L		1780	
|	Fe	57		ug/L		7715	
|	Co	59		ug/L		217	
|	Ni	60		ug/L		124	
|	Cu	63		ug/L		688	
⌊	Cu	65		ug/L		387	
⌈	Zn	66		ug/L		408	
|	Zn	67		ug/L		28487	
|	Zn	68		ug/L		3232	
\>	Ge	74		ug/L		679176	
|	As	75		ug/L		1164	
|	Se	77		ug/L		10862	
|	Se	82		ug/L		-67	
⌊	Kr	83		ug/L		174	
⌈	Sr	88		ug/L		443	
|	Y	89		ug/L		90	
|	Mo	98		ug/L		171	
|	Ag	107		ug/L		71	
|	Cd	111		ug/L		34	
|	Cd	114		ug/L		49	
\>	In	115		ug/L		371759	
|	Sn	120		ug/L		538	
|	Sb	121		ug/L		900	
⌊	Sb	123		ug/L		780	
⌈	Ba	135		ug/L		46	
|	Ba	137		ug/L		73	
|	Ho	165		ug/L		30	
\>	Lu	175		ug/L		673205	
|	Tl	205		ug/L		5660	
|	Pb	208		ug/L		584	
|	Bi	209		ug/L		99	
|	Th	232		ug/L		1150	
⌊	U	238		ug/L		592	

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9999
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9998
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9998
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Wednesday, January 06, 2010 02:52:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\Standard 1.203

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	10.000	ug/L	2.453	11607	0.010
	Be	9	10.000	ug/L	4.017	5268	0.005
	B	11	20.000	ug/L	2.629	13033	0.011
	Na	23	1000.000	ug/L	5.021	7291143	6.482
	Mg	24	1000.000	ug/L	9.629	4864184	4.342
	Al	27	1000.000	ug/L	7.587	7276085	6.496
	P	31	1000.000	ug/L	0.989	497609	0.433
	K	39	1000.000	ug/L	6.511	10304989	8.379
	Ca	43	1000.000	ug/L	2.415	21340	0.019
>	Sc	45		ug/L		1119346	1119345.974
	Ti	47	10.000	ug/L	1.855	11691	0.010
	V	51	10.000	ug/L	7.883	149286	0.112
	Cr	52	10.000	ug/L	0.494	97227	0.090
	Cr	53		ug/L		211242	0.007
	Mn	55	10.000	ug/L	0.661	155747	0.138
	Fe	57	1000.000	ug/L	1.410	305927	0.266
	Co	59	10.000	ug/L	2.283	110347	0.098
	Ni	60	10.000	ug/L	1.816	23373	0.021
	Cu	63		ug/L		55739	0.049
	Cu	65	10.000	ug/L	2.126	27505	0.024
	Zn	66	10.000	ug/L	3.129	18334	0.026
	Zn	67		ug/L		31277	0.003
	Zn	68		ug/L		17420	0.021
>	Ge	74		ug/L		689597	689597.055
	As	75	10.000	ug/L	1.263	22053	0.030
	Se	77		ug/L		12242	0.002
	Se	82	10.000	ug/L	0.788	1772	0.003
	Kr	83		ug/L		137	-0.000
	Sr	88	10.000	ug/L	1.647	219082	0.585
	Y	89		ug/L		126	0.000
	Mo	98	10.000	ug/L	3.416	57635	0.154
	Ag	107	10.000	ug/L	2.799	94341	0.252
	Cd	111	10.000	ug/L	3.739	22028	0.059
	Cd	114		ug/L		51819	0.139
>	In	115		ug/L		373726	373725.520
	Sn	120	10.000	ug/L	2.293	94364	0.251
	Sb	121	10.000	ug/L	5.309	73785	0.195
	Sb	123		ug/L		58326	0.154
	Ba	135		ug/L		26134	0.039
	Ba	137	10.000	ug/L	0.347	46094	0.069
	Ho	165		ug/L		25	-0.000
>	Lu	175		ug/L		667901	667901.305
	Tl	205	10.000	ug/L	1.982	370590	0.547
	Pb	208	10.000	ug/L	1.877	556542	0.832
	Bi	209		ug/L		162	0.000
	Th	232	10.000	ug/L	3.984	651395	0.974
	U	238	10.000	ug/L	1.334	690010	1.032

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Wednesday, January 06, 2010 02:58:43
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\Standard 2.204

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.026**	**ug/L**	3.794	117711	0.106
	Be	9	**100.006**	**ug/L**	1.895	52378	0.047
	B	11	**199.975**	**ug/L**	5.501	121313	0.109
	Na	23	**10008.638**	**ug/L**	8.998	78725425	71.006
	Mg	24	**9997.065**	**ug/L**	2.729	46761367	42.174
	Al	27	**9997.687**	**ug/L**	5.154	70385105	63.478
	P	31	**10000.858**	**ug/L**	2.461	4856463	4.369
	K	39	**9996.394**	**ug/L**	12.279	90468499	80.841
	Ca	43	**9994.186**	**ug/L**	1.713	194783	0.175
>	Sc	45		**ug/L**		1109031	1109030.837
	Ti	47	**99.989**	**ug/L**	1.438	108915	0.098
	V	51	**99.895**	**ug/L**	3.642	1150537	1.017
	Cr	52	**99.889**	**ug/L**	2.905	891203	0.807
	Cr	53		**ug/L**		273829	0.066
	Mn	55	**99.860**	**ug/L**	1.296	1338325	1.205
	Fe	57	**9981.218**	**ug/L**	1.871	2490408	2.239
	Co	59	**99.886**	**ug/L**	2.769	977936	0.882
	Ni	60	**99.939**	**ug/L**	1.052	217112	0.196
	Cu	63		**ug/L**		497236	0.448
	Cu	65	**99.931**	**ug/L**	2.644	251465	0.226
	Zn	66	**99.950**	**ug/L**	2.478	167788	0.247
	Zn	67		**ug/L**		52936	0.036
	Zn	68		**ug/L**		135207	0.195
>	Ge	74		**ug/L**		677092	677091.918
	As	75	**99.961**	**ug/L**	1.971	198364	0.291
	Se	77		**ug/L**		22431	0.017
	Se	82	**99.954**	**ug/L**	1.855	17189	0.025
	Kr	83		**ug/L**		175	0.000
	Sr	88	**99.863**	**ug/L**	0.333	1852863	5.138
	Y	89		**ug/L**		277	0.001
	Mo	98	**99.977**	**ug/L**	1.061	541897	1.503
	Ag	107	**99.916**	**ug/L**	0.358	838245	2.325
	Cd	111	**99.974**	**ug/L**	1.948	206785	0.574
	Cd	114		**ug/L**		479113	1.329
>	In	115		**ug/L**		360509	360508.790
	Sn	120	**99.918**	**ug/L**	2.584	836626	2.320
	Sb	121	**99.989**	**ug/L**	5.476	695847	1.928
	Sb	123		**ug/L**		557419	1.544
	Ba	135		**ug/L**		243622	0.369
	Ba	137	**99.936**	**ug/L**	1.036	426875	0.647
	Ho	165		**ug/L**		43	0.000
>	Lu	175		**ug/L**		659610	659610.243
	Tl	205	**99.781**	**ug/L**	1.466	2956714	4.475
	Pb	208	**99.752**	**ug/L**	1.087	4389205	6.653
	Bi	209		**ug/L**		517	0.001
	Th	232	**99.761**	**ug/L**	4.248	5169984	7.839
	U	238	**99.777**	**ug/L**	1.819	5553520	8.420

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Wednesday, January 06, 2010 03:04:47
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 1.205

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**54.042**	**ug/L**	8.047	63969	0.057
	Be	9	**53.068**	**ug/L**	2.326	27960	0.025
	B	11	**108.188**	**ug/L**	1.647	66350	0.059
	Na	23	**4462.712**	**ug/L**	11.580	35325511	31.661
	Mg	24	**4712.309**	**ug/L**	4.334	22169732	19.880
	Al	27	**5328.692**	**ug/L**	10.894	37720195	33.833
	P	31	**5175.384**	**ug/L**	0.815	2534012	2.261
	K	39	**4957.408**	**ug/L**	3.608	45625888	40.090
	Ca	43	**5217.019**	**ug/L**	0.843	102541	0.091
>	Sc	45		ug/L		1115218	1115217.577
	Ti	47	**51.077**	**ug/L**	1.222	56263	0.050
	V	51	**52.986**	**ug/L**	1.838	624818	0.539
	Cr	52	**53.617**	**ug/L**	1.567	479687	0.433
	Cr	53		ug/L		221273	0.017
	Mn	55	**55.955**	**ug/L**	2.450	754859	0.675
	Fe	57	**5393.475**	**ug/L**	1.626	1356937	1.210
	Co	59	**52.605**	**ug/L**	1.261	518134	0.464
	Ni	60	**53.028**	**ug/L**	1.818	115908	0.104
	Cu	63		ug/L		266647	0.238
	Cu	65	**52.754**	**ug/L**	0.755	133704	0.120
	Zn	66	**54.158**	**ug/L**	2.560	90343	0.134
	Zn	67		ug/L		38997	0.016
	Zn	68		ug/L		73976	0.105
>	Ge	74		ug/L		671361	671360.515
	As	75	**50.762**	**ug/L**	1.613	100435	0.148
	Se	77		ug/L		15226	0.007
	Se	82	**52.368**	**ug/L**	1.322	8900	0.013
	Kr	83		ug/L		152	-0.000
	Sr	88	**55.782**	**ug/L**	2.858	1057050	2.870
	Y	89		ug/L		155	0.000
	Mo	98	**50.818**	**ug/L**	3.700	281330	0.764
	Ag	107	**51.895**	**ug/L**	2.609	444614	1.208
	Cd	111	**51.940**	**ug/L**	1.903	109747	0.298
	Cd	114		ug/L		254205	0.690
>	In	115		ug/L		368254	368254.106
	Sn	120	**52.944**	**ug/L**	2.104	453034	1.229
	Sb	121	**52.372**	**ug/L**	4.959	372661	1.010
	Sb	123		ug/L		297785	0.807
	Ba	135		ug/L		129014	0.193
	Ba	137	**51.511**	**ug/L**	1.877	223376	0.334
	Ho	165		ug/L		63	0.000
>	Lu	175		ug/L		669600	669599.628
	Tl	205	**51.596**	**ug/L**	0.567	1554978	2.314
	Pb	208	**56.701**	**ug/L**	2.720	2532300	3.782
	Bi	209		ug/L		575	0.001
	Th	232	**52.849**	**ug/L**	2.028	2781117	4.153
	U	238	**55.051**	**ug/L**	1.285	3110792	4.645

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	108.084				
|	Be	9	106.135				
|	B	11	108.188				
|	Na	23	89.254				
|	Mg	24	94.246				
|	Al	27	105.519				
|	P	31	103.508				
|	K	39	99.148				
|	Ca	43	104.340				
|>	Sc	45			98.9		
|	Ti	47	102.154				
|	V	51	105.973				
|	Cr	52	107.234				
|	Cr	53					
|	Mn	55	111.910				
|	Fe	57	107.870				
|	Co	59	105.210				
|	Ni	60	106.056				
|	Cu	63					
⌊	Cu	65	105.508				
⌈	Zn	66	108.316				
|	Zn	67					
|	Zn	68					
|>	Ge	74			98.8		
|	As	75	101.524				
|	Se	77					
|	Se	82	104.737				
⌊	Kr	83					
⌈	Sr	88	111.565				
|	Y	89					
|	Mo	98	101.637				
|	Ag	107	103.791				
|	Cd	111	103.880				
|	Cd	114					
|>	In	115			99.1		
|	Sn	120	105.888				
|	Sb	121	104.744				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	103.021				
|	Ho	165					
|>	Lu	175			99.5		
|	Tl	205	103.193				
|	Pb	208	113.401				
|	Bi	209					
|	Th	232	105.699				
⌊	U	238	110.102				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Na	23	ICV is out of limits (+/- 10%)
QC Std 1	Mn	55	ICV is out of limits (+/- 10%)
QC Std 1	Sr	88	ICV is out of limits (+/- 10%)
QC Std 1	Pb	208	ICV is out of limits (+/- 10%)
QC Std 1	U	238	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Wednesday, January 06, 2010 03:10:53
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 2.206

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.020**	**ug/L**	32.422	66	0.000
	Be	9	**0.011**	**ug/L**	147.046	23	0.000
	B	11	**2.492**	**ug/L**	22.435	2223	0.001
	Na	23	**1.531**	**ug/L**	58.900	49754	0.011
	Mg	24	**1.840**	**ug/L**	76.662	12006	0.008
	Al	27	**1.216**	**ug/L**	45.179	15676	0.008
	P	31	**1.886**	**ug/L**	82.963	13770	0.001
	K	39	**5.037**	**ug/L**	124.977	978471	0.041
	Ca	43	**-0.396**	**ug/L**	333.990	576	-0.000
>	Sc	45		**ug/L**		1123796	1123796.206
	Ti	47	**0.212**	**ug/L**	138.660	875	0.000
	V	51	**-0.178**	**ug/L**	219.697	21433	-0.002
	Cr	52	**-0.120**	**ug/L**	26.070	-4336	-0.001
	Cr	53		**ug/L**		183856	-0.018
	Mn	55	**-0.002**	**ug/L**	74.193	1744	-0.000
	Fe	57	**-0.294**	**ug/L**	170.151	7613	-0.000
	Co	59	**0.012**	**ug/L**	29.557	335	0.000
	Ni	60	**0.012**	**ug/L**	14.898	150	0.000
	Cu	63		**ug/L**		950	0.000
	Cu	65	**0.003**	**ug/L**	57.252	393	0.000
	Zn	66	**-0.016**	**ug/L**	99.592	390	-0.000
	Zn	67		**ug/L**		26305	-0.004
	Zn	68		**ug/L**		3072	-0.000
>	Ge	74		**ug/L**		694386	694386.032
	As	75	**-0.037**	**ug/L**	343.039	1117	-0.000
	Se	77		**ug/L**		8910	-0.003
	Se	82	**0.083**	**ug/L**	132.419	-54	0.000
	Kr	83		**ug/L**		177	-0.000
	Sr	88	**0.012**	**ug/L**	7.044	663	0.001
	Y	89		**ug/L**		96	0.000
	Mo	98	**0.092**	**ug/L**	16.555	680	0.001
	Ag	107	**0.013**	**ug/L**	32.093	181	0.000
	Cd	111	**0.008**	**ug/L**	39.953	50	0.000
	Cd	114		**ug/L**		96	0.000
>	In	115		**ug/L**		369437	369437.234
	Sn	120	**0.117**	**ug/L**	16.720	1540	0.003
	Sb	121	**0.859**	**ug/L**	16.344	7027	0.017
	Sb	123		**ug/L**		5670	0.013
	Ba	135		**ug/L**		70	0.000
	Ba	137	**0.008**	**ug/L**	31.127	108	0.000
	Ho	165		**ug/L**		29	-0.000
>	Lu	175		**ug/L**		678461	678461.339
	Tl	205	**0.064**	**ug/L**	71.824	7649	0.003
	Pb	208	**0.012**	**ug/L**	12.908	1148	0.001
	Bi	209		**ug/L**		93	-0.000
	Th	232	**0.080**	**ug/L**	20.958	5425	0.006
	U	238	**0.015**	**ug/L**	21.696	1465	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		99.6			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		102.2			
|	As	75					
|	Se	77					
|	Se	82.					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		99.4			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		100.8			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Wednesday, January 06, 2010 03:17:00
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 3.207

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.899**	**ug/L**	6.964	12999	0.012
	Be	9	**0.583**	**ug/L**	3.220	325	0.000
	B	11	**16.982**	**ug/L**	3.534	11059	0.009
	Na	23	**261.687**	**ug/L**	12.148	2120373	1.857
	Mg	24	**20.451**	**ug/L**	20.586	100024	0.086
	Al	27	**39.929**	**ug/L**	3.899	291276	0.254
	P	31	**58.511**	**ug/L**	4.034	41483	0.026
	K	39	**296.760**	**ug/L**	6.126	3622656	2.400
	Ca	43	**224.847**	**ug/L**	0.878	5002	0.004
>	Sc	45		**ug/L**		1121449	1121449.245
	Ti	47	**8.634**	**ug/L**	2.184	10096	0.008
	V	51	**11.522**	**ug/L**	3.315	154959	0.117
	Cr	52	**11.219**	**ug/L**	0.724	98376	0.091
	Cr	53		**ug/L**		202809	-0.001
	Mn	55	**6.213**	**ug/L**	2.185	85862	0.075
	Fe	57	**128.885**	**ug/L**	2.810	40094	0.029
	Co	59	**1.170**	**ug/L**	1.691	11803	0.010
	Ni	60	**2.301**	**ug/L**	2.038	5175	0.005
	Cu	63		**ug/L**		6797	0.005
	Cu	65	**1.187**	**ug/L**	1.178	3401	0.003
	Zn	66	**11.616**	**ug/L**	4.067	19810	0.029
	Zn	67		**ug/L**		30749	0.004
	Zn	68		**ug/L**		17930	0.022
>	Ge	74		**ug/L**		675365	675365.425
	As	75	**5.818**	**ug/L**	2.251	12605	0.017
	Se	77		**ug/L**		10027	-0.001
	Se	82	**5.531**	**ug/L**	4.486	886	0.001
	Kr	83		**ug/L**		147	-0.000
	Sr	88	**12.458**	**ug/L**	3.116	238849	0.641
	Y	89		**ug/L**		98	0.000
	Mo	98	**0.624**	**ug/L**	2.527	3661	0.009
	Ag	107	**1.109**	**ug/L**	5.697	9666	0.026
	Cd	111	**1.086**	**ug/L**	1.520	2351	0.006
	Cd	114		**ug/L**		5374	0.014
>	In	115		**ug/L**		372067	372067.124
	Sn	120	**5.714**	**ug/L**	3.941	49867	0.133
	Sb	121	**3.377**	**ug/L**	7.622	25113	0.065
	Sb	123		**ug/L**		20231	0.052
	Ba	135		**ug/L**		5468	0.008
	Ba	137	**2.182**	**ug/L**	2.669	9574	0.014
	Ho	165		**ug/L**		25	-0.000
>	Lu	175		**ug/L**		672756	672756.308
	Tl	205	**1.201**	**ug/L**	2.259	41897	0.054
	Pb	208	**2.536**	**ug/L**	0.824	114358	0.169
	Bi	209		**ug/L**		122	0.000
	Th	232	**1.347**	**ug/L**	1.598	72357	0.106
	U	238	**0.278**	**ug/L**	3.427	16356	0.023

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	108.990				
|	Be	9	116.641				
|	B	11	113.210				
|	Na	23	104.675				
|	Mg	24	136.340				
|	Al	27	133.098				
|	P	31	117.023				
|	K	39	98.920				
|	Ca	43	112.423				
|>	Sc	45		99.4			
|	Ti	47	86.339				
|	V	51	115.218				
|	Cr	52	112.189				
|	Cr	53					
|	Mn	55	124.253				
|	Fe	57	128.885				
|	Co	59	117.030				
|	Ni	60	115.027				
|	Cu	63					
⌊	Cu	65	118.684				
⌈	Zn	66	116.163				
|	Zn	67					
|	Zn	68					
|>	Ge	74		99.4			
|	As	75	116.362				
|	Se	77					
|	Se	82	110.624				
⌊	Kr	83					
⌈	Sr	88	124.579				
|	Y	89					
|	Mo	98	124.837				
|	Ag	107	110.903				
|	Cd	111	108.566				
|	Cd	114					
|>	In	115		100.1			
|	Sn	120	114.278				
|	Sb	121	112.555				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	109.087				
|	Ho	165					
|>	Lu	175		99.9			
|	Tl	205	120.142				
|	Pb	208	126.787				
|	Bi	209					
|	Th	232	134.726				
⌊	U	238	138.900				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Mg	24	CRDL is out of limits
QC Std 3	Al	27	CRDL is out of limits
QC Std 3	Th	232	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Wednesday, January 06, 2010 03:23:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 4.208

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.273**	**ug/L**	10.738	335	0.000
	Be	9	**0.087**	**ug/L**	26.445	57	0.000
	B	11	**1.408**	**ug/L**	8.158	1418	0.001
	Na	23	**86556.545**	**ug/L**	6.170	627448369	614.076
	Mg	24	**101037.663**	**ug/L**	1.204	435756322	426.244
	Al	27	**97005.971**	**ug/L**	4.114	629382834	615.918
	P	31	**96838.470**	**ug/L**	3.670	43242866	42.304
	K	39	**S**	**ug/L**	S	S	S
	Ca	43	**90300.016**	**ug/L**	1.752	1618103	1.582
>	Sc	45		**ug/L**		1022436	1022435.679
	Ti	47	**1315.953**	**ug/L**	2.619	1314204	1.285
	V	51	**-0.564**	**ug/L**	14.987	15512	-0.006
	Cr	52	**2.504**	**ug/L**	1.558	17724	0.020
	Cr	53		**ug/L**		146596	-0.038
	Mn	55	**6.286**	**ug/L**	3.074	79153	0.076
	Fe	57	**97365.883**	**ug/L**	2.601	22332284	21.843
	Co	59	**0.388**	**ug/L**	1.543	3695	0.003
	Ni	60	**3.316**	**ug/L**	3.615	6746	0.006
	Cu	63		**ug/L**		10247	0.009
	Cu	65	**3.430**	**ug/L**	1.589	8297	0.008
	Zn	66	**4.322**	**ug/L**	0.757	6962	0.011
	Zn	67		**ug/L**		21685	-0.007
	Zn	68		**ug/L**		3484	0.001
>	Ge	74		**ug/L**		616366	616366.311
	As	75	**-0.282**	**ug/L**	184.590	551	-0.001
	Se	77		**ug/L**		12265	0.004
	Se	82	**-1.084**	**ug/L**	20.340	-231	-0.000
	Kr	83		**ug/L**		472	0.001
	Sr	88	**1.315**	**ug/L**	2.335	22784	0.068
	Y	89		**ug/L**		778	0.002
	Mo	98	**1988.053**	**ug/L**	3.452	9888234	29.882
	Ag	107	**0.111**	**ug/L**	11.517	922	0.003
	Cd	111	**0.537**	**ug/L**	14.512	1050	0.003
	Cd	114		**ug/L**		16124	0.049
>	In	115		**ug/L**		330988	330988.149
	Sn	120	**0.141**	**ug/L**	4.612	1561	0.003
	Sb	121	**0.290**	**ug/L**	12.675	2652	0.006
	Sb	123		**ug/L**		2072	0.004
	Ba	135		**ug/L**		1558	0.003
	Ba	137	**0.676**	**ug/L**	3.250	2697	0.004
	Ho	165		**ug/L**		1526	0.002
>	Lu	175		**ug/L**		600955	600954.555
	Tl	205	**-0.061**	**ug/L**	9.315	3407	-0.003
	Pb	208	**0.194**	**ug/L**	0.479	8307	0.013
	Bi	209		**ug/L**		1626	0.003
	Th	232	**0.068**	**ug/L**	28.353	4227	0.005
	U	238	**-0.002**	**ug/L**	20.285	436	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23	86.557				
|	Mg	24	101.038				
|	Al	27	97.006				
|	P	31	96.838				
|	K	39	S				
|	Ca	43	90.300				
|>	Sc	45		90.7			
|	Ti	47	65.798				
|	V	51					
|	Cr	52	67.682				
|	Cr	53					
|	Mn	55	108.372				
|	Fe	57	97.366				
|	Co	59	155.019				
|	Ni	60	122.797				
|	Cu	63					
⌊	Cu	65	118.289				
⌈	Zn	66	120.056				
|	Zn	67					
|	Zn	68					
|>	Ge	74		90.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88	109.569				
|	Y	89					
|	Mo	98	99.403				
|	Ag	107					
|	Cd	111	134.276				
|	Cd	114					
|>	In	115		89.0			
|	Sn	120					
|	Sb	121	289.629				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	100.952				
|	Ho	165					
|>	Lu	175		89.3			
|	Tl	205					
|	Pb	208	97.119				
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	K	39	ICSA is out of limits
QC Std 4	Ti	47	ICSA is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Wednesday, January 06, 2010 03:29:11
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 5.209

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**29.589**	**ug/L**	5.546	31787	0.031
	Be	9	**24.135**	**ug/L**	3.233	11548	0.011
	B	11	**23.014**	**ug/L**	2.729	13304	0.013
	Na	23	**84062.753**	**ug/L**	2.903	603729811	596.384
	Mg	24	**101904.384**	**ug/L**	4.752	435011121	429.900
	Al	27	**98567.881**	**ug/L**	4.140	633465948	625.835
	P	31	**96711.604**	**ug/L**	0.532	42775994	42.249
	K	39	**90883.535**	**ug/L**	2.824	744896474	734.973
	Ca	43	**89618.799**	**ug/L**	0.805	1590260	1.571
>	Sc	45		**ug/L**		1012177	1012176.827
	Ti	47	**1313.629**	**ug/L**	0.709	1299125	1.283
	V	51	**21.169**	**ug/L**	1.454	239268	0.215
	Cr	52	**23.152**	**ug/L**	0.414	186341	0.187
	Cr	53		**ug/L**		158438	-0.025
	Mn	55	**27.974**	**ug/L**	1.672	343332	0.338
	Fe	57	**99284.149**	**ug/L**	2.009	22549555	22.274
	Co	59	**20.744**	**ug/L**	2.261	185551	0.183
	Ni	60	**22.844**	**ug/L**	0.330	45385	0.045
	Cu	63		**ug/L**		97811	0.096
	Cu	65	**21.973**	**ug/L**	2.483	50740	0.050
	Zn	66	**23.022**	**ug/L**	2.369	35455	0.057
	Zn	67		**ug/L**		25931	0.000
	Zn	68		**ug/L**		26410	0.038
>	Ge	74		**ug/L**		616045	616045.264
	As	75	**20.527**	**ug/L**	0.835	37902	0.060
	Se	77		**ug/L**		14551	0.008
	Se	82	**19.145**	**ug/L**	2.230	2947	0.005
	Kr	83		**ug/L**		464	0.000
	Sr	88	**24.175**	**ug/L**	0.714	407746	1.244
	Y	89		**ug/L**		805	0.002
	Mo	98	**2019.738**	**ug/L**	1.561	9941711	30.359
	Ag	107	**19.888**	**ug/L**	0.734	151612	0.463
	Cd	111	**19.557**	**ug/L**	1.618	36776	0.112
	Cd	114		**ug/L**		98929	0.302
>	In	115		**ug/L**		327481	327480.528
	Sn	120	**21.304**	**ug/L**	0.573	162440	0.495
	Sb	121	**23.386**	**ug/L**	1.462	148490	0.451
	Sb	123		**ug/L**		115492	0.351
	Ba	135		**ug/L**		44112	0.074
	Ba	137	**19.841**	**ug/L**	0.329	77020	0.128
	Ho	165		**ug/L**		1454	0.002
>	Lu	175		**ug/L**		599017	599016.983
	Tl	205	**19.944**	**ug/L**	1.070	540740	0.894
	Pb	208	**21.454**	**ug/L**	1.196	857643	1.431
	Bi	209		**ug/L**		2277	0.004
	Th	232	**22.618**	**ug/L**	0.480	1065591	1.777
	U	238	**22.658**	**ug/L**	0.673	1145871	1.912

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	147.946				
|	Be	9	120.676				
|	B	11	115.072				
|	Na	23	84.063				
|	Mg	24	101.904				
|	Al	27	98.568				
|	P	31	96.712				
|	K	39	90.884				
|	Ca	43	89.619				
|>	Sc	45		89.7			
|	Ti	47	65.681				
|	V	51	105.844				
|	Cr	52	97.688				
|	Cr	53					
|	Mn	55	108.427				
|	Fe	57	99.284				
|	Co	59	102.441				
|	Ni	60	100.634				
|	Cu	63					
⌊	Cu	65	95.952				
⌈	Zn	66	97.552				
|	Zn	67					
|	Zn	68					
|>	Ge	74		90.7			
|	As	75	102.635				
|	Se	77					
|	Se	82	95.723				
⌊	Kr	83					
⌈	Sr	88	114.031				
|	Y	89					
|	Mo	98	100.987				
|	Ag	107	99.440				
|	Cd	111	95.870				
|	Cd	114					
|>	In	115		88.1			
|	Sn	120	106.522				
|	Sb	121	116.346				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	95.988				
|	Ho	165					
|>	Lu	175		89.0			
|	Tl	205	99.720				
|	Pb	208	106.208				
|	Bi	209					
|	Th	232	113.091				
⌊	U	238	113.292				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	Li	7	ICSAB is out of limits
QC Std 5	Be	9	ICSAB is out of limits
QC Std 5	Ti	47	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Wednesday, January 06, 2010 03:35:18
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 6.210

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**60.588**	**ug/L**	5.072	72441	0.064
	Be	9	**55.372**	**ug/L**	1.743	29479	0.026
	B	11	**106.768**	**ug/L**	3.559	66167	0.058
	Na	23	**4263.558**	**ug/L**	8.263	34147994	30.248
	Mg	24	**4909.750**	**ug/L**	4.879	23337019	20.713
	Al	27	**5219.088**	**ug/L**	6.829	37331327	33.137
	P	31	**4853.813**	**ug/L**	1.567	2402353	2.120
	K	39	**4600.602**	**ug/L**	13.293	42884418	37.205
	Ca	43	**4950.624**	**ug/L**	1.815	98360	0.087
>	Sc	45		**ug/L**		1127059	1127059.326
	Ti	47	**48.070**	**ug/L**	1.776	53553	0.047
	V	51	**50.421**	**ug/L**	2.818	601904	0.513
	Cr	52	**50.674**	**ug/L**	3.759	457840	0.409
	Cr	53		**ug/L**		203752	-0.001
	Mn	55	**52.004**	**ug/L**	1.279	709168	0.628
	Fe	57	**5130.771**	**ug/L**	1.675	1304804	1.151
	Co	59	**50.198**	**ug/L**	2.396	499611	0.443
	Ni	60	**50.292**	**ug/L**	3.755	111076	0.098
	Cu	63		**ug/L**		258259	0.229
	Cu	65	**49.722**	**ug/L**	1.982	127397	0.113
	Zn	66	**51.152**	**ug/L**	1.556	87597	0.127
	Zn	67		**ug/L**		36492	0.011
	Zn	68		**ug/L**		70718	0.098
>	Ge	74		**ug/L**		689008	689007.862
	As	75	**47.533**	**ug/L**	1.563	96623	0.139
	Se	77		**ug/L**		14261	0.005
	Se	82	**48.092**	**ug/L**	1.564	8383	0.012
	Kr	83		**ug/L**		137	-0.000
	Sr	88	**52.129**	**ug/L**	2.246	994367	2.682
	Y	89		**ug/L**		154	0.000
	Mo	98	**48.616**	**ug/L**	0.897	270953	0.731
	Ag	107	**49.207**	**ug/L**	0.999	424350	1.145
	Cd	111	**48.080**	**ug/L**	2.360	102248	0.276
	Cd	114		**ug/L**		240617	0.649
>	In	115		**ug/L**		370561	370560.753
	Sn	120	**50.072**	**ug/L**	0.961	431292	1.162
	Sb	121	**50.688**	**ug/L**	2.660	363169	0.978
	Sb	123		**ug/L**		287619	0.774
	Ba	135		**ug/L**		118447	0.174
	Ba	137	**47.585**	**ug/L**	2.753	210016	0.308
	Ho	165		**ug/L**		69	0.000
>	Lu	175		**ug/L**		681576	681575.940
	Ti	205	**47.320**	**ug/L**	1.981	1451833	2.122
	Pb	208	**51.976**	**ug/L**	1.185	2363398	3.467
	Bi	209		**ug/L**		546	0.001
	Th	232	**48.345**	**ug/L**	2.739	2589659	3.799
	U	238	**50.080**	**ug/L**	1.112	2880709	4.226

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	121.175				
|	Be	9	110.744				
|	B	11	106.768				
|	Na	23	85.271				
|	Mg	24	98.195				
|	Al	27	103.348				
|	P	31	97.076				
|	K	39	92.012				
|	Ca	43	99.012				
|>	Sc	45		99.9			
|	Ti	47	96.140				
|	V	51	100.843				
|	Cr	52	101.347				
|	Cr	53					
|	Mn	55	104.008				
|	Fe	57	102.615				
|	Co	59	100.396				
|	Ni	60	100.584				
|	Cu	63					
⌊	Cu	65	99.443				
⌈	Zn	66	102.304				
|	Zn	67					
|	Zn	68					
|>	Ge	74		101.4			
|	As	75	95.066				
|	Se	77					
|	Se	82	96.184				
⌊	Kr	83					
⌈	Sr	88	104.259				
|	Y	89					
|	Mo	98	97.233				
|	Ag	107	98.414				
|	Cd	111	96.160				
|	Cd	114					
|>	In	115		99.7			
|	Sn	120	100.143				
|	Sb	121	101.376				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	95.169				
|	Ho	165					
|>	Lu	175		101.2			
|	Tl	205	94.641				
|	Pb	208	103.952				
|	Bi	209					
|	Th	232	96.690				
⌊	U	238	100.160				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Be	9	CCV is out of limits (+/- 10%)
QC Std 6	Na	23	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Wednesday, January 06, 2010 03:41:25
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 7.211

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.035**	**ug/L**	17.835	84	0.000
	Be	9	**0.012**	**ug/L**	120.471	23	0.000
	B	11	**1.833**	**ug/L**	27.589	1815	0.001
	Na	23	**4.945**	**ug/L**	16.741	76874	0.035
	Mg	24	**2.899**	**ug/L**	70.149	17012	0.012
	Al	27	**3.803**	**ug/L**	16.186	34041	0.024
	P	31	**1.134**	**ug/L**	136.940	13373	0.000
	K	39	**-2.912**	**ug/L**	36.775	904418	-0.024
	Ca	43	**2.373**	**ug/L**	66.117	629	0.000
>	Sc	45		**ug/L**		1121590	1121589.774
	Ti	47	**0.244**	**ug/L**	55.123	908	0.000
	V	51	**-0.366**	**ug/L**	19.446	19259	-0.004
	Cr	52	**-0.086**	**ug/L**	44.523	-4020	-0.001
	Cr	53		**ug/L**		174228	-0.026
	Mn	55	**-0.008**	**ug/L**	50.660	1661	-0.000
	Fe	57	**1.799**	**ug/L**	41.037	8124	0.000
	Co	59	**0.003**	**ug/L**	92.315	248	0.000
	Ni	60	**0.008**	**ug/L**	53.795	140	0.000
	Cu	63		**ug/L**		1199	0.000
	Cu	65	**0.027**	**ug/L**	40.506	452	0.000
	Zn	66	**-0.005**	**ug/L**	280.449	405	-0.000
	Zn	67		**ug/L**		24456	-0.006
	Zn	68		**ug/L**		2586	-0.001
>	Ge	74		**ug/L**		686716	686715.793
	As	75	**0.028**	**ug/L**	46.546	1234	0.000
	Se	77		**ug/L**		8571	-0.004
	Se	82	**0.247**	**ug/L**	28.595	-25	0.000
	Kr	83		**ug/L**		149	-0.000
	Sr	88	**0.008**	**ug/L**	38.660	606	0.000
	Y	89		**ug/L**		81	-0.000
	Mo	98	**0.230**	**ug/L**	9.101	1473	0.003
	Ag	107	**0.012**	**ug/L**	16.251	176	0.000
	Cd	111	**0.008**	**ug/L**	37.143	52	0.000
	Cd	114		**ug/L**		91	0.000
>	In	115		**ug/L**		376348	376347.956
	Sn	120	**0.093**	**ug/L**	23.484	1358	0.002
	Sb	121	**0.416**	**ug/L**	21.140	3934	0.008
	Sb	123		**ug/L**		3086	0.006
	Ba	135		**ug/L**		66	0.000
	Ba	137	**0.005**	**ug/L**	52.984	93	0.000
	Ho	165		**ug/L**		32	0.000
>	Lu	175		**ug/L**		677946	677945.512
	Tl	205	**0.206**	**ug/L**	31.784	11956	0.009
	Pb	208	**0.011**	**ug/L**	14.672	1095	0.001
	Bi	209		**ug/L**		88	-0.000
	Th	232	**0.088**	**ug/L**	12.667	5859	0.007
	U	238	**0.015**	**ug/L**	8.547	1442	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
>	Sc	45		99.4			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
>	Ge	74		101.1			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
>	In	115		101.2			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
>	Lu	175		100.7			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Wednesday, January 06, 2010 03:47:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 10.212

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**1257.603**	**ug/L**	4.416	1397819	1.333
	Be	9	**1185.405**	**ug/L**	2.301	586440	0.560
	B	11	**0.855**	**ug/L**	1.440	1138	0.000
	Na	23	**44940.464**	**ug/L**	3.391	334078408	318.830
	Mg	24	**54256.310**	**ug/L**	5.159	239768442	228.889
	Al	27	**52699.267**	**ug/L**	2.537	350564489	334.602
	P	31	**26294.619**	**ug/L**	1.527	12048172	11.487
	K	39	**51371.407**	**ug/L**	1.573	436285317	415.439
	Ca	43	**48475.810**	**ug/L**	0.217	890813	0.850
>	Sc	45		**ug/L**		1047950	1047949.567
	Ti	47	**50.557**	**ug/L**	2.072	52342	0.049
	V	51	**1009.027**	**ug/L**	2.629	10784686	10.272
	Cr	52	**966.961**	**ug/L**	1.473	8180505	7.809
	Cr	53		**ug/L**		1130735	0.898
	Mn	55	**994.490**	**ug/L**	1.444	12579544	12.004
	Fe	57	**51727.142**	**ug/L**	2.365	12165610	11.605
	Co	59	**906.093**	**ug/L**	1.714	8382228	8.000
	Ni	60	**861.811**	**ug/L**	0.470	1768456	1.687
	Cu	63		**ug/L**		4260089	4.065
	Cu	65	**813.257**	**ug/L**	1.307	1931523	1.843
	Zn	66	**2410.383**	**ug/L**	3.440	3783063	5.964
	Zn	67		**ug/L**		634525	0.958
	Zn	68		**ug/L**		2863011	4.509
>	Ge	74		**ug/L**		634513	634513.351
	As	75	**862.247**	**ug/L**	0.453	1595186	2.512
	Se	77		**ug/L**		73393	0.100
	Se	82	**488.279**	**ug/L**	2.149	78935	0.125
	Kr	83		**ug/L**		270	0.000
	Sr	88	**1033.274**	**ug/L**	4.384	17844203	53.167
	Y	89		**ug/L**		855	0.002
	Mo	98	**1052.854**	**ug/L**	4.099	5312560	15.825
	Ag	107	**229.492**	**ug/L**	2.521	1793166	5.340
	Cd	111	**883.232**	**ug/L**	2.744	1701498	5.067
	Cd	114		**ug/L**		4383540	13.058
>	In	115		**ug/L**		336017	336017.419
	Sn	120	**1007.141**	**ug/L**	5.732	7845211	23.381
	Sb	121	**241.925**	**ug/L**	7.531	1565375	4.666
	Sb	123		**ug/L**		1267739	3.778
	Ba	135		**ug/L**		1901408	3.008
	Ba	137	**933.595**	**ug/L**	1.650	3821305	6.045
	Ho	165		**ug/L**		557	0.001
>	Lu	175		**ug/L**		632197	632197.458
	Tl	205	**492.104**	**ug/L**	2.235	13954523	22.068
	Pb	208	**5034.641**	**ug/L**	1.764	212274244	335.810
	Bi	209		**ug/L**		6028	0.009
	Th	232	**2569.089**	**ug/L**	0.759	127617006	201.869
	U	238	**5440.286**	**ug/L**	2.489	290191612	459.081

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	125.760				
|	Be	9	118.541				
|	B	11					
|	Na	23	89.881				
|	Mg	24	108.513				
|	Al	27	105.399				
|	P	31	105.178				
|	K	39	102.743				
|	Ca	43	96.952				
|>	Sc	45			92.9		
|	Ti	47					
|	V	51	100.903				
|	Cr	52	96.696				
|	Cr	53					
|	Mn	55	99.449				
|	Fe	57	103.454				
|	Co	59	90.609				
|	Ni	60	86.181				
|	Cu	63					
⌊	Cu	65	81.326				
⌈	Zn	66	96.415				
|	Zn	67					
|	Zn	68					
|>	Ge	74			93.4		
|	As	75	86.225				
|	Se	77					
|	Se	82	97.656				
⌊	Kr	83					
⌈	Sr	88	103.327				
|	Y	89					
|	Mo	98	105.285				
|	Ag	107	91.797				
|	Cd	111	88.323				
|	Cd	114					
|>	In	115			90.4		
|	Sn	120	100.714				
|	Sb	121	96.770				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	93.359				
|	Ho	165					
|>	Lu	175			93.9		
|	Tl	205	98.421				
|	Pb	208	100.693				
|	Bi	209					
|	Th	232	102.764				
⌊	U	238	108.806				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Li	7	LRS is out of limits (+/- 10%)
QC Std 10	Be	9	LRS is out of limits (+/- 10%)
QC Std 10	Na	23	LRS is out of limits (+/- 10%)
QC Std 10	Ni	60	LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	LRS is out of limits (+/- 10%)
QC Std 10	As	75	LRS is out of limits (+/- 10%)
QC Std 10	Cd	111	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Wednesday, January 06, 2010 03:53:35
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 11.213

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**61.555**	**ug/L**	5.895	76670	0.065
	Be	9	**58.164**	**ug/L**	2.806	32246	0.027
	B	11	**119.819**	**ug/L**	5.188	77208	0.065
	Na	23	**4464.985**	**ug/L**	8.322	37175895	31.677
	Mg	24	**5269.782**	**ug/L**	5.827	26082037	22.231
	Al	27	**5558.918**	**ug/L**	3.521	41414440	35.295
	P	31	**5311.316**	**ug/L**	2.305	2736222	2.320
	K	39	**4888.426**	**ug/L**	3.947	47388262	39.533
	Ca	43	**5076.798**	**ug/L**	1.679	105021	0.089
>	Sc	45		**ug/L**		1173552	1173551.894
	Ti	47	**50.776**	**ug/L**	1.697	58853	0.050
	V	51	**52.478**	**ug/L**	1.630	651334	0.534
	Cr	52	**53.145**	**ug/L**	1.366	500240	0.429
	Cr	53		**ug/L**		214162	0.001
	Mn	55	**54.618**	**ug/L**	0.972	775444	0.659
	Fe	57	**5367.832**	**ug/L**	2.190	1420912	1.204
	Co	59	**52.968**	**ug/L**	2.297	548895	0.468
	Ni	60	**53.474**	**ug/L**	1.241	122984	0.105
	Cu	63		**ug/L**		279443	0.238
	Cu	65	**52.069**	**ug/L**	1.404	138879	0.118
	Zn	66	**52.414**	**ug/L**	0.939	94066	0.130
	Zn	67		**ug/L**		41020	0.015
	Zn	68		**ug/L**		77431	0.102
>	Ge	74		**ug/L**		722030	722030.334
	As	75	**50.324**	**ug/L**	0.495	107114	0.147
	Se	77		**ug/L**		14583	0.004
	Se	82	**51.434**	**ug/L**	2.657	9400	0.013
	Kr	83		**ug/L**		143	-0.000
	Sr	88	**53.392**	**ug/L**	0.537	1080207	2.747
	Y	89		**ug/L**		147	0.000
	Mo	98	**50.402**	**ug/L**	1.584	297903	0.758
	Ag	107	**51.491**	**ug/L**	0.641	470974	1.198
	Cd	111	**50.334**	**ug/L**	2.257	113513	0.289
	Cd	114		**ug/L**		264762	0.673
>	In	115		**ug/L**		393038	393037.889
	Sn	120	**52.866**	**ug/L**	1.082	482893	1.227
	Sb	121	**53.642**	**ug/L**	4.288	407451	1.035
	Sb	123		**ug/L**		323516	0.821
	Ba	135		**ug/L**		130974	0.183
	Ba	137	**49.856**	**ug/L**	4.592	231243	0.323
	Ho	165		**ug/L**		69	0.000
>	Lu	175		**ug/L**		716706	716706.459
	Tl	205	**50.305**	**ug/L**	1.479	1622407	2.256
	Pb	208	**56.013**	**ug/L**	2.757	2677059	3.736
	Bi	209		**ug/L**		601	0.001
	Th	232	**53.919**	**ug/L**	2.059	3036558	4.237
	U	238	**55.789**	**ug/L**	2.512	3373150	4.708

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	123.110				
|	Be	9	116.328				
|	B	11	119.819				
|	Na	23	89.300				
|	Mg	24	105.396				
|	Al	27	110.078				
|	P	31	106.226				
|	K	39	97.769				
|	Ca	43	101.536				
|>	Sc	45		104.1			
|	Ti	47	101.552				
|	V	51	104.955				
|	Cr	52	106.291				
|	Cr	53					
|	Mn	55	109.237				
|	Fe	57	107.357				
|	Co	59	105.937				
|	Ni	60	106.947				
|	Cu	63					
⌊	Cu	65	104.139				
⌈	Zn	66	104.828				
|	Zn	67					
|	Zn	68					
|>	Ge	74		106.3			
|	As	75	100.649				
|	Se	77					
|	Se	82	102.867				
⌊	Kr	83					
⌈	Sr	88	106.784				
|	Y	89					
|	Mo	98	100.804				
|	Ag	107	102.983				
|	Cd	111	100.667				
|	Cd	114					
|>	In	115		105.7			
|	Sn	120	105.733				
|	Sb	121	107.284				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	99.712				
|	Ho	165					
|>	Lu	175		106.5			
|	Tl	205	100.611				
|	Pb	208	112.025				
|	Bi	209					
|	Th	232	107.838				
⌊	U	238	111.578				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 11	Li	7	CCV is out of limits (+/- 10%)
QC Std 11	Be	9	CCV is out of limits (+/- 10%)
QC Std 11	B	11	CCV is out of limits (+/- 10%)
QC Std 11	Na	23	CCV is out of limits (+/- 10%)
QC Std 11	Al	27	CCV is out of limits (+/- 10%)
QC Std 11	Pb	208	CCV is out of limits (+/- 10%)
QC Std 11	U	238	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Wednesday, January 06, 2010 03:59:42
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 12.214

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.111**	**ug/L**	14.186	185	0.000
	Be	9	**0.043**	**ug/L**	14.690	42	0.000
	B	11	**1.836**	**ug/L**	29.403	1936	0.001
	Na	23	**4.910**	**ug/L**	20.114	81567	0.035
	Mg	24	**3.005**	**ug/L**	3.595	18679	0.013
	Al	27	**2.364**	**ug/L**	55.027	25358	0.015
	P	31	**1.951**	**ug/L**	65.863	14674	0.001
	K	39	**-8.921**	**ug/L**	6.825	905483	-0.072
	Ca	43	**-0.067**	**ug/L**	3621.429	619	-0.000
>	Sc	45		**ug/L**		1194873	1194873.141
	Ti	47	**-0.015**	**ug/L**	251.625	665	-0.000
	V	51	**-0.588**	**ug/L**	93.092	17811	-0.006
	Cr	52	**0.034**	**ug/L**	88.432	-3116	0.000
	Cr	53		**ug/L**		179443	-0.031
	Mn	55	**0.016**	**ug/L**	48.938	2119	0.000
	Fe	57	**-0.408**	**ug/L**	130.332	8064	-0.000
	Co	59	**0.038**	**ug/L**	28.496	632	0.000
	Ni	60	**0.038**	**ug/L**	28.658	219	0.000
	Cu	63		**ug/L**		1243	0.000
	Cu	65	**0.084**	**ug/L**	7.478	637	0.000
	Zn	66	**0.065**	**ug/L**	7.594	547	0.000
	Zn	67		**ug/L**		28035	-0.003
	Zn	68		**ug/L**		3026	-0.001
>	Ge	74		**ug/L**		717332	717332.084
	As	75	**-0.078**	**ug/L**	188.680	1063	-0.000
	Se	77		**ug/L**		8010	-0.005
	Se	82	**0.303**	**ug/L**	35.534	-16	0.000
	Kr	83		**ug/L**		144	-0.000
	Sr	88	**0.036**	**ug/L**	31.704	1194	0.002
	Y	89		**ug/L**		86	-0.000
	Mo	98	**0.249**	**ug/L**	13.333	1656	0.004
	Ag	107	**0.023**	**ug/L**	15.206	286	0.001
	Cd	111	**0.033**	**ug/L**	32.127	111	0.000
	Cd	114		**ug/L**		232	0.000
>	In	115		**ug/L**		394143	394143.132
	Sn	120	**0.445**	**ug/L**	13.714	4637	0.010
	Sb	121	**1.190**	**ug/L**	15.070	9986	0.023
	Sb	123		**ug/L**		8054	0.018
	Ba	135		**ug/L**		139	0.000
	Ba	137	**0.033**	**ug/L**	29.190	231	0.000
	Ho	165		**ug/L**		29	-0.000
>	Lu	175		**ug/L**		722685	722685.195
	Tl	205	**0.262**	**ug/L**	28.069	14537	0.012
	Pb	208	**0.150**	**ug/L**	20.910	7880	0.010
	Bi	209		**ug/L**		89	-0.000
	Th	232	**0.210**	**ug/L**	6.222	13153	0.016
	U	238	**0.173**	**ug/L**	12.787	11185	0.015

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		105.9			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		105.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		106.0			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		107.4			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, January 06, 2010 04:49:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 8.222

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**58.633**	**ug/L**	7.935	69263	0.062
	Be	9	**56.114**	**ug/L**	4.219	29524	0.026
	B	11	**115.184**	**ug/L**	1.421	70522	0.063
	Na	23	**4552.904**	**ug/L**	8.992	35998378	32.301
	Mg	24	**5153.137**	**ug/L**	1.975	24219035	21.739
	Al	27	**5087.718**	**ug/L**	9.331	35970289	32.303
	P	31	**4999.800**	**ug/L**	2.707	2445527	2.184
	K	39	**4524.454**	**ug/L**	8.368	41709503	36.589
	Ca	43	**4990.888**	**ug/L**	1.347	98009	0.087
>	Sc	45		ug/L		1114034	1114034.405
	Ti	47	**49.898**	**ug/L**	2.893	54914	0.049
	V	51	**50.615**	**ug/L**	1.608	597256	0.515
	Cr	52	**51.477**	**ug/L**	0.849	459932	0.416
	Cr	53		ug/L		229389	0.025
	Mn	55	**53.219**	**ug/L**	1.739	717307	0.642
	Fe	57	**5175.280**	**ug/L**	0.977	1301098	1.161
	Co	59	**50.785**	**ug/L**	1.112	499738	0.448
	Ni	60	**50.866**	**ug/L**	2.116	111065	0.100
	Cu	63		ug/L		253138	0.227
	Cu	65	**49.968**	**ug/L**	1.373	126515	0.113
	Zn	66	**50.982**	**ug/L**	1.798	86554	0.126
	Zn	67		ug/L		40938	0.018
	Zn	68		ug/L		70926	0.099
>	Ge	74		ug/L		683021	683021.190
	As	75	**48.000**	**ug/L**	0.911	96699	0.140
	Se	77		ug/L		16777	0.009
	Se	82	**49.344**	**ug/L**	3.131	8526	0.013
	Kr	83		ug/L		165	-0.000
	Sr	88	**51.834**	**ug/L**	1.384	1004304	2.667
	Y	89		ug/L		159	0.000
	Mo	98	**47.228**	**ug/L**	2.189	267346	0.710
	Ag	107	**49.715**	**ug/L**	1.354	435487	1.157
	Cd	111	**48.323**	**ug/L**	1.426	104389	0.277
	Cd	114		ug/L		247141	0.656
>	In	115		ug/L		376409	376408.756
	Sn	120	**49.741**	**ug/L**	2.570	435119	1.155
	Sb	121	**50.094**	**ug/L**	4.673	364496	0.966
	Sb	123		ug/L		286747	0.760
	Ba	135		ug/L		120770	0.175
	Ba	137	**47.366**	**ug/L**	2.246	211472	0.307
	Ho	165		ug/L		63	0.000
>	Lu	175		ug/L		689481	689480.611
	Tl	205	**48.654**	**ug/L**	1.266	1509848	2.182
	Pb	208	**53.234**	**ug/L**	2.022	2448088	3.551
	Bi	209		ug/L		570	0.001
	Th	232	**50.963**	**ug/L**	2.877	2761368	4.004
	U	238	**53.593**	**ug/L**	3.347	3117379	4.522

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	117.266				
|	Be	9	112.228				
|	B	11	115.184				
|	Na	23	91.058				
|	Mg	24	103.063				
|	Al	27	100.747				
|	P	31	99.996				
|	K	39	90.489				
|	Ca	43	99.818				
|>	Sc	45			98.8		
|	Ti	47	99.796				
|	V	51	101.230				
|	Cr	52	102.954				
|	Cr	53					
|	Mn	55	106.437				
|	Fe	57	103.506				
|	Co	59	101.571				
|	Ni	60	101.732				
|	Cu	63					
⌊	Cu	65	99.937				
⌈	Zn	66	101.965				
|	Zn	67					
|	Zn	68					
|>	Ge	74			100.6		
|	As	75	95.999				
|	Se	77					
|	Se	82	98.689				
⌊	Kr	83					
⌈	Sr	88	103.668				
|	Y	89					
|	Mo	98	94.456				
|	Ag	107	99.430				
|	Cd	111	96.646				
|	Cd	114					
|>	In	115			101.3		
|	Sn	120	99.481				
|	Sb	121	100.188				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	94.732				
|	Ho	165					
|>	Lu	175			102.4		
|	Tl	205	97.307				
|	Pb	208	106.468				
|	Bi	209					
|	Th	232	101.927				
⌊	U	238	107.187				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	Be	9	CCV is out of limits (+/- 10%)
QC Std 8	B	11	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, January 06, 2010 04:55:14
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 9.223

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.016**	**ug/L**	49.916	62	0.000
	Be	9	**0.008**	**ug/L**	81.173	21	0.000
	B	11	**1.931**	**ug/L**	26.107	1903	0.001
	Na	23	**1.072**	**ug/L**	47.349	46743	0.008
	Mg	24	**2.212**	**ug/L**	17.491	14007	0.009
	Al	27	**0.955**	**ug/L**	60.691	14007	0.006
	P	31	**3.091**	**ug/L**	12.317	14553	0.001
	K	39	**-7.079**	**ug/L**	13.603	879962	-0.057
	Ca	43	**-3.722**	**ug/L**	26.268	517	-0.000
>	Sc	45		**ug/L**		1138823	1138822.564
	Ti	47	**0.096**	**ug/L**	33.538	757	0.000
	V	51	**-0.515**	**ug/L**	63.817	17811	-0.005
	Cr	52	**0.125**	**ug/L**	31.407	-2134	0.001
	Cr	53		**ug/L**		185072	-0.019
	Mn	55	**-0.003**	**ug/L**	180.679	1755	-0.000
	Fe	57	**-1.104**	**ug/L**	96.899	7507	-0.000
	Co	59	**0.006**	**ug/L**	52.612	275	0.000
	Ni	60	**0.011**	**ug/L**	33.660	150	0.000
	Cu	63		**ug/L**		844	0.000
	Cu	65	**0.004**	**ug/L**	474.645	401	0.000
	Zn	66	**-0.022**	**ug/L**	62.510	377	-0.000
	Zn	67		**ug/L**		27820	-0.002
	Zn	68		**ug/L**		3138	-0.000
>	Ge	74		**ug/L**		691078	691078.382
	As	75	**0.102**	**ug/L**	114.694	1392	0.000
	Se	77		**ug/L**		9911	-0.002
	Se	82	**0.129**	**ug/L**	34.353	-46	0.000
	Kr	83		**ug/L**		158	-0.000
	Sr	88	**0.010**	**ug/L**	46.113	643	0.000
	Y	89		**ug/L**		92	-0.000
	Mo	98	**0.067**	**ug/L**	20.738	558	0.001
	Ag	107	**0.008**	**ug/L**	22.181	141	0.000
	Cd	111	**0.011**	**ug/L**	23.191	59	0.000
	Cd	114		**ug/L**		80	0.000
>	In	115		**ug/L**		380975	380974.644
	Sn	120	**0.075**	**ug/L**	24.876	1209	0.002
	Sb	121	**0.406**	**ug/L**	23.334	3899	0.008
	Sb	123		**ug/L**		3044	0.006
	Ba	135		**ug/L**		73	0.000
	Ba	137	**0.006**	**ug/L**	31.918	104	0.000
	Ho	165		**ug/L**		26	-0.000
>	Lu	175		**ug/L**		702714	702714.120
	Tl	205	**0.409**	**ug/L**	11.903	18793	0.018
	Pb	208	**0.012**	**ug/L**	8.301	1163	0.001
	Bi	209		**ug/L**		78	-0.000
	Th	232	**0.079**	**ug/L**	16.731	5572	0.006
	U	238	**0.018**	**ug/L**	20.350	1664	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
>	Sc	45		101.0			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
>	Ge	74		101.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
>	In	115		102.5			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
>	Lu	175		104.4			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, January 06, 2010 05:38:31
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 8.230

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**58.010**	**ug/L**	5.483	72302	0.062
	Be	9	**55.823**	**ug/L**	2.382	30981	0.026
	B	11	**115.797**	**ug/L**	4.182	74744	0.063
	Na	23	**4174.205**	**ug/L**	7.950	34820861	29.614
	Mg	24	**4817.788**	**ug/L**	9.854	23869722	20.325
	Al	27	**5293.018**	**ug/L**	11.360	39470101	33.607
	P	31	**4949.187**	**ug/L**	2.399	2552882	2.162
	K	39	**4432.813**	**ug/L**	3.626	43080238	35.848
	Ca	43	**4869.614**	**ug/L**	2.253	100858	0.085
>	Sc	45		**ug/L**		1174673	1174672.729
	Ti	47	**49.142**	**ug/L**	1.216	57047	0.048
	V	51	**50.552**	**ug/L**	1.162	629030	0.515
	Cr	52	**51.908**	**ug/L**	0.920	489043	0.419
	Cr	53		**ug/L**		242655	0.025
	Mn	55	**52.331**	**ug/L**	1.881	743836	0.632
	Fe	57	**5060.918**	**ug/L**	0.210	1341749	1.135
	Co	59	**49.787**	**ug/L**	0.864	516555	0.440
	Ni	60	**50.178**	**ug/L**	1.624	115547	0.098
	Cu	63		**ug/L**		265152	0.225
	Cu	65	**49.481**	**ug/L**	0.441	132113	0.112
	Zn	66	**51.509**	**ug/L**	1.496	90475	0.127
	Zn	67		**ug/L**		42394	0.018
	Zn	68		**ug/L**		72861	0.098
>	Ge	74		**ug/L**		706589	706588.550
	As	75	**48.165**	**ug/L**	1.598	100374	0.140
	Se	77		**ug/L**		18602	0.010
	Se	82	**49.594**	**ug/L**	0.265	8867	0.013
	Kr	83		**ug/L**		188	0.000
	Sr	88	**52.775**	**ug/L**	1.351	1041687	2.716
	Y	89		**ug/L**		177	0.000
	Mo	98	**48.626**	**ug/L**	3.293	280323	0.731
	Ag	107	**50.486**	**ug/L**	1.968	450422	1.175
	Cd	111	**49.936**	**ug/L**	2.144	109874	0.286
	Cd	114		**ug/L**		256533	0.669
>	In	115		**ug/L**		383445	383444.935
	Sn	120	**51.027**	**ug/L**	3.521	454593	1.185
	Sb	121	**50.578**	**ug/L**	4.743	374758	0.975
	Sb	123		**ug/L**		300196	0.781
	Ba	135		**ug/L**		123733	0.174
	Ba	137	**47.140**	**ug/L**	2.609	217495	0.305
	Ho	165		**ug/L**		62	0.000
>	Lu	175		**ug/L**		712492	712492.172
	Tl	205	**48.646**	**ug/L**	2.295	1560159	2.181
	Pb	208	**53.615**	**ug/L**	1.198	2548182	3.576
	Bi	209		**ug/L**		611	0.001
	Th	232	**50.942**	**ug/L**	2.247	2852882	4.003
	U	238	**53.533**	**ug/L**	4.862	3218017	4.517

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	116.021				
|	Be	9	111.645				
|	B	11	115.797				
|	Na	23	83.484				
|	Mg	24	96.356				
|	Al	27	104.812				
|	P	31	98.984				
|	K	39	88.656				
|	Ca	43	97.392				
|>	Sc	45		104.2			
|	Ti	47	98.283				
|	V	51	101.105				
|	Cr	52	103.815				
|	Cr	53					
|	Mn	55	104.663				
|	Fe	57	101.218				
|	Co	59	99.574				
|	Ni	60	100.355				
|	Cu	63					
⌊	Cu	65	98.961				
⌈	Zn	66	103.018				
|	Zn	67					
|	Zn	68					
|>	Ge	74		104.0			
|	As	75	96.330				
|	Se	77					
|	Se	82	99.187				
⌊	Kr	83					
⌈	Sr	88	105.550				
|	Y	89					
|	Mo	98	97.253				
|	Ag	107	100.973				
|	Cd	111	99.871				
|	Cd	114					
|>	In	115		103.1			
|	Sn	120	102.054				
|	Sb	121	101.156				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	94.281				
|	Ho	165					
|>	Lu	175		105.8			
|	Tl	205	97.292				
|	Pb	208	107.229				
|	Bi	209					
|	Th	232	101.884				
⌊	U	238	107.066				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	Be	9	CCV is out of limits (+/- 10%)
QC Std 8	B	11	CCV is out of limits (+/- 10%)
QC Std 8	Na	23	CCV is out of limits (+/- 10%)
QC Std 8	K	39	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, January 06, 2010 05:44:40
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 9.231

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.019**	**ug/L**	9.018	68	0.000
	Be	9	**0.014**	**ug/L**	81.362	25	0.000
	B	11	**1.829**	**ug/L**	24.852	1909	0.001
	Na	23	**1.243**	**ug/L**	81.377	49754	0.009
	Mg	24	**1.786**	**ug/L**	44.036	12339	0.008
	Al	27	**1.707**	**ug/L**	51.795	20015	0.011
	P	31	**3.091**	**ug/L**	60.581	15086	0.001
	K	39	**-7.998**	**ug/L**	129.958	901363	-0.065
	Ca	43	**-1.781**	**ug/L**	94.387	577	-0.000
>	Sc	45		**ug/L**		1179747	1179746.835
	Ti	47	**0.016**	**ug/L**	172.655	692	0.000
	V	51	**0.031**	**ug/L**	789.955	25006	0.000
	Cr	52	**0.408**	**ug/L**	6.233	481	0.003
	Cr	53		**ug/L**		199577	-0.012
	Mn	55	**0.009**	**ug/L**	117.223	1982	0.000
	Fe	57	**-0.591**	**ug/L**	195.715	7909	-0.000
	Co	59	**0.006**	**ug/L**	57.300	291	0.000
	Ni	60	**0.008**	**ug/L**	112.825	147	0.000
	Cu	63		**ug/L**		803	0.000
	Cu	65	**0.004**	**ug/L**	322.848	416	0.000
	Zn	66	**-0.015**	**ug/L**	186.073	399	-0.000
	Zn	67		**ug/L**		28499	-0.002
	Zn	68		**ug/L**		3237	-0.000
>	Ge	74		**ug/L**		706392	706391.856
	As	75	**0.246**	**ug/L**	45.518	1719	0.001
	Se	77		**ug/L**		11761	0.001
	Se	82	**0.079**	**ug/L**	92.425	-56	0.000
	Kr	83		**ug/L**		172	-0.000
	Sr	88	**0.012**	**ug/L**	56.479	707	0.001
	Y	89		**ug/L**		103	0.000
	Mo	98	**0.073**	**ug/L**	19.977	602	0.001
	Ag	107	**0.012**	**ug/L**	30.298	183	0.000
	Cd	111	**0.008**	**ug/L**	65.543	54	0.000
	Cd	114		**ug/L**		102	0.000
>	In	115		**ug/L**		387955	387954.923
	Sn	120	**0.083**	**ug/L**	13.742	1308	0.002
	Sb	121	**0.404**	**ug/L**	21.453	3958	0.008
	Sb	123		**ug/L**		3135	0.006
	Ba	135		**ug/L**		69	0.000
	Ba	137	**0.009**	**ug/L**	49.234	118	0.000
	Ho	165		**ug/L**		32	-0.000
>	Lu	175		**ug/L**		719830	719829.552
	Tl	205	**0.422**	**ug/L**	14.386	19674	0.019
	Pb	208	**0.014**	**ug/L**	29.799	1318	0.001
	Bi	209		**ug/L**		85	-0.000
	Th	232	**0.086**	**ug/L**	14.231	6112	0.007
	U	238	**0.019**	**ug/L**	13.266	1808	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		104.6			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		104.0			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		104.4			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		106.9			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, January 06, 2010 06:09:23
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 8.235

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**56.457**	**ug/L**	3.171	67976	0.060
	Be	9	**55.166**	**ug/L**	1.696	29571	0.026
	B	11	**108.294**	**ug/L**	2.248	67556	0.059
	Na	23	**4072.786**	**ug/L**	5.230	32802261	28.894
	Mg	24	**4946.507**	**ug/L**	3.378	23683421	20.868
	Al	27	**4887.472**	**ug/L**	5.290	35192553	31.032
	P	31	**4848.151**	**ug/L**	0.902	2415908	2.118
	K	39	**4569.128**	**ug/L**	4.483	42884418	36.950
	Ca	43	**4852.410**	**ug/L**	0.769	97071	0.085
>	Sc	45		**ug/L**		1134482	1134481.762
	Ti	47	**48.228**	**ug/L**	0.704	54078	0.047
	V	51	**50.302**	**ug/L**	4.652	604329	0.512
	Cr	52	**51.781**	**ug/L**	4.203	470918	0.418
	Cr	53		**ug/L**		255851	0.044
	Mn	55	**52.485**	**ug/L**	1.030	720577	0.634
	Fe	57	**5155.138**	**ug/L**	1.021	1319862	1.157
	Co	59	**50.269**	**ug/L**	1.399	503663	0.444
	Ni	60	**50.320**	**ug/L**	0.701	111892	0.099
	Cu	63		**ug/L**		256896	0.226
	Cu	65	**49.809**	**ug/L**	1.725	128416	0.113
	Zn	66	**50.745**	**ug/L**	1.384	86235	0.126
	Zn	67		**ug/L**		41246	0.018
	Zn	68		**ug/L**		70214	0.098
>	Ge	74		**ug/L**		683685	683684.945
	As	75	**48.535**	**ug/L**	1.320	97845	0.141
	Se	77		**ug/L**		20205	0.014
	Se	82	**49.575**	**ug/L**	2.467	8574	0.013
	Kr	83		**ug/L**		192	0.000
	Sr	88	**53.221**	**ug/L**	1.796	1001714	2.738
	Y	89		**ug/L**		180	0.000
	Mo	98	**49.237**	**ug/L**	2.612	270730	0.740
	Ag	107	**50.160**	**ug/L**	3.268	426789	1.167
	Cd	111	**48.906**	**ug/L**	2.465	102676	0.281
	Cd	114		**ug/L**		241626	0.661
>	In	115		**ug/L**		365732	365731.561
	Sn	120	**51.016**	**ug/L**	3.600	433437	1.184
	Sb	121	**50.888**	**ug/L**	4.996	359561	0.981
	Sb	123		**ug/L**		284968	0.777
	Ba	135		**ug/L**		119260	0.171
	Ba	137	**46.834**	**ug/L**	2.117	211251	0.303
	Ho	165		**ug/L**		67	0.000
>	Lu	175		**ug/L**		696509	696508.639
	Tl	205	**47.777**	**ug/L**	0.740	1497990	2.142
	Pb	208	**52.311**	**ug/L**	1.864	2430448	3.489
	Bi	209		**ug/L**		543	0.001
	Th	232	**49.505**	**ug/L**	2.495	2709900	3.890
	U	238	**51.262**	**ug/L**	0.063	3013519	4.326

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	112.914				
|	Be	9	110.332				
|	B	11	108.294				
|	Na	23	81.456				
|	Mg	24	98.930				
|	Al	27	96.782				
|	P	31	96.963				
|	K	39	91.383				
|	Ca	43	97.048				
\>	Sc	45		100.6			
|	Ti	47	96.457				
|	V	51	100.605				
|	Cr	52	103.563				
|	Cr	53					
|	Mn	55	104.970				
|	Fe	57	103.103				
|	Co	59	100.537				
|	Ni	60	100.640				
|	Cu	63					
⌊	Cu	65	99.619				
⌈	Zn	66	101.490				
|	Zn	67					
|	Zn	68					
\>	Ge	74		100.7			
|	As	75	97.070				
|	Se	77					
|	Se	82	99.150				
⌊	Kr	83					
⌈	Sr	88	106.442				
|	Y	89					
|	Mo	98	98.474				
|	Ag	107	100.320				
|	Cd	111	97.811				
|	Cd	114					
\>	In	115		98.4			
|	Sn	120	102.031				
|	Sb	121	101.776				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	93.668				
|	Ho	165					
\>	Lu	175		103.5			
|	Tl	205	95.554				
|	Pb	208	104.623				
|	Bi	209					
|	Th	232	99.011				
⌊	U	238	102.524				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	Be	9	CCV is out of limits (+/- 10%)
QC Std 8	Na	23	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, January 06, 2010 06:15:32
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 9.236

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.014**	**ug/L**	29.158	60	0.000
	Be	9	**0.001**	**ug/L**	793.442	17	0.000
	B	11	**1.689**	**ug/L**	24.022	1764	0.001
	Na	23	**0.725**	**ug/L**	79.567	44068	0.005
	Mg	24	**1.026**	**ug/L**	8.230	8336	0.004
	Al	27	**1.092**	**ug/L**	24.723	15008	0.007
	P	31	**1.371**	**ug/L**	115.408	13747	0.001
	K	39	**-7.890**	**ug/L**	51.870	875734	-0.064
	Ca	43	**-3.371**	**ug/L**	57.558	527	-0.000
>	Sc	45		**ug/L**		1143352	1143351.633
	Ti	47	**0.020**	**ug/L**	84.230	675	0.000
	V	51	**-0.051**	**ug/L**	1102.292	23309	-0.001
	Cr	52	**0.544**	**ug/L**	10.588	1722	0.004
	Cr	53		**ug/L**		205655	-0.001
	Mn	55	**0.006**	**ug/L**	58.725	1884	0.000
	Fe	57	**-0.448**	**ug/L**	65.507	7706	-0.000
	Co	59	**-0.001**	**ug/L**	273.959	209	-0.000
	Ni	60	**0.002**	**ug/L**	322.801	130	0.000
	Cu	63		**ug/L**		841	0.000
	Cu	65	**-0.002**	**ug/L**	282.075	386	-0.000
	Zn	66	**-0.010**	**ug/L**	100.497	398	-0.000
	Zn	67		**ug/L**		27444	-0.002
	Zn	68		**ug/L**		3164	-0.000
>	Ge	74		**ug/L**		692312	692312.103
	As	75	**0.220**	**ug/L**	27.671	1630	0.001
	Se	77		**ug/L**		13477	0.003
	Se	82	**-0.029**	**ug/L**	226.114	-74	-0.000
	Kr	83		**ug/L**		189	0.000
	Sr	88	**0.006**	**ug/L**	49.367	561	0.000
	Y	89		**ug/L**		107	0.000
	Mo	98	**0.069**	**ug/L**	27.096	563	0.001
	Ag	107	**0.007**	**ug/L**	11.280	130	0.000
	Cd	111	**0.006**	**ug/L**	25.337	48	0.000
	Cd	114		**ug/L**		77	0.000
>	In	115		**ug/L**		375787	375786.831
	Sn	120	**0.076**	**ug/L**	26.582	1210	0.002
	Sb	121	**0.406**	**ug/L**	26.377	3845	0.008
	Sb	123		**ug/L**		3088	0.006
	Ba	135		**ug/L**		57	0.000
	Ba	137	**0.006**	**ug/L**	30.686	100	0.000
	Ho	165		**ug/L**		21	-0.000
>	Lu	175		**ug/L**		689994	689994.495
	Tl	205	**0.224**	**ug/L**	17.893	12732	0.010
	Pb	208	**0.010**	**ug/L**	8.903	1038	0.001
	Bi	209		**ug/L**		77	-0.000
	Th	232	**0.083**	**ug/L**	20.527	5694	0.007
	U	238	**0.015**	**ug/L**	24.854	1470	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		101.4			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		101.9			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		101.1			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		102.5			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004440
Sample Date/Time: Wednesday, January 06, 2010 06:21:39
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\1202004440.237

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	0.087	ug/L	19.960	143	0.000
	Be	9	0.001	ug/L	1931.108	17	0.000
	B	11	0.811	ug/L	17.886	1169	0.000
	Na	23	5.312	ug/L	24.682	78215	0.038
	Mg	24	0.662	ug/L	48.001	6335	0.003
	Al	27	8.580	ug/L	15.401	66825	0.054
	P	31	3.818	ug/L	36.636	14422	0.002
	K	39	9.320	ug/L	9.669	996591	0.075
	Ca	43	18.110	ug/L	3.357	921	0.000
>	Sc	45		ug/L		1100890	1100889.686
	Ti	47	0.389	ug/L	10.959	1047	0.000
	V	51	-2.239	ug/L	106.796	-2187	-0.023
	Cr	52	1.677	ug/L	7.781	11723	0.014
	Cr	53		ug/L		525105	0.296
	Mn	55	0.220	ug/L	5.010	4664	0.003
	Fe	57	6.264	ug/L	10.341	9076	0.001
	Co	59	-0.005	ug/L	20.214	161	-0.000
	Ni	60	0.052	ug/L	17.611	232	0.000
	Cu	63		ug/L		1153	0.000
	Cu	65	0.068	ug/L	12.415	547	0.000
	Zn	66	0.669	ug/L	3.304	1493	0.002
	Zn	67		ug/L		127802	0.151
	Zn	68		ug/L		9133	0.009
>	Ge	74		ug/L		661625	661625.411
	As	75	1.276	ug/L	37.418	3587	0.004
	Se	77		ug/L		38218	0.042
	Se	82	0.024	ug/L	231.363	-61	0.000
	Kr	83		ug/L		186	0.000
	Sr	88	0.024	ug/L	8.665	895	0.001
	Y	89		ug/L		136	0.000
	Mo	98	0.013	ug/L	31.923	241	0.000
	Ag	107	0.001	ug/L	41.940	80	0.000
	Cd	111	0.005	ug/L	133.490	43	0.000
	Cd	114		ug/L		38	-0.000
>	In	115		ug/L		365018	365017.622
	Sn	120	0.113	ug/L	34.367	1487	0.003
	Sb	121	0.136	ug/L	46.450	1842	0.003
	Sb	123		ug/L		1495	0.002
	Ba	135		ug/L		67	0.000
	Ba	137	0.004	ug/L	28.549	95	0.000
	Ho	165		ug/L		28	-0.000
>	Lu	175		ug/L		688362	688362.226
	Tl	205	-0.003	ug/L	302.091	5698	-0.000
	Pb	208	0.014	ug/L	7.997	1261	0.001
	Bi	209		ug/L		102	0.000
	Th	232	0.050	ug/L	24.315	3911	0.004
	U	238	-0.003	ug/L	12.098	417	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
>	Sc	45		97.6			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
>	Ge	74		97.4			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
>	In	115		98.2			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
>	Lu	175		102.3			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004441
Sample Date/Time: Wednesday, January 06, 2010 06:27:46
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\1202004441.238

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**67.297**	**ug/L**	5.668	78666	0.071
|	Be	9	**64.895**	**ug/L**	1.622	33778	0.031
|	B	11	**132.641**	**ug/L**	3.076	80216	0.072
|	Na	23	**1908.331**	**ug/L**	4.339	14952889	13.539
|	Mg	24	**2141.375**	**ug/L**	5.345	9955420	9.034
|	Al	27	**2066.968**	**ug/L**	2.359	14467104	13.124
|	P	31	**1921.893**	**ug/L**	2.775	937643	0.840
|	K	39	**1911.173**	**ug/L**	2.723	17945000	15.456
|	Ca	43	**2071.561**	**ug/L**	1.965	40573	0.036
|>	Sc	45		**ug/L**		1101821	1101820.929
|	Ti	47	**45.545**	**ug/L**	1.207	49637	0.044
|	V	51	**46.855**	**ug/L**	5.413	548504	0.477
|	Cr	52	**55.093**	**ug/L**	1.017	487081	0.445
|	Cr	53		**ug/L**		561184	0.328
|	Mn	55	**54.746**	**ug/L**	0.282	729815	0.661
|	Fe	57	**2278.010**	**ug/L**	0.393	570625	0.511
|	Co	59	**52.087**	**ug/L**	0.410	506909	0.460
|	Ni	60	**52.858**	**ug/L**	2.074	114151	0.103
|	Cu	63		**ug/L**		265250	0.240
⌊	Cu	65	**52.880**	**ug/L**	2.358	132404	0.120
⌈	Zn	66	**52.134**	**ug/L**	2.441	86503	0.129
|	Zn	67		**ug/L**		139646	0.167
|	Zn	68		**ug/L**		75358	0.108
|>	Ge	74		**ug/L**		667524	667524.192
|	As	75	**51.348**	**ug/L**	1.306	101013	0.150
|	Se	77		**ug/L**		43137	0.049
|	Se	82	**51.687**	**ug/L**	1.278	8733	0.013
⌊	Kr	83		**ug/L**		213	0.000
⌈	Sr	88	**54.253**	**ug/L**	3.033	1013719	2.792
|	Y	89		**ug/L**		171	0.000
|	Mo	98	**51.565**	**ug/L**	0.237	281615	0.775
|	Ag	107	**52.656**	**ug/L**	3.633	444774	1.225
|	Cd	111	**50.787**	**ug/L**	0.966	105824	0.291
|	Cd	114		**ug/L**		244325	0.673
|>	In	115		**ug/L**		363115	363115.160
|	Sn	120	**53.870**	**ug/L**	0.692	454597	1.251
|	Sb	121	**57.191**	**ug/L**	1.531	401349	1.103
⌊	Sb	123		**ug/L**		312769	0.860
⌈	Ba	135		**ug/L**		119326	0.177
|	Ba	137	**48.123**	**ug/L**	4.723	209819	0.312
|	Ho	165		**ug/L**		69	0.000
|>	Lu	175		**ug/L**		673774	673773.975
|	Tl	205	**48.445**	**ug/L**	3.649	1468203	2.172
|	Pb	208	**56.012**	**ug/L**	5.752	2514522	3.736
|	Bi	209		**ug/L**		1891817	2.810
|	Th	232	**51.578**	**ug/L**	4.943	2728988	4.053
⌊	U	238	**54.529**	**ug/L**	2.518	3099711	4.601

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
>	Sc	45		97.7			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
>	Ge	74		98.3			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
>	In	115		97.7			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
>	Lu	175		100.1			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 243493001
Sample Date/Time: Wednesday, January 06, 2010 06:33:52
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\243493001.239

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.216**	**ug/L**	20.044	302	0.000
	Be	9	**0.005**	**ug/L**	248.909	20	0.000
	B	11	**29.018**	**ug/L**	4.200	18646	0.016
	Na	23	**78.741**	**ug/L**	6.223	672488	0.559
	Mg	24	**9.892**	**ug/L**	7.574	50757	0.042
	Al	27	**23.590**	**ug/L**	9.091	177095	0.150
	P	31	**5.866**	**ug/L**	14.828	15907	0.003
	K	39	**109.203**	**ug/L**	4.487	1946107	0.883
	Ca	43	**42.628**	**ug/L**	0.676	1439	0.001
>	Sc	45		**ug/L**		1136479	1136478.578
	Ti	47	**0.970**	**ug/L**	6.503	1725	0.001
	V	51	**-2.225**	**ug/L**	72.296	-1661	-0.023
	Cr	52	**2.380**	**ug/L**	15.129	18616	0.019
	Cr	53		**ug/L**		541528	0.295
	Mn	55	**1.011**	**ug/L**	4.026	15653	0.012
	Fe	57	**21.307**	**ug/L**	5.257	13201	0.005
	Co	59	**0.013**	**ug/L**	14.694	345	0.000
	Ni	60	**0.221**	**ug/L**	5.755	617	0.000
	Cu	63		**ug/L**		6310	0.005
•	Cu	65	**0.999**	**ug/L**	1.573	2963	0.002
	Zn	66	**1.104**	**ug/L**	3.304	2256	0.003
	Zn	67		**ug/L**		136057	0.159
	Zn	68		**ug/L**		10322	0.010
>	Ge	74		**ug/L**		677037	677037.285
	As	75	**1.446**	**ug/L**	14.101	4008	0.004
	Se	77		**ug/L**		37689	0.040
	Se	82	**0.083**	**ug/L**	149.203	-53	0.000
	Kr	83		**ug/L**		185	0.000
	Sr	88	**0.190**	**ug/L**	0.748	4047	0.010
	Y	89		**ug/L**		507	0.001
	Mo	98	**0.049**	**ug/L**	27.518	438	0.001
	Ag	107	**0.009**	**ug/L**	24.693	150	0.000
	Cd	111	**0.010**	**ug/L**	33.030	54	0.000
	Cd	114		**ug/L**		73	0.000
>	In	115		**ug/L**		368434	368434.101
	Sn	120	**0.085**	**ug/L**	9.658	1264	0.002
	Sb	121	**0.047**	**ug/L**	40.324	1222	0.001
	Sb	123		**ug/L**		1017	0.001
	Ba	135		**ug/L**		815	0.001
	Ba	137	**0.302**	**ug/L**	2.332	1436	0.002
	Ho	165		**ug/L**		53	0.000
>	Lu	175		**ug/L**		694682	694681.958
	Tl	205	**0.546**	**ug/L**	22.023	22854	0.024
	Pb	208	**0.096**	**ug/L**	1.971	5071	0.006
	Bi	209		**ug/L**		516	0.001
	Th	232	**0.080**	**ug/L**	29.919	5531	0.006
	U	238	**0.005**	**ug/L**	12.683	929	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		100.8			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		99.7			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		99.1			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		103.2			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004442
Sample Date/Time: Wednesday, January 06, 2010 06:40:00
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\1202004442.240

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.192**	**ug/L**	6.460	279	0.000
	Be	9	**-0.002**	**ug/L**	386.217	16	-0.000
	B	11	**25.791**	**ug/L**	4.755	16974	0.014
	Na	23	**75.743**	**ug/L**	6.570	660963	0.537
	Mg	24	**8.387**	**ug/L**	14.666	44403	0.035
	Al	27	**22.830**	**ug/L**	14.716	175421	0.145
	P	31	**3.196**	**ug/L**	44.422	14853	0.001
	K	39	**104.617**	**ug/L**	13.242	1941910	0.846
	Ca	43	**40.945**	**ug/L**	9.197	1433	0.001
>	Sc	45		**ug/L**		1158850	1158849.869
	Ti	47	**0.954**	**ug/L**	7.580	1740	0.001
	V	51	**-4.056**	**ug/L**	40.008	-23699	-0.041
	Cr	52	**2.319**	**ug/L**	9.464	18333	0.019
	Cr	53		**ug/L**		541413	0.286
	Mn	55	**1.015**	**ug/L**	3.785	16020	0.012
	Fe	57	**22.916**	**ug/L**	8.222	13877	0.005
	Co	59	**0.010**	**ug/L**	3.119	322	0.000
	Ni	60	**0.190**	**ug/L**	1.175	559	0.000
	Cu	63		**ug/L**		6433	0.005
	Cu	65	**0.988**	**ug/L**	4.622	2992	0.002
	Zn	66	**1.098**	**ug/L**	4.174	2304	0.003
	Zn	67		**ug/L**		125297	0.138
	Zn	68		**ug/L**		9904	0.010
>	Ge	74		**ug/L**		694390	694390.156
	As	75	**1.111**	**ug/L**	11.116	3438	0.003
	Se	77		**ug/L**		38989	0.040
	Se	82	**0.008**	**ug/L**	2347.245	-67	0.000
	Kr	83		**ug/L**		197	0.000
	Sr	88	**0.186**	**ug/L**	2.833	3950	0.010
	Y	89		**ug/L**		542	0.001
	Mo	98	**0.008**	**ug/L**	18.596	210	0.000
	Ag	107	**0.006**	**ug/L**	40.815	125	0.000
	Cd	111	**0.002**	**ug/L**	440.940	38	0.000
	Cd	114		**ug/L**		55	0.000
>	In	115		**ug/L**		366038	366037.535
	Sn	120	**0.074**	**ug/L**	13.959	1161	0.002
	Sb	121	**-0.035**	**ug/L**	20.182	638	-0.001
	Sb	123		**ug/L**		535	-0.001
	Ba	135		**ug/L**		859	0.001
	Ba	137	**0.326**	**ug/L**	5.183	1538	0.002
	Ho	165		**ug/L**		61	0.000
>	Lu	175		**ug/L**		692940	692939.979
	Tl	205	**0.113**	**ug/L**	7.681	9343	0.005
	Pb	208	**0.093**	**ug/L**	1.673	4921	0.006
	Bi	209		**ug/L**		233	0.000
	Th	232	**0.017**	**ug/L**	4.818	2136	0.001
	U	238	**-0.001**	**ug/L**	30.560	524	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		102.7			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		102.2			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		98.5			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		102.9			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004443
Sample Date/Time: Wednesday, January 06, 2010 06:46:08
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 936815|1|ba|
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\1202004443.241

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**72.780**	**ug/L**	1.247	88498	0.077
	Be	9	**68.675**	**ug/L**	1.592	37189	0.032
	B	11	**167.705**	**ug/L**	2.831	105329	0.091
	Na	23	**1918.939**	**ug/L**	1.762	15644155	13.614
	Mg	24	**2283.007**	**ug/L**	11.091	11038291	9.631
	Al	27	**2201.900**	**ug/L**	3.577	16034728	13.980
	P	31	**1921.118**	**ug/L**	2.250	975111	0.839
	K	39	**2032.589**	**ug/L**	6.290	19793044	16.438
	Ca	43	**2136.025**	**ug/L**	3.030	43512	0.037
>	Sc	45		**ug/L**		1146402	1146402.225
	Ti	47	**46.839**	**ug/L**	2.005	53092	0.046
	V	51	**56.728**	**ug/L**	2.530	685906	0.577
	Cr	52	**56.780**	**ug/L**	3.010	522340	0.459
	Cr	53		**ug/L**		590220	0.334
	Mn	55	**57.549**	**ug/L**	1.848	798077	0.695
	Fe	57	**2410.911**	**ug/L**	2.195	627820	0.541
	Co	59	**54.639**	**ug/L**	2.442	553171	0.482
	Ni	60	**54.296**	**ug/L**	2.310	121990	0.106
	Cu	63		**ug/L**		290534	0.253
	Cu	65	**55.421**	**ug/L**	1.515	144357	0.126
	Zn	66	**54.559**	**ug/L**	2.057	92704	0.135
	Zn	67		**ug/L**		152207	0.181
	Zn	68		**ug/L**		80612	0.113
>	Ge	74		**ug/L**		683826	683825.713
	As	75	**82.919**	**ug/L**	1.420	166372	0.242
	Se	77		**ug/L**		41150	0.044
	Se	82	**21.479**	**ug/L**	5.248	3677	0.005
	Kr	83		**ug/L**		231	0.000
	Sr	88	**56.332**	**ug/L**	1.817	1069539	2.899
	Y	89		**ug/L**		618	0.001
	Mo	98	**52.327**	**ug/L**	1.614	290273	0.787
	Ag	107	**55.821**	**ug/L**	1.631	479146	1.299
	Cd	111	**11.402**	**ug/L**	1.390	24161	0.065
	Cd	114		**ug/L**		53912	0.146
>	In	115		**ug/L**		368839	368839.341
	Sn	120	**55.347**	**ug/L**	0.495	474450	1.285
	Sb	121	**213.875**	**ug/L**	1.414	1522318	4.125
	Sb	123		**ug/L**		1232007	3.338
	Ba	135		**ug/L**		130349	0.184
	Ba	137	**49.995**	**ug/L**	0.488	229929	0.324
	Ho	165		**ug/L**		454	0.001
>	Lu	175		**ug/L**		710029	710028.646
	Tl	205	**92.881**	**ug/L**	2.525	2963729	4.165
	Pb	208	**46.269**	**ug/L**	2.199	2191272	3.086
	Bi	209		**ug/L**		922	0.001
	Th	232	**53.657**	**ug/L**	1.572	2994231	4.216
	U	238	**55.681**	**ug/L**	0.700	3336612	4.699

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9999
Cr	52	Linear Thru Zero	0.9999
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Fe	57	Linear Thru Zero	0.9998
Co	59	Linear Thru Zero	0.9999
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	0.9999
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9997
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9997
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
>	Sc	45		101.6			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
>	Ge	74		100.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
>	In	115		99.2			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
>	Lu	175		105.5			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004444
Sample Date/Time: Wednesday, January 06, 2010 06:52:15
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 936815|5|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\1202004444.242

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.031**	**ug/L**	14.638	84	0.000
	Be	9	**0.012**	**ug/L**	84.155	24	0.000
	B	11	**6.487**	**ug/L**	13.056	4893	0.004
	Na	23	**14.936**	**ug/L**	21.456	164288	0.106
	Mg	24	**1.510**	**ug/L**	22.307	11004	0.006
	Al	27	**5.444**	**ug/L**	12.156	48081	0.035
	P	31	**6.072**	**ug/L**	40.799	16601	0.003
	K	39	**23.266**	**ug/L**	3.227	1200401	0.188
	Ca	43	**8.244**	**ug/L**	38.235	783	0.000
>	Sc	45		**ug/L**		1179100	1179100.233
	Ti	47	**0.310**	**ug/L**	39.289	1030	0.000
	V	51	**-0.474**	**ug/L**	45.613	18938	-0.005
	Cr	52	**0.816**	**ug/L**	14.042	4367	0.007
	Cr	53		**ug/L**		298050	0.071
	Mn	55	**0.215**	**ug/L**	1.097	4922	0.003
	Fe	57	**2.779**	**ug/L**	26.910	8800	0.001
	Co	59	**-0.000**	**ug/L**	1150.833	225	-0.000
	Ni	60	**0.044**	**ug/L**	40.580	230	0.000
	Cu	63		**ug/L**		1937	0.001
	Cu	65	**0.168**	**ug/L**	8.438	854	0.000
	Zn	66	**0.853**	**ug/L**	2.649	1918	0.002
	Zn	67		**ug/L**		46002	0.023
	Zn	68		**ug/L**		5769	0.003
>	Ge	74		**ug/L**		707141	707141.318
	As	75	**0.505**	**ug/L**	30.387	2252	0.001
	Se	77		**ug/L**		19642	0.012
	Se	82	**0.052**	**ug/L**	114.043	-61	0.000
	Kr	83		**ug/L**		173	-0.000
	Sr	88	**0.038**	**ug/L**	12.406	1191	0.002
	Y	89		**ug/L**		184	0.000
	Mo	98	**0.026**	**ug/L**	39.422	324	0.000
	Ag	107	**0.002**	**ug/L**	77.746	91	0.000
	Cd	111	**-0.005**	**ug/L**	63.986	22	-0.000
	Cd	114		**ug/L**		43	-0.000
>	In	115		**ug/L**		377966	377965.781
	Sn	120	**0.015**	**ug/L**	22.529	679	0.000
	Sb	121	**0.090**	**ug/L**	46.340	1572	0.002
	Sb	123		**ug/L**		1264	0.001
	Ba	135		**ug/L**		217	0.000
	Ba	137	**0.068**	**ug/L**	8.709	384	0.000
	Ho	165		**ug/L**		35	0.000
>	Lu	175		**ug/L**		697102	697101.883
	Tl	205	**1.431**	**ug/L**	21.193	50620	0.064
	Pb	208	**0.019**	**ug/L**	4.441	1467	0.001
	Bi	209		**ug/L**		128	0.000
	Th	232	**0.029**	**ug/L**	28.753	2769	0.002
	U	238	**-0.001**	**ug/L**	290.921	576	-0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		104.5			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		104.1			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		101.7			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		103.5			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Wednesday, January 06, 2010 06:58:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 8.243

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.335**	**ug/L**	6.687	67887	0.059
	Be	9	**53.902**	**ug/L**	4.281	29455	0.025
	B	11	**110.879**	**ug/L**	2.781	70534	0.060
	Na	23	**4275.968**	**ug/L**	2.928	35157295	30.336
	Mg	24	**5041.200**	**ug/L**	9.639	24591635	21.267
	Al	27	**5663.173**	**ug/L**	3.600	41608874	35.957
	P	31	**4978.687**	**ug/L**	3.721	2529186	2.175
	K	39	**4604.165**	**ug/L**	8.868	44059334	37.234
	Ca	43	**4914.997**	**ug/L**	0.931	100270	0.086
>	Sc	45		**ug/L**		1157271	1157271.265
	Ti	47	**49.264**	**ug/L**	2.839	56321	0.048
	V	51	**51.186**	**ug/L**	2.360	627047	0.521
	Cr	52	**52.132**	**ug/L**	2.028	483799	0.421
	Cr	53		**ug/L**		239096	0.025
	Mn	55	**53.350**	**ug/L**	3.806	746728	0.644
	Fe	57	**5149.908**	**ug/L**	2.101	1344658	1.155
	Co	59	**50.238**	**ug/L**	3.229	513444	0.444
	Ni	60	**50.171**	**ug/L**	2.246	113789	0.098
	Cu	63		**ug/L**		260532	0.225
	Cu	65	**49.868**	**ug/L**	2.399	131138	0.113
	Zn	66	**51.747**	**ug/L**	2.392	89712	0.128
	Zn	67		**ug/L**		40926	0.017
	Zn	68		**ug/L**		72457	0.099
>	Ge	74		**ug/L**		697527	697526.813
	As	75	**47.978**	**ug/L**	2.925	98700	0.140
	Se	77		**ug/L**		17859	0.010
	Se	82	**50.078**	**ug/L**	1.621	8839	0.013
	Kr	83		**ug/L**		163	-0.000
	Sr	88	**53.531**	**ug/L**	1.039	1037512	2.754
	Y	89		**ug/L**		163	0.000
	Mo	98	**48.867**	**ug/L**	1.942	276713	0.735
	Ag	107	**50.694**	**ug/L**	0.205	444205	1.180
	Cd	111	**49.234**	**ug/L**	3.009	106368	0.282
	Cd	114		**ug/L**		249903	0.664
>	In	115		**ug/L**		376521	376521.250
	Sn	120	**51.846**	**ug/L**	2.176	453672	1.204
	Sb	121	**51.076**	**ug/L**	4.358	371701	0.985
	Sb	123		**ug/L**		293085	0.777
	Ba	135		**ug/L**		124611	0.179
	Ba	137	**48.600**	**ug/L**	2.438	219427	0.315
	Ho	165		**ug/L**		53	0.000
>	Lu	175		**ug/L**		697192	697191.987
	Tl	205	**47.819**	**ug/L**	1.040	1500875	2.144
	Pb	208	**53.178**	**ug/L**	1.843	2473095	3.547
	Bi	209		**ug/L**		578	0.001
	Th	232	**50.380**	**ug/L**	2.875	2760652	3.959
	U	238	**52.973**	**ug/L**	3.857	3115941	4.470

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	110.670				
|	Be	9	107.803				
|	B	11	110.879				
|	Na	23	85.519				
|	Mg	24	100.824				
|	Al	27	112.142				
|	P	31	99.574				
|	K	39	92.083				
|	Ca	43	98.300				
|>	Sc	45		102.6			
|	Ti	47	98.528				
|	V	51	102.371				
|	Cr	52	104.264				
|	Cr	53					
|	Mn	55	106.699				
|	Fe	57	102.998				
|	Co	59	100.477				
|	Ni	60	100.342				
|	Cu	63					
⌊	Cu	65	99.736				
⌈	Zn	66	103.493				
|	Zn	67					
|	Zn	68					
|>	Ge	74		102.7			
|	As	75	95.956				
|	Se	77					
|	Se	82	100.155				
⌊	Kr	83					
⌈	Sr	88	107.061				
|	Y	89					
|	Mo	98	97.733				
|	Ag	107	101.387				
|	Cd	111	98.467				
|	Cd	114					
|>	In	115		101.3			
|	Sn	120	103.692				
|	Sb	121	102.151				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	97.201				
|	Ho	165					
|>	Lu	175		103.6			
|	Tl	205	95.637				
|	Pb	208	106.356				
|	Bi	209					
|	Th	232	100.760				
⌊	U	238	105.945				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 8	Li	7	CCV is out of limits (+/- 10%)
QC Std 8	B	11	CCV is out of limits (+/- 10%)
QC Std 8	Na	23	CCV is out of limits (+/- 10%)
QC Std 8	Al	27	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Wednesday, January 06, 2010 07:04:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: c:\elandata\Dataset\100105\QC Std 9.244

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.005**	**ug/L**	76.445	50	0.000
	Be	9	**0.013**	**ug/L**	41.543	25	0.000
	B	11	**1.850**	**ug/L**	32.216	1900	0.001
	Na	23	**1.008**	**ug/L**	59.397	47412	0.007
	Mg	24	**1.672**	**ug/L**	62.079	11672	0.007
	Al	27	**0.865**	**ug/L**	72.793	13674	0.005
	P	31	**2.413**	**ug/L**	45.653	14579	0.001
	K	39	**-2.269**	**ug/L**	285.727	947858	-0.018
	Ca	43	**-2.873**	**ug/L**	43.114	548	-0.000
>	Sc	45		**ug/L**		1167703	1167702.984
	Ti	47	**0.015**	**ug/L**	217.745	684	0.000
	V	51	**-0.001**	**ug/L**	81888.136	24421	-0.000
	Cr	52	**0.430**	**ug/L**	10.868	685	0.003
	Cr	53		**ug/L**		198937	-0.011
	Mn	55	**0.005**	**ug/L**	40.924	1910	0.000
	Fe	57	**-0.849**	**ug/L**	12.557	7765	-0.000
	Co	59	**0.002**	**ug/L**	33.598	243	0.000
	Ni	60	**0.003**	**ug/L**	74.277	134	0.000
	Cu	63		**ug/L**		805	0.000
	Cu	65	**-0.012**	**ug/L**	62.000	369	-0.000
	Zn	66	**-0.019**	**ug/L**	44.561	387	-0.000
	Zn	67		**ug/L**		27919	-0.002
	Zn	68		**ug/L**		3263	-0.000
>	Ge	74		**ug/L**		699434	699433.570
	As	75	**0.179**	**ug/L**	119.175	1566	0.001
	Se	77		**ug/L**		11770	0.001
	Se	82	**0.040**	**ug/L**	313.376	-62	0.000
	Kr	83		**ug/L**		169	-0.000
	Sr	88	**0.006**	**ug/L**	14.720	569	0.000
	Y	89		**ug/L**		109	0.000
	Mo	98	**0.071**	**ug/L**	28.316	590	0.001
	Ag	107	**0.011**	**ug/L**	16.933	168	0.000
	Cd	111	**0.010**	**ug/L**	51.410	57	0.000
	Cd	114		**ug/L**		84	0.000
>	In	115		**ug/L**		384281	384281.354
	Sn	120	**0.076**	**ug/L**	24.816	1235	0.002
	Sb	121	**0.421**	**ug/L**	23.316	4057	0.008
	Sb	123		**ug/L**		3336	0.007
	Ba	135		**ug/L**		64	0.000
	Ba	137	**0.004**	**ug/L**	7.112	95	0.000
	Ho	165		**ug/L**		31	-0.000
>	Lu	175		**ug/L**		716274	716273.529
	Tl	205	**0.656**	**ug/L**	15.265	27113	0.029
	Pb	208	**0.010**	**ug/L**	1.726	1100	0.001
	Bi	209		**ug/L**		77	-0.000
	Th	232	**0.083**	**ug/L**	16.691	5879	0.006
	U	238	**0.015**	**ug/L**	20.139	1521	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	0.9999
Cr	52Linear Thru Zero	0.9999
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	0.9999
Fe	57Linear Thru Zero	0.9998
Co	59Linear Thru Zero	0.9999
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	0.9999
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9998
Pb	208Linear Thru Zero	0.9997
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9997
U	238Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		103.5			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		103.0			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		103.4			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		106.4			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Wednesday, January 06, 2010 12:25:30
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.1665
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	6186.7	6186.740	119.384	1.9
	Mg	24.0	76825.2	76825.229	558.927	0.7
	Co	58.9	137010.3	137010.291	688.984	0.5
	Rh	102.9	251351.0	251350.980	3067.286	1.2
	In	114.9	332233.7	332233.719	3053.239	0.9
	Pb	208.0	349629.3	349629.253	2386.978	0.7
⌈>	Ba	137.9	333349.1	333349.123	3921.900	1.2
⌊	Ba++	69.0	9109.0	0.027	0.000	1.1
⌈>	Ce	139.9	406646.6	406646.582	8071.774	2.0
⌊	CeO	155.9	11555.6	0.028	0.000	1.7
	Bkgd	220.0	18.3	18.300	3.054	16.7

Current Optimization File Data

Current Value	Description
0.82	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1687.50	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	21	8.8	7480.0
Co	59	21	10.0	124851.5
In	115	21	11.0	321793.6

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	595	2065	0.626
Be	9.0	9.0	2033	2070	0.656
Mg	24.0	24.0	5685	2070	0.672
Mg	25.0	25.0	5937	2070	0.638
Mg	26.0	26.0	6184	2070	0.667
Co	58.9	59.0	14190	2105	0.632
Rh	102.9	102.9	24879	2165	0.621
In	114.9	114.9	27793	2185	0.622
Ce	139.9	139.9	33865	2200	0.638
Pb	206.0	206.0	49936	2270	0.656
Pb	207.0	207.0	50171	2235	0.680
Pb	208.0	208.0	50439	2260	0.720
U	238.1	238.0	57731	2275	0.737

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Thursday, January 07, 2010 04:38:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\Blank.330

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7		ug/L		41	
	Be	9		ug/L		22	
>	Sc	45		ug/L		945591	
	Mn	55		ug/L		1933	
>	Lu	175		ug/L		676669	
	Tl	205		ug/L		5441	
	Pb	208		ug/L		1211	
	U	238		ug/L		1409	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Simple Linear	
Be	9	Simple Linear	
Sc	45	Simple Linear	
Mn	55	Simple Linear	
Lu	175	Linear Thru Zero	
Tl	205	Simple Linear	
Pb	208	Simple Linear	
U	238	Linear Thru Zero	0.9997

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45					
	Mn	55					
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, January 07, 2010 04:41:30
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\Standard 1.331

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	12.692	12291	0.013
	Be	9	**10.000**	**ug/L**	7.446	5262	0.006
>	Sc	45		**ug/L**		920749	920749.273
	Mn	55	**10.000**	**ug/L**	3.081	149855	0.161
>	Lu	175		**ug/L**		676032	676031.870
	Tl	205	**10.000**	**ug/L**	6.714	353322	0.515
	Pb	208	**10.000**	**ug/L**	1.215	529358	0.781
	U	238	**10.000**	**ug/L**	4.437	639889	0.945

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45					
	Mn	55					
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, January 07, 2010 04:44:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\Standard 2.332

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.081**	**ug/L**	15.041	128566	0.145
	Be	9	**100.037**	**ug/L**	7.361	52501	0.059
>	Sc	45		**ug/L**		887728	887728.345
	Mn	55	**99.888**	**ug/L**	4.522	1281860	1.444
>	Lu	175		**ug/L**		652333	652332.722
	Tl	205	**99.754**	**ug/L**	4.077	2695308	4.123
	Pb	208	**99.787**	**ug/L**	6.366	4187633	6.428
	U	238	**99.814**	**ug/L**	3.796	5186330	7.948

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45					
	Mn	55					
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, January 07, 2010 04:46:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 1.333

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.387**	**ug/L**	9.572	66127	0.072
	Be	9	**49.727**	**ug/L**	6.617	27180	0.029
>	Sc	45		**ug/L**		923776	923776.307
	Mn	55	**54.313**	**ug/L**	4.264	725817	0.785
>	Lu	175		**ug/L**		659367	659366.832
	Tl	205	**54.239**	**ug/L**	2.788	1484231	2.242
	Pb	208	**58.392**	**ug/L**	5.520	2478349	3.762
	U	238	**53.604**	**ug/L**	3.767	2815358	4.268

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	98.773				
	Be	9	99.455				
>	Sc	45		97.7			
	Mn	55	108.626				
>	Lu	175		97.4			
	Tl	205	108.478				
	Pb	208	116.785				
	U	238	107.207				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 1	Pb	208	ICV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, January 07, 2010 04:49:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 2.334

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.015**	**ug/L**	57.106	60	0.000
	Be	9	**0.005**	**ug/L**	194.525	24	0.000
>	Sc	45		**ug/L**		935236	935236.476
	Mn	55	**-0.006**	**ug/L**	79.667	1823	-0.000
>	Lu	175		**ug/L**		664658	664657.725
	Tl	205	**0.479**	**ug/L**	5.972	18492	0.020
	Pb	208	**0.011**	**ug/L**	6.587	1671	0.001
	U	238	**0.020**	**ug/L**	11.247	2442	0.002

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		98.9			
	Mn	55					
>	Lu	175		98.2			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Thursday, January 07, 2010 04:51:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 3.335

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.629**	**ug/L**	15.457	13868	0.015
	Be	9	**0.475**	**ug/L**	9.551	274	0.000
>	Sc	45		**ug/L**		898484	898484.299
	Mn	55	**6.171**	**ug/L**	5.403	81872	0.089
>	Lu	175		**ug/L**		671866	671865.904
	Tl	205	**1.400**	**ug/L**	5.310	44199	0.058
	Pb	208	**2.509**	**ug/L**	6.588	109551	0.162
	U	238	**0.262**	**ug/L**	3.613	15391	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	106.293				
	Be	9	95.077				
>	Sc	45		95.0			
	Mn	55	123.418				
>	Lu	175		99.3			
	Tl	205	139.962				
	Pb	208	125.473				
	U	238	130.846				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	Tl	205	CRDL is out of limits
QC Std 3	U	238	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Thursday, January 07, 2010 04:54:17
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 4.336

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.152**	**ug/L**	10.119	215	0.000
	Be	9	**0.071**	**ug/L**	21.559	53	0.000
>	Sc	45		**ug/L**		819617	819617.018
	Mn	55	**6.135**	**ug/L**	1.164	74333	0.089
>	Lu	175		**ug/L**		566238	566238.180
	Tl	205	**0.012**	**ug/L**	145.987	4827	0.000
	Pb	208	**0.190**	**ug/L**	3.697	7924	0.012
	U	238	**-0.015**	**ug/L**	7.800	502	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		86.7			
	Mn	55	105.773				
>	Lu	175		83.7			
	Tl	205					
	Pb	208	94.758				
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Thursday, January 07, 2010 04:56:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 5.337

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**22.700**	**ug/L**	9.127	27298	0.033
	Be	9	**21.475**	**ug/L**	1.187	10556	0.013
>	Sc	45		**ug/L**		828480	828479.746
	Mn	55	**26.726**	**ug/L**	2.123	321497	0.386
>	Lu	175		**ug/L**		569048	569048.086
	Tl	205	**21.268**	**ug/L**	3.344	505104	0.879
	Pb	208	**22.329**	**ug/L**	5.058	818763	1.438
	U	238	**23.770**	**ug/L**	4.026	1077880	1.893

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	113.501				
	Be	9	107.373				
>	Sc	45		87.6			
	Mn	55	103.589				
>	Lu	175		84.1			
	Tl	205	106.338				
	Pb	208	110.539				
	U	238	118.852				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, January 07, 2010 04:59:26
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 6.338

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.142**	**ug/L**	9.382	72565	0.076
	Be	9	**53.095**	**ug/L**	3.088	30160	0.031
>	Sc	45		**ug/L**		959434	959434.086
	Mn	55	**52.522**	**ug/L**	4.379	729993	0.759
>	Lu	175		**ug/L**		668671	668670.777
	Tl	205	**52.148**	**ug/L**	5.407	1444729	2.156
	Pb	208	**56.263**	**ug/L**	6.537	2420268	3.625
	U	238	**51.627**	**ug/L**	7.713	2750182	4.111

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	104.285				
	Be	9	106.190				
>	Sc	45		101.5			
	Mn	55	105.044				
>	Lu	175		98.8			
	Tl	205	104.296				
	Pb	208	112.527				
	U	238	103.254				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Pb	208	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, January 07, 2010 05:02:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 7.339

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.021**	**ug/L**	45.529	68	0.000
	Be	9	**0.006**	**ug/L**	118.132	25	0.000
>	Sc	45		**ug/L**		934775	934775.409
	Mn	55	**-0.014**	**ug/L**	62.031	1726	-0.000
>	Lu	175		**ug/L**		659941	659940.796
	Tl	205	**0.499**	**ug/L**	10.245	18886	0.021
	Pb	208	**0.005**	**ug/L**	45.528	1408	0.000
	U	238	**0.014**	**ug/L**	5.478	2128	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		98.9			
	Mn	55					
>	Lu	175		97.5			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004440
Sample Date/Time: Thursday, January 07, 2010 05:04:37
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\1202004440.340

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.098**	**ug/L**	14.841	168	0.000
	Be	9	**-0.009**	**ug/L**	22.692	16	-0.000
>	Sc	45		**ug/L**		907614	907614.139
	Mn	55	**0.168**	**ug/L**	8.563	4052	0.002
>	Lu	175		**ug/L**		660938	660938.209
	Tl	205	**0.075**	**ug/L**	17.314	7357	0.003
	Pb	208	**0.003**	**ug/L**	68.208	1303	0.000
	U	238	**-0.018**	**ug/L**	4.088	433	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		96.0			
	Mn	55					
>	Lu	175		97.7			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004441
Sample Date/Time: Thursday, January 07, 2010 05:07:11
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\1202004441.341

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**58.886**	**ug/L**	7.920	77031	0.086
	Be	9	**60.436**	**ug/L**	5.840	32244	0.036
>	Sc	45		**ug/L**		901020	901019.922
	Mn	55	**56.884**	**ug/L**	3.842	742334	0.822
>	Lu	175		**ug/L**		645652	645651.561
	Tl	205	**52.409**	**ug/L**	6.258	1401184	2.166
	Pb	208	**60.602**	**ug/L**	5.722	2517604	3.904
	U	238	**56.377**	**ug/L**	5.523	2895217	4.489

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		95.3			
	Mn	55					
>	Lu	175		95.4			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 243493001
Sample Date/Time: Thursday, January 07, 2010 05:09:45
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\243493001.342

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.203**	**ug/L**	15.531	305	0.000
	Be	9	**-0.002**	**ug/L**	194.223	20	-0.000
>	Sc	45		**ug/L**		902500	902499.874
	Mn	55	**1.030**	**ug/L**	4.731	15282	0.015
>	Lu	175		**ug/L**		659989	659988.662
	Tl	205	**0.895**	**ug/L**	8.034	29687	0.037
	Pb	208	**0.093**	**ug/L**	5.064	5110	0.006
	U	238	**-0.005**	**ug/L**	29.021	1100	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		95.4			
	Mn	55					
>	Lu	175		97.5			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004442
Sample Date/Time: Thursday, January 07, 2010 05:12:20
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\1202004442.343

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.173**	**ug/L**	21.102	265	0.000
	Be	9	**-0.012**	**ug/L**	104.109	14	-0.000
>	Sc	45		**ug/L**		904838	904837.991
	Mn	55	**1.060**	**ug/L**	4.640	15714	0.015
>	Lu	175		**ug/L**		669064	669063.513
	Tl	205	**0.222**	**ug/L**	13.554	11486	0.009
	Pb	208	**0.085**	**ug/L**	12.823	4857	0.006
	U	238	**-0.017**	**ug/L**	4.586	495	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		95.7			
	Mn	55					
>	Lu	175		98.9			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004443
Sample Date/Time: Thursday, January 07, 2010 05:14:56
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\1202004443.344

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**63.177**	**ug/L**	9.425	83824	0.092
	Be	9	**64.925**	**ug/L**	8.087	35121	0.038
>	Sc	45		**ug/L**		913968	913967.724
	Mn	55	**58.443**	**ug/L**	3.495	773973	0.845
>	Lu	175		**ug/L**		648583	648583.329
	Tl	205	**100.347**	**ug/L**	5.515	2693677	4.148
	Pb	208	**51.523**	**ug/L**	6.608	2148865	3.319
	U	238	**58.473**	**ug/L**	3.667	3017266	4.656

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		96.7			
	Mn	55					
>	Lu	175		95.8			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004444
Sample Date/Time: Thursday, January 07, 2010 05:17:31
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 936815|5|baj
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\1202004444.345

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.033**	**ug/L**	47.032	84	0.000
	Be	9	**-0.005**	**ug/L**	195.412	18	-0.000
>	Sc	45		**ug/L**		927739	927739.221
	Mn	55	**0.205**	**ug/L**	7.842	4638	0.003
>	Lu	175		**ug/L**		660648	660647.597
	Tl	205	**1.975**	**ug/L**	6.282	59125	0.082
	Pb	208	**0.009**	**ug/L**	15.673	1575	0.001
	U	238	**-0.008**	**ug/L**	12.969	978	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		98.1			
	Mn	55					
>	Lu	175		97.6			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, January 07, 2010 05:20:05
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 8.346

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**47.643**	**ug/L**	13.124	63301	0.069
	Be	9	**49.293**	**ug/L**	8.521	26739	0.029
>	Sc	45		**ug/L**		917017	917016.773
	Mn	55	**53.224**	**ug/L**	2.325	707065	0.769
>	Lu	175		**ug/L**		657167	657167.012
	Tl	205	**51.591**	**ug/L**	3.943	1406662	2.133
	Pb	208	**54.768**	**ug/L**	4.242	2318112	3.528
	U	238	**50.612**	**ug/L**	2.143	2650671	4.030

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7	95.286				
	Be	9	98.586				
>	Sc	45		97.0			
	Mn	55	106.448				
>	Lu	175		97.1			
	Tl	205	103.181				
	Pb	208	109.537				
	U	238	101.224				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, January 07, 2010 05:22:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\100106b.mth
Dataset File: c:\elandata\Dataset\100106\QC Std 9.347

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.010**	**ug/L**	40.474	53	0.000
	Be	9	**0.009**	**ug/L**	189.294	26	0.000
>	Sc	45		**ug/L**		930283	930282.855
	Mn	55	**-0.007**	**ug/L**	46.196	1806	-0.000
>	Lu	175		**ug/L**		664250	664249.757
	Tl	205	**1.039**	**ug/L**	7.709	33825	0.043
	Pb	208	**0.010**	**ug/L**	11.545	1602	0.001
	U	238	**0.018**	**ug/L**	9.737	2351	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Mn	55	Linear Thru Zero	0.9999
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9997
Pb	208	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9998

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
>	Sc	45		98.4			
	Mn	55					
>	Lu	175		98.2			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 9	Tl	205	CCB is out of limits (+/- PQL)

QC Action

QC Action Line: Continue

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Friday, January 08, 2010 10:59:59
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.1689
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	4767.6	4767.596	120.642	2.5
	Mg	24.0	49237.9	49237.914	510.851	1.0
	Co	58.9	103615.2	103615.209	338.035	0.3
	Rh	102.9	196977.6	196977.555	1320.738	0.7
	In	114.9	257255.3	257255.341	1918.410	0.7
	Pb	208.0	242068.0	242068.034	2508.523	1.0
⌈>	Ba	137.9	252609.2	252609.245	2391.730	0.9
⌊	Ba++	69.0	4450.6	0.018	0.000	2.7
⌈>	Ce	139.9	314412.9	314412.927	1289.266	0.4
⌊	CeO	155.9	6624.0	0.021	0.000	1.7
	Bkgd	220.0	25.3	25.300	2.564	10.1

Current Optimization File Data

Current Value	Description
0.85	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	19	9.5	5638.8
Co	59	19	10.3	104053.9
In	115	19	11.5	254758.5

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	595	2065	0.639
Be	9.0	9.0	2043	2070	0.662
Mg	24.0	24.0	5695	2070	0.717
Mg	25.0	25.0	5923	2070	0.660
Mg	26.0	26.0	6188	2070	0.678
Co	58.9	59.0	14188	2105	0.646
Rh	102.9	102.9	24878	2165	0.633
In	114.9	114.9	27792	2185	0.632
Ce	139.9	139.9	33864	2200	0.646
Pb	206.0	206.0	49948	2270	0.707
Pb	207.0	207.0	50159	2235	0.687
Pb	208.0	208.0	50451	2260	0.738
U	238.1	238.1	57724	2275	0.748

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Friday, January 08, 2010 11:44:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\Blank.007

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		607528	
	Tl	205		ug/L		1445	
	Pb	208		ug/L		319	
	U	238		ug/L		162	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	
Pb	208	Linear Thru Zero	
U	238	Linear Thru Zero	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Friday, January 08, 2010 11:48:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\Standard 1.008

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		604741	604740.618
	Tl	205	10.000	ug/L	1.751	271219	0.446
	Pb	208	10.000	ug/L	2.123	422596	0.698
	U	238	10.000	ug/L	1.762	530846	0.878

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Friday, January 08, 2010 11:53:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\Standard 2.009

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		591178	591178.486
	Tl	205	99.863	ug/L	1.211	2317884	3.919
	Pb	208	99.881	ug/L	1.399	3685653	6.235
	U	238	99.898	ug/L	2.702	4702114	7.956

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dil	Duplicate Rel. % Difference
>	Lu	175					
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Friday, January 08, 2010 11:58:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 1.010

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		594169	594169.434
	Tl	205	**51.723**	ug/L	0.718	1207372	2.030
	Pb	208	**54.127**	ug/L	0.791	2007845	3.379
	U	238	**52.358**	ug/L	1.189	2477818	4.170

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		97.8			
	Tl	205	103.446				
	Pb	208	108.255				
	U	238	104.716				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Friday, January 08, 2010 12:02:51
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 2.011

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		599400	599399.609
	Tl	205	0.038	ug/L	12.252	2315	0.001
	Pb	208	0.001	ug/L	34.855	361	0.000
	U	238	0.002	ug/L	6.371	257	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dil	Duplicate Rel. % Difference
>	Lu	175		98.7			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Friday, January 08, 2010 12:07:34
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 3.012

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		607676	607675.533
	Tl	205	**1.199**	ug/L	1.546	30038	0.047
	Pb	208	**2.444**	ug/L	1.576	93035	0.153
	U	238	**0.259**	ug/L	1.220	12719	0.021

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		100.0			
	Tl	205	119.893				
	Pb	208	122.223				
	U	238	129.750				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Friday, January 08, 2010 12:12:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 4.013

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		552787	552786.890
	Tl	205	0.011	ug/L	25.722	1552	0.000
	Pb	208	0.204	ug/L	1.848	7325	0.013
	U	238	-0.000	ug/L	12157.702	147	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		91.0			
	Tl	205					
	Pb	208	101.936				
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Friday, January 08, 2010 12:16:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 5.014

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		543792	543791.507
	Tl	205	**21.512**	ug/L	1.605	460248	0.844
	Pb	208	**22.242**	ug/L	2.955	754967	1.388
	U	238	**23.275**	ug/L	2.460	1007726	1.854

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		89.5			
	Tl	205	107.558				
	Pb	208	110.111				
	U	238	116.374				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Friday, January 08, 2010 12:21:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 6.015

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		594730	594729.765
	Tl	205	51.332	ug/L	1.921	1199391	2.014
	Pb	208	53.447	ug/L	1.731	1984532	3.336
	U	238	51.389	ug/L	1.351	2434149	4.093

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		97.9			
	Tl	205	102.663				
	Pb	208	106.894				
	U	238	102.777				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Friday, January 08, 2010 12:26:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 7.016

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		588893	588892.706
	Tl	205	**0.040**	ug/L	8.932	2321	0.002
	Pb	208	**0.002**	ug/L	48.655	368	0.000
	U	238	**0.001**	ug/L	16.215	221	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		96.9			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004440
Sample Date/Time: Friday, January 08, 2010 12:31:06
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\1202004440.017

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		568721	568721.282
	Tl	205	-0.011	ug/L	9.216	1111	-0.000
	Pb	208	0.024	ug/L	7.555	1139	0.001
	U	238	0.001	ug/L	28.325	214	0.000

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		93.6			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004441
Sample Date/Time: Friday, January 08, 2010 12:35:52
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\1202004441.018

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		564445	564444.617
	Tl	205	55.563	ug/L	4.166	1231476	2.180
	Pb	208	62.135	ug/L	1.952	2189150	3.879
	U	238	59.489	ug/L	1.847	2673785	4.738

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		92.9			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 243493001
Sample Date/Time: Friday, January 08, 2010 12:40:38
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\243493001.019

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		575978	575978.360
	Tl	205	**0.200**	ug/L	1.837	5901	0.008
	Pb	208	**0.112**	ug/L	3.173	4328	0.007
	U	238	**0.011**	ug/L	6.547	644	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		94.8			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004442
Sample Date/Time: Friday, January 08, 2010 12:45:25
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\1202004442.020

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		571164	571164.345
	Tl	205	0.048	ug/L	11.380	2427	0.002
	Pb	208	0.112	ug/L	1.929	4285	0.007
	U	238	0.005	ug/L	8.542	371	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		94.0			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004443
Sample Date/Time: Friday, January 08, 2010 12:50:12
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 936815|1|baj
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\1202004443.021

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		571694	571693.567
	Tl	205	**109.249**	ug/L	4.082	2452028	4.287
	Pb	208	**53.143**	ug/L	2.279	1896488	3.317
	U	238	**62.238**	ug/L	0.457	2833742	4.957

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		94.1			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202004444
Sample Date/Time: Friday, January 08, 2010 12:55:00
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 936815|5|baj
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\1202004444.022

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		590288	590287.588
	Tl	205	**0.507**	ug/L	2.318	13158	0.020
	Pb	208	**0.035**	ug/L	1.783	1597	0.002
	U	238	**0.014**	ug/L	6.132	815	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		97.2			
	Tl	205					
	Pb	208					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Friday, January 08, 2010 12:59:45
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 8.023

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
>	Lu	175		ug/L		592727	592726.509
	Tl	205	51.524	ug/L	1.968	1199648	2.022
	Pb	208	53.546	ug/L	2.826	1980730	3.343
	U	238	50.730	ug/L	1.589	2394311	4.040

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
>	Lu	175		97.6			
	Tl	205	103.047				
	Pb	208	107.091				
	U	238	101.460				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Friday, January 08, 2010 13:04:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\tl pb and u.mth
Dataset File: C:\elandata\Dataset\100108\QC Std 9.024

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
[>	Lu	175		ug/L		584971	584971.156
|	Tl	205	0.148	ug/L	1.711	4779	0.006
|	Pb	208	0.003	ug/L	24.273	407	0.000
[	U	238	0.002	ug/L	27.140	248	0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
[>	Lu	175		96.3			
|	Tl	205					
|	Pb	208					
[	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS #5 Daily Performance Report

Sample ID: Sample
Sample Date/Time: Thursday, January 14, 2010 09:35:31
Sample Description:
Method File: c:\elandata\Method\Daily2.mth
Dataset File: c:\elandata\Dataset\default2\Sample.1704
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35
Number of Replicates: 5

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	2731.1	2731.061	99.800	3.7
	Mg	24.0	37746.2	37746.210	571.608	1.5
	Co	58.9	90605.2	90605.223	450.984	0.5
	Rh	102.9	161043.3	161043.306	1599.952	1.0
	In	114.9	211491.0	211491.038	1276.766	0.6
	Pb	208.0	212686.2	212686.233	1822.611	0.9
⌈>	Ba	137.9	211181.2	211181.233	2960.897	1.4
⌊	Ba++	69.0	3538.3	0.017	0.001	3.4
⌈>	Ce	139.9	253488.9	253488.916	3378.609	1.3
⌊	CeO	155.9	5495.8	0.022	0.000	2.0
	Bkgd	220.0	22.6	22.600	2.485	11.0

Current Optimization File Data

Current Value	Description
0.85	Nebulizer Gas Flow
8.75	Lens Voltage
1450.00	ICP RF Power
-1718.75	Analog Stage Voltage
1200.00	Pulse Stage Voltage
275.00	Discriminator Threshold
-6.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	19	8.8	4723.4
Co	59	19	9.5	88973.5
In	115	19	11.3	205140.4

ICPMS #5 Instrument Tuning Report

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width
He	3.0	3.0	593	2050	0.638
Be	9.0	9.0	2058	2070	0.619
Mg	24.0	24.0	5685	2070	0.621
Mg	25.0	25.0	5937	2070	0.600
Mg	26.0	26.0	6182	2070	0.633
Co	58.9	58.9	14190	2105	0.616
Rh	102.9	102.9	24879	2165	0.601
In	114.9	114.9	27793	2185	0.599
Ce	139.9	139.9	33877	2200	0.622
Pb	206.0	206.0	49948	2270	0.693
Pb	207.0	207.0	50159	2235	0.651
Pb	208.0	208.0	50463	2260	0.697
U	238.1	238.1	57728	2275	0.711

ICPMS#5 - Summary Report

Sample ID: Blank
Sample Date/Time: Thursday, January 14, 2010 21:13:39
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\Blank.040

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7		ug/L		59	
|	Be	9		ug/L		16	
|	B	11		ug/L		2855	
|	Na	23		ug/L		30032	
|	Mg	24		ug/L		4001	
|	Al	27		ug/L		7669	
|	P	31		ug/L		10004	
|	K	39		ug/L		659216	
|	Ca	43		ug/L		373	
|>	Sc	45		ug/L		550453	
|	Ti	47		ug/L		524	
|	V	51		ug/L		6014	
|	Cr	52		ug/L		-4487	
|	Cr	53		ug/L		122447	
|	Mn	55		ug/L		1261	
|	Fe	57		ug/L		5556	
|	Co	59		ug/L		194	
|	Ni	60		ug/L		244	
|	Cu	63		ug/L		531	
⌊	Cu	65		ug/L		205	
⌈	Zn	66		ug/L		270	
|	Zn	67		ug/L		13823	
|	Zn	68		ug/L		1527	
|>	Ge	74		ug/L		361048	
|	As	75		ug/L		-340	
|	Se	77		ug/L		6361	
|	Se	82		ug/L		-15	
⌊	Kr	83		ug/L		111	
⌈	Sr	88		ug/L		252	
|	Y	89		ug/L		54	
|	Mo	98		ug/L		133	
|	Ag	107		ug/L		72	
|	Cd	111		ug/L		26	
|	Cd	114		ug/L		58	
|>	In	115		ug/L		223880	
|	Sn	120		ug/L		308	
|	Sb	121		ug/L		642	
⌊	Sb	123		ug/L		532	
⌈	Ba	135		ug/L		49	
|	Ba	137		ug/L		64	
|	Ho	165		ug/L		20	
|>	Lu	175		ug/L		468237	
|	Tl	205		ug/L		5963	
|	Pb	208		ug/L		772	
|	Bi	209		ug/L		210	
|	Th	232		ug/L		1876	
⌊	U	238		ug/L		817	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	0.9999
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	0.9999
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9998
Pb	208	Linear Thru Zero	0.9999
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9998
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, January 14, 2010 21:19:46
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\Standard 1.041

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**10.000**	**ug/L**	5.488	10396	0.019
|	Be	9	**10.000**	**ug/L**	4.943	3158	0.006
|	B	11	**20.000**	**ug/L**	4.196	8995	0.011
|	Na	23	**1000.000**	**ug/L**	3.529	4327412	7.803
|	Mg	24	**1000.000**	**ug/L**	7.502	3063584	5.557
|	Al	27	**1000.000**	**ug/L**	6.388	4364048	7.909
|	P	31	**1000.000**	**ug/L**	2.935	247791	0.432
|	K	39	**1000.000**	**ug/L**	1.714	6058747	9.799
|	Ca	43	**1000.000**	**ug/L**	2.716	12618	0.022
|>	Sc	45		**ug/L**		550918	550918.327
|	Ti	47	**10.000**	**ug/L**	2.981	6400	0.011
|	V	51	**10.000**	**ug/L**	3.578	73616	0.123
|	Cr	52	**10.000**	**ug/L**	3.324	47311	0.094
|	Cr	53		**ug/L**		120710	-0.003
|	Mn	55	**10.000**	**ug/L**	0.881	88861	0.159
|	Fe	57	**1000.000**	**ug/L**	1.237	182329	0.321
|	Co	59	**10.000**	**ug/L**	3.554	66480	0.120
|	Ni	60	**10.000**	**ug/L**	3.116	14381	0.026
|	Cu	63		**ug/L**		34831	0.062
⌊	Cu	65	**10.000**	**ug/L**	0.172	16669	0.030
⌈	Zn	66	**10.000**	**ug/L**	1.479	10987	0.029
|	Zn	67		**ug/L**		14505	0.001
|	Zn	68		**ug/L**		8977	0.020
|>	Ge	74		**ug/L**		366210	366209.788
|	As	75	**10.000**	**ug/L**	4.423	10485	0.030
|	Se	77		**ug/L**		6547	0.000
|	Se	82	**10.000**	**ug/L**	9.130	998	0.003
⌊	Kr	83		**ug/L**		114	0.000
⌈	Sr	88	**10.000**	**ug/L**	3.018	128716	0.559
|	Y	89		**ug/L**		69	0.000
|	Mo	98	**10.000**	**ug/L**	1.911	30136	0.131
|	Ag	107	**10.000**	**ug/L**	2.981	54499	0.237
|	Cd	111	**10.000**	**ug/L**	2.547	13016	0.057
|	Cd	114		**ug/L**		31532	0.137
|>	In	115		**ug/L**		229656	229656.392
|	Sn	120	**10.000**	**ug/L**	1.690	58429	0.253
|	Sb	121	**10.000**	**ug/L**	1.317	47706	0.205
⌊	Sb	123		**ug/L**		37635	0.161
⌈	Ba	135		**ug/L**		14881	0.031
|	Ba	137	**10.000**	**ug/L**	3.314	26666	0.057
|	Ho	165		**ug/L**		19	-0.000
|>	Lu	175		**ug/L**		470979	470978.692
|	Tl	205	**10.000**	**ug/L**	2.169	234082	0.484
|	Pb	208	**10.000**	**ug/L**	2.460	350427	0.743
|	Bi	209		**ug/L**		251	0.000
|	Th	232	**10.000**	**ug/L**	1.230	446888	0.945
⌊	U	238	**10.000**	**ug/L**	2.254	469365	0.995

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	1.0000
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	1.0000
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	1.0000
U	238Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45					
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74					
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115					
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175					
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, January 14, 2010 21:25:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\Standard 2.042

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**100.042**	**ug/L**	5.445	103674	0.196
	Be	9	**100.027**	**ug/L**	4.944	31028	0.059
	B	11	**200.249**	**ug/L**	5.994	70129	0.127
	Na	23	**10006.611**	**ug/L**	5.281	44238971	83.604
	Mg	24	**10005.054**	**ug/L**	5.588	30976237	58.554
	Al	27	**10006.558**	**ug/L**	2.066	44830171	84.698
	P	31	**9995.985**	**ug/L**	2.083	2204378	4.148
	K	39	**9999.448**	**ug/L**	6.852	52164196	97.447
	Ca	43	**10000.815**	**ug/L**	2.019	118944	0.224
>	Sc	45		**ug/L**		529263	529263.418
	Ti	47	**100.016**	**ug/L**	2.173	57868	0.108
	V	51	**99.975**	**ug/L**	3.838	638946	1.197
	Cr	52	**99.993**	**ug/L**	3.044	489500	0.934
	Cr	53		**ug/L**		165855	0.091
	Mn	55	**99.963**	**ug/L**	2.185	811780	1.532
	Fe	57	**9990.581**	**ug/L**	4.674	1554617	2.930
	Co	59	**99.971**	**ug/L**	3.797	618391	1.169
	Ni	60	**99.985**	**ug/L**	2.538	134050	0.253
	Cu	63		**ug/L**		320261	0.604
	Cu	65	**99.987**	**ug/L**	2.260	156304	0.295
	Zn	66	**99.974**	**ug/L**	1.725	101612	0.285
	Zn	67		**ug/L**		28288	0.041
	Zn	68		**ug/L**		72630	0.200
>	Ge	74		**ug/L**		355662	355661.794
	As	75	**99.972**	**ug/L**	1.640	101872	0.287
	Se	77		**ug/L**		12912	0.019
	Se	82	**99.974**	**ug/L**	1.996	9566	0.027
	Kr	83		**ug/L**		131	0.000
	Sr	88	**99.953**	**ug/L**	1.340	1170230	5.340
	Y	89		**ug/L**		158	0.000
	Mo	98	**100.029**	**ug/L**	1.927	294867	1.345
	Ag	107	**99.985**	**ug/L**	0.209	511818	2.336
	Cd	111	**100.018**	**ug/L**	2.428	126195	0.576
	Cd	114		**ug/L**		299495	1.367
>	In	115		**ug/L**		219108	219108.055
	Sn	120	**100.003**	**ug/L**	2.801	556384	2.539
	Sb	121	**100.039**	**ug/L**	2.854	467824	2.133
	Sb	123		**ug/L**		368329	1.679
	Ba	135		**ug/L**		146669	0.324
	Ba	137	**100.001**	**ug/L**	0.139	256194	0.565
	Ho	165		**ug/L**		31	0.000
>	Lu	175		**ug/L**		452932	452931.923
	Tl	205	**99.841**	**ug/L**	1.540	1896302	4.174
	Pb	208	**99.908**	**ug/L**	0.483	3077204	6.792
	Bi	209		**ug/L**		464	0.001
	Th	232	**99.853**	**ug/L**	0.496	3726983	8.225
	U	238	**99.874**	**ug/L**	1.438	3999735	8.829

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	0.9999
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, January 14, 2010 21:31:55
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 1.043

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**53.077**	**ug/L**	5.197	54698	0.104
	Be	9	**52.982**	**ug/L**	3.109	16341	0.031
	B	11	**102.531**	**ug/L**	2.635	37005	0.065
	Na	23	**4866.037**	**ug/L**	17.142	21370649	40.655
	Mg	24	**5042.141**	**ug/L**	7.750	15504075	29.509
	Al	27	**4598.692**	**ug/L**	6.418	20452654	38.924
	P	31	**5022.867**	**ug/L**	1.583	1104728	2.085
	K	39	**5231.990**	**ug/L**	4.268	27417359	50.987
	Ca	43	**5082.778**	**ug/L**	2.549	60199	0.114
>	Sc	45		**ug/L**		525421	525420.788
	Ti	47	**49.962**	**ug/L**	2.566	28960	0.054
	V	51	**51.541**	**ug/L**	0.734	330021	0.617
	Cr	52	**51.296**	**ug/L**	0.723	247320	0.479
	Cr	53		**ug/L**		138672	0.041
	Mn	55	**53.194**	**ug/L**	0.425	429578	0.815
	Fe	57	**5264.705**	**ug/L**	1.832	816455	1.544
	Co	59	**51.038**	**ug/L**	1.374	313709	0.597
	Ni	60	**52.469**	**ug/L**	1.439	69975	0.133
	Cu	63		**ug/L**		165466	0.314
	Cu	65	**51.596**	**ug/L**	1.377	80196	0.152
	Zn	66	**52.937**	**ug/L**	1.182	53484	0.151
	Zn	67		**ug/L**		20553	0.020
	Zn	68		**ug/L**		38753	0.106
>	Ge	74		**ug/L**		352680	352679.780
	As	75	**49.591**	**ug/L**	0.976	49945	0.143
	Se	77		**ug/L**		9352	0.009
	Se	82	**51.010**	**ug/L**	2.240	4834	0.014
	Kr	83		**ug/L**		113	0.000
	Sr	88	**53.934**	**ug/L**	1.332	627282	2.882
	Y	89		**ug/L**		76	0.000
	Mo	98	**50.152**	**ug/L**	1.732	146903	0.675
	Ag	107	**50.650**	**ug/L**	0.494	257544	1.183
	Cd	111	**51.437**	**ug/L**	2.444	64467	0.296
	Cd	114		**ug/L**		154568	0.710
>	In	115		**ug/L**		217630	217629.837
	Sn	120	**51.228**	**ug/L**	2.827	283218	1.300
	Sb	121	**51.974**	**ug/L**	3.476	241659	1.108
	Sb	123		**ug/L**		190673	0.874
	Ba	135		**ug/L**		74883	0.165
	Ba	137	**51.123**	**ug/L**	1.527	131233	0.289
	Ho	165		**ug/L**		48	0.000
>	Lu	175		**ug/L**		453751	453750.730
	Tl	205	**53.808**	**ug/L**	1.493	1026420	2.249
	Pb	208	**53.719**	**ug/L**	0.474	1657896	3.652
	Bi	209		**ug/L**		509	0.001
	Th	232	**52.126**	**ug/L**	0.743	1949939	4.293
	U	238	**53.297**	**ug/L**	1.407	2138601	4.712

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	106.154				
|	Be	9	105.963				
|	B	11	102.531				
|	Na	23	97.321				
|	Mg	24	100.843				
|	Al	27	91.063				
|	P	31	100.457				
|	K	39	104.640				
|	Ca	43	101.656				
|>	Sc	45			95.5		
|	Ti	47	99.925				
|	V	51	103.082				
|	Cr	52	102.591				
|	Cr	53					
|	Mn	55	106.388				
|	Fe	57	105.294				
|	Co	59	102.075				
|	Ni	60	104.938				
|	Cu	63					
⌊	Cu	65	103.191				
⌈	Zn	66	105.873				
|	Zn	67					
|	Zn	68					
|>	Ge	74			97.7		
|	As	75	99.183				
|	Se	77					
|	Se	82	102.019				
⌊	Kr	83					
⌈	Sr	88	107.867				
|	Y	89					
|	Mo	98	100.305				
|	Ag	107	101.299				
|	Cd	111	102.874				
|	Cd	114					
|>	In	115			97.2		
|	Sn	120	102.456				
|	Sb	121	103.947				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	102.245				
|	Ho	165					
|>	Lu	175			96.9		
|	Tl	205	107.615				
|	Pb	208	107.438				
|	Bi	209					
|	Th	232	104.251				
⌊	U	238	106.595				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, January 14, 2010 21:38:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 2.044

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.014**	**ug/L**	107.046	72	0.000
	Be	9	**0.013**	**ug/L**	125.749	20	0.000
	B	11	**0.353**	**ug/L**	270.693	2912	0.000
	Na	23	**0.086**	**ug/L**	2571.929	29700	0.001
	Mg	24	**0.246**	**ug/L**	401.520	4668	0.001
	Al	27	**1.281**	**ug/L**	12.201	13340	0.011
	P	31	**-2.131**	**ug/L**	190.529	9310	-0.001
	K	39	**-2.227**	**ug/L**	278.994	633071	-0.022
	Ca	43	**-0.007**	**ug/L**	20163.163	365	-0.000
>	Sc	45		**ug/L**		538578	538577.511
	Ti	47	**-0.082**	**ug/L**	33.779	465	-0.000
	V	51	**0.109**	**ug/L**	281.504	6578	0.001
	Cr	52	**0.037**	**ug/L**	102.944	-4205	0.000
	Cr	53		**ug/L**		113271	-0.012
	Mn	55	**-0.003**	**ug/L**	275.542	1211	-0.000
	Fe	57	**-1.039**	**ug/L**	53.444	5273	-0.000
	Co	59	**0.003**	**ug/L**	42.029	209	0.000
	Ni	60	**-0.010**	**ug/L**	73.519	225	-0.000
	Cu	63		**ug/L**		452	-0.000
	Cu	65	**0.010**	**ug/L**	74.881	216	0.000
	Zn	66	**-0.005**	**ug/L**	531.718	258	-0.000
	Zn	67		**ug/L**		12626	-0.002
	Zn	68		**ug/L**		1386	-0.000
>	Ge	74		**ug/L**		352464	352463.831
	As	75	**0.346**	**ug/L**	69.101	19	0.001
	Se	77		**ug/L**		5869	-0.001
	Se	82	**0.030**	**ug/L**	899.992	-12	0.000
	Kr	83		**ug/L**		109	0.000
	Sr	88	**0.003**	**ug/L**	114.126	281	0.000
	Y	89		**ug/L**		48	-0.000
	Mo	98	**0.022**	**ug/L**	44.336	197	0.000
	Ag	107	**0.003**	**ug/L**	43.473	88	0.000
	Cd	111	**-0.003**	**ug/L**	235.534	22	-0.000
	Cd	114		**ug/L**		55	-0.000
>	In	115		**ug/L**		221836	221835.897
	Sn	120	**0.060**	**ug/L**	32.897	641	0.002
	Sb	121	**0.612**	**ug/L**	27.797	3523	0.013
	Sb	123		**ug/L**		2732	0.010
	Ba	135		**ug/L**		48	0.000
	Ba	137	**0.004**	**ug/L**	38.681	72	0.000
	Ho	165		**ug/L**		22	0.000
>	Lu	175		**ug/L**		459042	459042.300
	Tl	205	**0.132**	**ug/L**	51.614	8363	0.006
	Pb	208	**0.002**	**ug/L**	53.866	806	0.000
	Bi	209		**ug/L**		222	0.000
	Th	232	**0.053**	**ug/L**	38.896	3848	0.004
	U	238	**0.006**	**ug/L**	42.248	1060	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		97.8			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		97.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		99.1			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		98.0			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Thursday, January 14, 2010 21:44:09
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 3.045

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**11.211**	**ug/L**	5.420	11772	0.022
	Be	9	**0.521**	**ug/L**	3.098	179	0.000
	B	11	**13.082**	**ug/L**	5.528	7209	0.008
	Na	23	**275.443**	**ug/L**	5.821	1257478	2.301
	Mg	24	**16.068**	**ug/L**	15.448	54104	0.094
	Al	27	**34.857**	**ug/L**	8.696	164952	0.295
	P	31	**55.597**	**ug/L**	7.604	22005	0.023
	K	39	**322.014**	**ug/L**	12.680	2314452	3.138
	Ca	43	**219.324**	**ug/L**	1.325	2984	0.005
>	Sc	45		**ug/L**		533612	533612.342
	Ti	47	**8.701**	**ug/L**	1.609	5542	0.009
	V	51	**10.865**	**ug/L**	2.480	75254	0.130
	Cr	52	**10.784**	**ug/L**	2.257	49369	0.101
	Cr	53		**ug/L**		120716	0.004
	Mn	55	**5.831**	**ug/L**	1.051	48919	0.089
	Fe	57	**115.952**	**ug/L**	2.434	23532	0.034
	Co	59	**1.102**	**ug/L**	2.945	7062	0.013
	Ni	60	**2.181**	**ug/L**	2.470	3181	0.006
	Cu	63		**ug/L**		4156	0.007
	Cu	65	**1.126**	**ug/L**	0.729	1971	0.003
	Zn	66	**11.167**	**ug/L**	1.177	11508	0.032
	Zn	67		**ug/L**		14405	0.003
	Zn	68		**ug/L**		9142	0.022
>	Ge	74		**ug/L**		353228	353227.757
	As	75	**6.146**	**ug/L**	1.599	5907	0.018
	Se	77		**ug/L**		6284	0.000
	Se	82	**5.324**	**ug/L**	3.740	492	0.001
	Kr	83		**ug/L**		115	0.000
	Sr	88	**11.615**	**ug/L**	0.315	139665	0.621
	Y	89		**ug/L**		55	0.000
	Mo	98	**0.535**	**ug/L**	2.479	1749	0.007
	Ag	107	**1.037**	**ug/L**	0.341	5513	0.024
	Cd	111	**1.099**	**ug/L**	1.675	1447	0.006
	Cd	114		**ug/L**		3321	0.015
>	In	115		**ug/L**		224649	224648.543
	Sn	120	**5.387**	**ug/L**	0.537	31028	0.137
	Sb	121	**3.232**	**ug/L**	1.950	16123	0.069
	Sb	123		**ug/L**		12757	0.054
	Ba	135		**ug/L**		3213	0.007
	Ba	137	**2.115**	**ug/L**	1.446	5546	0.012
	Ho	165		**ug/L**		23	0.000
>	Lu	175		**ug/L**		458454	458454.239
	Tl	205	**1.194**	**ug/L**	1.784	28729	0.050
	Pb	208	**2.394**	**ug/L**	0.662	75367	0.163
	Bi	209		**ug/L**		219	0.000
	Th	232	**1.275**	**ug/L**	2.587	49975	0.105
	U	238	**0.252**	**ug/L**	3.235	11005	0.022

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
⌈	Li	7	112.107				
|	Be	9	104.281				
|	B	11	87.215				
|	Na	23	110.177				
|	Mg	24	107.119				
|	Al	27	116.191				
|	P	31	111.195				
|	K	39	107.338				
|	Ca	43	109.662				
|>	Sc	45		96.9			
|	Ti	47	87.014				
|	V	51	108.650				
|	Cr	52	107.845				
|	Cr	53					
|	Mn	55	116.629				
|	Fe	57	115.952				
|	Co	59	110.194				
|	Ni	60	109.059				
|	Cu	63					
⌊	Cu	65	112.578				
⌈	Zn	66	111.671				
|	Zn	67					
|	Zn	68					
|>	Ge	74		97.8			
|	As	75	122.916				
|	Se	77					
|	Se	82	106.480				
⌊	Kr	83					
⌈	Sr	88	116.146				
|	Y	89					
|	Mo	98	106.915				
|	Ag	107	103.688				
|	Cd	111	109.877				
|	Cd	114					
|>	In	115		100.3			
|	Sn	120	107.741				
|	Sb	121	107.722				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	105.751				
|	Ho	165					
|>	Lu	175		97.9			
|	Tl	205	119.442				
|	Pb	208	119.687				
|	Bi	209					
|	Th	232	127.487				
⌊	U	238	125.920				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Thursday, January 14, 2010 21:50:15
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 4.046

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.160**	**ug/L**	29.887	218	0.000
	Be	9	**0.077**	**ug/L**	44.206	39	0.000
	B	11	**-2.900**	**ug/L**	11.159	1731	-0.002
	Na	23	**92851.786**	**ug/L**	8.268	402451749	775.769
	Mg	24	**100721.935**	**ug/L**	4.575	305847788	589.472
	Al	27	**90382.891**	**ug/L**	4.502	396889334	765.021
	P	31	**94733.371**	**ug/L**	1.789	20401733	39.316
	K	39	**97394.823**	**ug/L**	2.582	492978359	949.139
	Ca	43	**92915.378**	**ug/L**	1.382	1080314	2.082
>	Sc	45		**ug/L**		518717	518717.220
	Ti	47	**1381.252**	**ug/L**	1.615	777101	1.497
	V	51	**0.400**	**ug/L**	91.363	8142	0.005
	Cr	52	**2.895**	**ug/L**	2.225	9796	0.027
	Cr	53		**ug/L**		92929	-0.043
	Mn	55	**5.918**	**ug/L**	1.760	48229	0.091
	Fe	57	**94773.123**	**ug/L**	0.697	14421291	27.794
	Co	59	**0.291**	**ug/L**	3.215	1950	0.003
	Ni	60	**2.810**	**ug/L**	4.834	3915	0.007
	Cu	63		**ug/L**		6615	0.012
	Cu	65	**2.885**	**ug/L**	3.088	4608	0.009
	Zn	66	**3.796**	**ug/L**	3.766	3924	0.011
	Zn	67		**ug/L**		11462	-0.004
	Zn	68		**ug/L**		1870	0.001
>	Ge	74		**ug/L**		339308	339308.360
	As	75	**0.018**	**ug/L**	1751.563	-299	0.000
	Se	77		**ug/L**		6830	0.003
	Se	82	**-0.940**	**ug/L**	30.644	-100	-0.000
	Kr	83		**ug/L**		274	0.000
	Sr	88	**1.241**	**ug/L**	0.753	14051	0.066
	Y	89		**ug/L**		420	0.002
	Mo	98	**1998.934**	**ug/L**	0.689	5601640	26.886
	Ag	107	**0.062**	**ug/L**	9.754	369	0.001
	Cd	111	**0.397**	**ug/L**	51.964	501	0.002
	Cd	114		**ug/L**		7629	0.036
>	In	115		**ug/L**		208339	208339.159
	Sn	120	**0.095**	**ug/L**	7.357	786	0.002
	Sb	121	**0.107**	**ug/L**	22.176	1071	0.002
	Sb	123		**ug/L**		894	0.002
	Ba	135		**ug/L**		998	0.002
	Ba	137	**0.700**	**ug/L**	4.890	1753	0.004
	Ho	165		**ug/L**		1094	0.003
>	Lu	175		**ug/L**		428036	428036.352
	Tl	205	**-0.091**	**ug/L**	10.183	3823	-0.004
	Pb	208	**0.178**	**ug/L**	0.167	5874	0.012
	Bi	209		**ug/L**		1260	0.002
	Th	232	**0.003**	**ug/L**	259.972	1830	0.000
	U	238	**-0.014**	**ug/L**	3.348	226	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23	92.852				
|	Mg	24	100.722				
|	Al	27	90.383				
|	P	31	94.733				
|	K	39	97.395				
|	Ca	43	92.915				
\>	Sc	45			94.2		
|	Ti	47	69.063				
|	V	51					
|	Cr	52	78.257				
|	Cr	53					
|	Mn	55	102.032				
|	Fe	57	94.773				
|	Co	59	116.584				
|	Ni	60	104.061				
|	Cu	63					
⌊	Cu	65	99.485				
⌈	Zn	66	105.436				
|	Zn	67					
|	Zn	68					
\>	Ge	74			94.0		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88	103.432				
|	Y	89					
|	Mo	98	99.947				
|	Ag	107					
|	Cd	111	99.278				
|	Cd	114					
\>	In	115			93.1		
|	Sn	120					
|	Sb	121	106.769				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	104.519				
|	Ho	165					
\>	Lu	175			91.4		
|	Tl	205					
|	Pb	208	88.799				
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 4	Ti	47	ICSA is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Thursday, January 14, 2010 21:56:21
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 5.047

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**21.805**	**ug/L**	3.638	21996	0.043
	Be	9	**20.865**	**ug/L**	1.258	6301	0.012
	B	11	**15.053**	**ug/L**	0.557	7586	0.010
	Na	23	**95041.136**	**ug/L**	7.081	407981620	794.060
	Mg	24	**93518.340**	**ug/L**	2.871	281168918	547.313
	Al	27	**92749.094**	**ug/L**	3.122	403293644	785.049
	P	31	**92868.391**	**ug/L**	1.974	19807817	38.542
	K	39	**97339.381**	**ug/L**	4.990	487815350	948.598
	Ca	43	**93243.731**	**ug/L**	0.392	1073855	2.090
>	Sc	45		**ug/L**		513724	513723.906
	Ti	47	**1387.845**	**ug/L**	0.668	773468	1.505
	V	51	**21.065**	**ug/L**	1.626	135191	0.252
	Cr	52	**22.965**	**ug/L**	1.588	105943	0.214
	Cr	53		**ug/L**		101817	-0.024
	Mn	55	**26.554**	**ug/L**	2.045	210260	0.407
	Fe	57	**96876.618**	**ug/L**	2.372	14599799	28.411
	Co	59	**19.840**	**ug/L**	1.720	119344	0.232
	Ni	60	**21.967**	**ug/L**	0.724	28776	0.056
	Cu	63		**ug/L**		64435	0.124
	Cu	65	**21.393**	**ug/L**	1.028	32626	0.063
	Zn	66	**23.031**	**ug/L**	1.067	22366	0.066
	Zn	67		**ug/L**		13956	0.003
	Zn	68		**ug/L**		14815	0.040
>	Ge	74		**ug/L**		336809	336809.030
	As	75	**21.500**	**ug/L**	3.484	20499	0.062
	Se	77		**ug/L**		8362	0.007
	Se	82	**19.765**	**ug/L**	3.717	1779	0.005
	Kr	83		**ug/L**		272	0.001
	Sr	88	**23.864**	**ug/L**	1.383	261172	1.275
	Y	89		**ug/L**		460	0.002
	Mo	98	**2033.868**	**ug/L**	1.115	5598246	27.356
	Ag	107	**19.490**	**ug/L**	1.125	93230	0.455
	Cd	111	**20.098**	**ug/L**	1.753	23707	0.116
	Cd	114		**ug/L**		62622	0.306
>	In	115		**ug/L**		204637	204637.417
	Sn	120	**20.856**	**ug/L**	0.870	108619	0.529
	Sb	121	**21.945**	**ug/L**	1.811	96323	0.468
	Sb	123		**ug/L**		75783	0.368
	Ba	135		**ug/L**		28251	0.066
	Ba	137	**20.658**	**ug/L**	2.754	50337	0.117
	Ho	165		**ug/L**		1126	0.003
>	Lu	175		**ug/L**		430451	430450.696
	Tl	205	**21.010**	**ug/L**	1.180	383590	0.878
	Pb	208	**21.317**	**ug/L**	1.046	624522	1.449
	Bi	209		**ug/L**		1735	0.004
	Th	232	**23.017**	**ug/L**	0.787	817770	1.896
	U	238	**23.212**	**ug/L**	1.782	883934	2.052

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	109.027				
|	Be	9	104.326				
|	B	11	75.266				
|	Na	23	95.041				
|	Mg	24	93.518				
|	Al	27	92.749				
|	P	31	92.868				
|	K	39	97.339				
|	Ca	43	93.244				
|>	Sc	45			93.3		
|	Ti	47	69.392				
|	V	51	105.325				
|	Cr	52	96.897				
|	Cr	53					
|	Mn	55	102.923				
|	Fe	57	96.877				
|	Co	59	97.974				
|	Ni	60	96.769				
|	Cu	63					
⌊	Cu	65	93.419				
⌈	Zn	66	97.589				
|	Zn	67					
|	Zn	68					
|>	Ge	74			93.3		
|	As	75	107.498				
|	Se	77					
|	Se	82	98.823				
⌊	Kr	83					
⌈	Sr	88	112.566				
|	Y	89					
|	Mo	98	101.693				
|	Ag	107	97.451				
|	Cd	111	98.519				
|	Cd	114					
|>	In	115			91.4		
|	Sn	120	104.281				
|	Sb	121	109.179				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	99.943				
|	Ho	165					
|>	Lu	175			91.9		
|	Tl	205	105.052				
|	Pb	208	105.529				
|	Bi	209					
|	Th	232	115.085				
⌊	U	238	116.060				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 5	B	11	ICSAB is out of limits
QC Std 5	Ti	47	ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, January 14, 2010 22:02:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 6.048

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.418**	**ug/L**	5.399	57132	0.109
	Be	9	**54.684**	**ug/L**	2.258	16874	0.032
	B	11	**99.388**	**ug/L**	0.709	35982	0.063
	Na	23	**4543.950**	**ug/L**	3.722	19988181	37.964
	Mg	24	**4972.870**	**ug/L**	3.042	15304622	29.104
	Al	27	**4695.557**	**ug/L**	8.014	20908516	39.744
	P	31	**4855.473**	**ug/L**	0.636	1069050	2.015
	K	39	**4985.637**	**ug/L**	5.920	26171115	48.586
	Ca	43	**4879.572**	**ug/L**	0.606	57852	0.109
>	Sc	45		**ug/L**		525774	525774.132
	Ti	47	**48.599**	**ug/L**	0.516	28202	0.053
	V	51	**49.536**	**ug/L**	2.632	317622	0.593
	Cr	52	**50.279**	**ug/L**	1.109	242508	0.469
	Cr	53		**ug/L**		130795	0.026
	Mn	55	**51.251**	**ug/L**	1.378	414216	0.786
	Fe	57	**5168.306**	**ug/L**	2.314	802177	1.516
	Co	59	**49.784**	**ug/L**	1.517	306227	0.582
	Ni	60	**50.742**	**ug/L**	0.842	67729	0.128
	Cu	63		**ug/L**		160652	0.305
	Cu	65	**51.013**	**ug/L**	1.582	79344	0.151
	Zn	66	**51.666**	**ug/L**	0.132	52148	0.147
	Zn	67		**ug/L**		19409	0.017
	Zn	68		**ug/L**		37318	0.102
>	Ge	74		**ug/L**		352263	352262.916
	As	75	**49.313**	**ug/L**	1.267	49608	0.142
	Se	77		**ug/L**		9071	0.008
	Se	82	**50.067**	**ug/L**	1.685	4739	0.013
	Kr	83		**ug/L**		122	0.000
	Sr	88	**51.778**	**ug/L**	1.543	608439	2.767
	Y	89		**ug/L**		94	0.000
	Mo	98	**49.245**	**ug/L**	0.180	145756	0.662
	Ag	107	**48.679**	**ug/L**	0.993	250062	1.137
	Cd	111	**49.395**	**ug/L**	0.634	62560	0.284
	Cd	114		**ug/L**		148830	0.677
>	In	115		**ug/L**		219858	219857.516
	Sn	120	**49.777**	**ug/L**	1.441	278094	1.264
	Sb	121	**50.268**	**ug/L**	1.373	236254	1.072
	Sb	123		**ug/L**		185761	0.843
	Ba	135		**ug/L**		72226	0.160
	Ba	137	**49.867**	**ug/L**	3.068	127065	0.282
	Ho	165		**ug/L**		42	0.000
>	Lu	175		**ug/L**		450504	450503.806
	Tl	205	**52.875**	**ug/L**	2.205	1001351	2.210
	Pb	208	**52.930**	**ug/L**	1.689	1621631	3.599
	Bi	209		**ug/L**		504	0.001
	Th	232	**51.292**	**ug/L**	2.006	1904731	4.225
	U	238	**51.005**	**ug/L**	1.560	2032081	4.509

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	110.835				
|	Be	9	109.368				
|	B	11	99.388				
|	Na	23	90.879				
|	Mg	24	99.457				
|	Al	27	92.981				
|	P	31	97.109				
|	K	39	99.713				
|	Ca	43	97.591				
\>	Sc	45			95.5		
|	Ti	47	97.197				
|	V	51	99.072				
|	Cr	52	100.558				
|	Cr	53					
|	Mn	55	102.503				
|	Fe	57	103.366				
|	Co	59	99.568				
|	Ni	60	101.485				
|	Cu	63					
⌊	Cu	65	102.025				
⌈	Zn	66	103.332				
|	Zn	67					
|	Zn	68					
\>	Ge	74			97.6		
|	As	75	98.625				
|	Se	77					
|	Se	82	100.134				
⌊	Kr	83					
⌈	Sr	88	103.556				
|	Y	89					
|	Mo	98	98.491				
|	Ag	107	97.357				
|	Cd	111	98.790				
|	Cd	114					
\>	In	115			98.2		
|	Sn	120	99.554				
|	Sb	121	100.536				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	99.735				
|	Ho	165					
\>	Lu	175			96.2		
|	Tl	205	105.750				
|	Pb	208	105.860				
|	Bi	209					
|	Th	232	102.585				
⌊	U	238	102.011				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li		7CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, January 14, 2010 22:08:37
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 7.049

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.036**	**ug/L**	20.477	93	0.000
	Be	9	**-0.001**	**ug/L**	1741.357	15	-0.000
	B	11	**-2.087**	**ug/L**	24.706	2035	-0.001
	Na	23	**-0.770**	**ug/L**	129.346	25356	-0.006
	Mg	24	**0.917**	**ug/L**	72.372	6668	0.005
	Al	27	**1.939**	**ug/L**	52.214	16009	0.016
	P	31	**-3.908**	**ug/L**	43.184	8731	-0.002
	K	39	**1.469**	**ug/L**	904.109	639084	0.014
	Ca	43	**-2.181**	**ug/L**	70.374	331	-0.000
>	Sc	45		**ug/L**		527373	527372.808
	Ti	47	**-0.112**	**ug/L**	52.805	439	-0.000
	V	51	**-0.179**	**ug/L**	73.385	4633	-0.002
	Cr	52	**0.116**	**ug/L**	30.213	-3726	0.001
	Cr	53		**ug/L**		107206	-0.019
	Mn	55	**-0.006**	**ug/L**	23.958	1163	-0.000
	Fe	57	**-1.653**	**ug/L**	59.566	5067	-0.000
	Co	59	**0.002**	**ug/L**	12.810	197	0.000
	Ni	60	**-0.014**	**ug/L**	25.070	215	-0.000
	Cu	63		**ug/L**		390	-0.000
	Cu	65	**0.010**	**ug/L**	87.899	211	0.000
	Zn	66	**0.013**	**ug/L**	119.784	274	0.000
	Zn	67		**ug/L**		11522	-0.005
	Zn	68		**ug/L**		1217	-0.001
>	Ge	74		**ug/L**		349596	349596.154
	As	75	**0.191**	**ug/L**	30.851	-137	0.001
	Se	77		**ug/L**		5798	-0.001
	Se	82	**-0.014**	**ug/L**	1889.673	-16	-0.000
	Kr	83		**ug/L**		109	0.000
	Sr	88	**0.001**	**ug/L**	55.807	259	0.000
	Y	89		**ug/L**		47	-0.000
	Mo	98	**0.086**	**ug/L**	17.640	389	0.001
	Ag	107	**0.004**	**ug/L**	72.181	89	0.000
	Cd	111	**0.006**	**ug/L**	97.496	33	0.000
	Cd	114		**ug/L**		71	0.000
>	In	115		**ug/L**		221688	221688.436
	Sn	120	**0.042**	**ug/L**	15.027	543	0.001
	Sb	121	**0.292**	**ug/L**	36.086	2014	0.006
	Sb	123		**ug/L**		1595	0.005
	Ba	135		**ug/L**		52	0.000
	Ba	137	**0.006**	**ug/L**	70.904	77	0.000
	Ho	165		**ug/L**		25	0.000
>	Lu	175		**ug/L**		451240	451239.686
	Tl	205	**0.233**	**ug/L**	30.068	10146	0.010
	Pb	208	**0.002**	**ug/L**	34.421	811	0.000
	Bi	209		**ug/L**		214	0.000
	Th	232	**0.050**	**ug/L**	34.099	3674	0.004
	U	238	**0.006**	**ug/L**	25.330	1016	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		95.8			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		96.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		99.0			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		96.4			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Thursday, January 14, 2010 22:14:44
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 10.050

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**980.596**	ug/L	8.039	975328	1.921
	Be	9	**997.301**	ug/L	6.636	297010	0.585
	B	11	**-3.654**	ug/L	11.534	1452	-0.002
	Na	23	**45220.396**	ug/L	4.991	192009422	377.812
	Mg	24	**49921.725**	ug/L	1.129	148583817	292.165
	Al	27	**48506.804**	ug/L	10.615	208317979	410.572
	P	31	**24070.542**	ug/L	1.250	5089570	9.990
	K	39	**48532.444**	ug/L	2.824	241059118	472.962
	Ca	43	**48001.055**	ug/L	1.219	547425	1.076
>	Sc	45		ug/L		508684	508684.170
	Ti	47	**37.763**	ug/L	4.253	21299	0.041
	V	51	**920.144**	ug/L	2.572	5607309	11.019
	Cr	52	**916.989**	ug/L	3.616	4346722	8.561
	Cr	53		ug/L		635435	1.028
	Mn	55	**909.852**	ug/L	2.754	7090910	13.946
	Fe	57	**48330.313**	ug/L	4.080	7208996	14.174
	Co	59	**873.137**	ug/L	3.074	5189526	10.209
	Ni	60	**875.707**	ug/L	3.818	1126149	2.215
	Cu	63		ug/L		2714816	5.339
	Cu	65	**849.648**	ug/L	3.726	1274511	2.507
	Zn	66	**2184.855**	ug/L	10.002	2101595	6.229
	Zn	67		ug/L		358247	1.024
	Zn	68		ug/L		1453160	4.306
>	Ge	74		ug/L		337322	337322.436
	As	75	**889.011**	ug/L	2.168	861495	2.556
	Se	77		ug/L		38689	0.097
	Se	82	**487.077**	ug/L	2.099	44252	0.131
	Kr	83		ug/L		180	0.000
	Sr	88	**1009.798**	ug/L	2.260	10639145	53.953
	Y	89		ug/L		405	0.002
	Mo	98	**1049.079**	ug/L	0.608	2782312	14.110
	Ag	107	**234.239**	ug/L	1.514	1078935	5.472
	Cd	111	**921.175**	ug/L	0.789	1045946	5.305
	Cd	114		ug/L		2660479	13.492
>	In	115		ug/L		197176	197175.715
	Sn	120	**1013.546**	ug/L	1.841	5073598	25.729
	Sb	121	**242.717**	ug/L	1.357	1020897	5.175
	Sb	123		ug/L		816628	4.139
	Ba	135		ug/L		1240666	2.888
	Ba	137	**863.226**	ug/L	8.389	2097278	4.881
	Ho	165		ug/L		350	0.001
>	Lu	175		ug/L		429603	429603.240
	Tl	205	**499.785**	ug/L	1.241	8981089	20.894
	Pb	208	**4896.379**	ug/L	0.814	143002651	332.887
	Bi	209		ug/L		3993	0.009
	Th	232	**2588.190**	ug/L	1.245	91584404	213.180
	U	238	**5282.617**	ug/L	2.288	200607288	466.991

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	98.060				
|	Be	9	99.730				
|	B	11					
|	Na	23	90.441				
|	Mg	24	99.843				
|	Al	27	97.014				
|	P	31	96.282				
|	K	39	97.065				
|	Ca	43	96.002				
|>	Sc	45			92.4		
|	Ti	47					
|	V	51	92.014				
|	Cr	52	91.699				
|	Cr	53					
|	Mn	55	90.985				
|	Fe	57	96.661				
|	Co	59	87.314				
|	Ni	60	87.571				
|	Cu	63					
⌊	Cu	65	84.965				
⌈	Zn	66	87.394				
|	Zn	67					
|	Zn	68					
|>	Ge	74			93.4		
|	As	75	88.901				
|	Se	77					
|	Se	82	97.415				
⌊	Kr	83					
⌈	Sr	88	100.980				
|	Y	89					
|	Mo	98	104.908				
|	Ag	107	93.696				
|	Cd	111	92.118				
|	Cd	114					
|>	In	115			88.1		
|	Sn	120	101.355				
|	Sb	121	97.087				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	86.323				
|	Ho	165					
|>	Lu	175			91.7		
|	Tl	205	99.957				
|	Pb	208	97.928				
|	Bi	209					
|	Th	232	103.528				
⌊	U	238	105.652				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 10	Co	59	LRS is out of limits (+/- 10%)
QC Std 10	Ni	60	LRS is out of limits (+/- 10%)
QC Std 10	Cu	65	LRS is out of limits (+/- 10%)
QC Std 10	Zn	66	LRS is out of limits (+/- 10%)
QC Std 10	As	75	LRS is out of limits (+/- 10%)
QC Std 10	Ba	137	LRS is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#5 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Thursday, January 14, 2010 22:20:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 11.051

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.589**	**ug/L**	6.139	53625	0.101
	Be	9	**51.541**	**ug/L**	4.128	16041	0.030
	B	11	**94.210**	**ug/L**	1.917	34544	0.060
	Na	23	**4850.942**	**ug/L**	8.188	21505055	40.529
	Mg	24	**5151.812**	**ug/L**	3.413	16001375	30.151
	Al	27	**4723.898**	**ug/L**	6.030	21214278	39.984
	P	31	**4937.312**	**ug/L**	3.147	1096026	2.049
	K	39	**5080.487**	**ug/L**	9.130	26883255	49.511
	Ca	43	**5004.886**	**ug/L**	3.256	59824	0.112
>	Sc	45		**ug/L**		530428	530428.187
	Ti	47	**48.571**	**ug/L**	2.209	28427	0.053
	V	51	**51.153**	**ug/L**	3.888	330516	0.613
	Cr	52	**51.060**	**ug/L**	2.501	248432	0.477
	Cr	53		**ug/L**		136900	0.036
	Mn	55	**52.166**	**ug/L**	1.803	425210	0.800
	Fe	57	**5278.909**	**ug/L**	3.288	826168	1.548
	Co	59	**50.734**	**ug/L**	4.338	314631	0.593
	Ni	60	**52.624**	**ug/L**	4.109	70813	0.133
	Cu	63		**ug/L**		167037	0.314
	Cu	65	**51.277**	**ug/L**	2.199	80437	0.151
	Zn	66	**52.783**	**ug/L**	2.378	53284	0.150
	Zn	67		**ug/L**		20335	0.019
	Zn	68		**ug/L**		39388	0.108
>	Ge	74		**ug/L**		352423	352423.002
	As	75	**50.104**	**ug/L**	1.137	50425	0.144
	Se	77		**ug/L**		9297	0.009
	Se	82	**50.242**	**ug/L**	0.956	4758	0.014
	Kr	83		**ug/L**		120	0.000
	Sr	88	**52.993**	**ug/L**	0.913	625535	2.831
	Y	89		**ug/L**		80	0.000
	Mo	98	**49.450**	**ug/L**	2.329	146998	0.665
	Ag	107	**50.064**	**ug/L**	1.376	258326	1.169
	Cd	111	**50.123**	**ug/L**	2.235	63760	0.289
	Cd	114		**ug/L**		152116	0.688
>	In	115		**ug/L**		220854	220853.767
	Sn	120	**51.783**	**ug/L**	1.866	290570	1.314
	Sb	121	**52.761**	**ug/L**	1.628	249046	1.125
	Sb	123		**ug/L**		195858	0.884
	Ba	135		**ug/L**		74276	0.164
	Ba	137	**51.121**	**ug/L**	2.176	131054	0.289
	Ho	165		**ug/L**		52	0.000
>	Lu	175		**ug/L**		453278	453278.487
	Tl	205	**53.748**	**ug/L**	2.344	1023933	2.247
	Pb	208	**53.837**	**ug/L**	3.090	1659022	3.660
	Bi	209		**ug/L**		514	0.001
	Th	232	**52.310**	**ug/L**	2.705	1954118	4.309
	U	238	**53.833**	**ug/L**	3.141	2156949	4.759

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovi	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	103.178				
|	Be	9	103.082				
|	B	11	94.210				
|	Na	23	97.019				
|	Mg	24	103.036				
|	Al	27	93.543				
|	P	31	98.746				
|	K	39	101.610				
|	Ca	43	100.098				
|>	Sc	45		96.4			
|	Ti	47	97.143				
|	V	51	102.305				
|	Cr	52	102.120				
|	Cr	53					
|	Mn	55	104.332				
|	Fe	57	105.578				
|	Co	59	101.467				
|	Ni	60	105.248				
|	Cu	63					
⌊	Cu	65	102.555				
⌈	Zn	66	105.567				
|	Zn	67					
|	Zn	68					
|>	Ge	74		97.6			
|	As	75	100.207				
|	Se	77					
|	Se	82	100.483				
⌊	Kr	83					
⌈	Sr	88	105.987				
|	Y	89					
|	Mo	98	98.899				
|	Ag	107	100.129				
|	Cd	111	100.247				
|	Cd	114					
|>	In	115		98.6			
|	Sn	120	103.565				
|	Sb	121	105.522				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	102.242				
|	Ho	165					
|>	Lu	175		96.8			
|	Tl	205	107.495				
|	Pb	208	107.673				
|	Bi	209					
|	Th	232	104.620				
⌊	U	238	107.666				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Thursday, January 14, 2010 22:26:56
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 12.052

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**0.069**	**ug/L**	21.121	129	0.000
|	Be	9	**0.029**	**ug/L**	68.081	25	0.000
|	B	11	**-2.705**	**ug/L**	28.898	1854	-0.002
|	Na	23	**0.859**	**ug/L**	211.797	33040	0.007
|	Mg	24	**0.143**	**ug/L**	467.750	4334	0.001
|	Al	27	**1.223**	**ug/L**	71.594	13006	0.010
|	P	31	**-2.892**	**ug/L**	66.787	9088	-0.001
|	K	39	**-3.045**	**ug/L**	58.445	625399	-0.030
|	Ca	43	**-0.542**	**ug/L**	241.275	356	-0.000
|>	Sc	45		**ug/L**		535473	535473.405
|	Ti	47	**-0.160**	**ug/L**	24.622	417	-0.000
|	V	51	**0.670**	**ug/L**	42.471	10155	0.008
|	Cr	52	**0.116**	**ug/L**	28.244	-3787	0.001
|	Cr	53		**ug/L**		111005	-0.015
|	Mn	55	**0.008**	**ug/L**	39.942	1292	0.000
|	Fe	57	**-1.405**	**ug/L**	56.889	5184	-0.000
|	Co	59	**0.021**	**ug/L**	29.792	323	0.000
|	Ni	60	**-0.001**	**ug/L**	773.928	235	-0.000
|	Cu	63		**ug/L**		466	-0.000
⌊	Cu	65	**0.030**	**ug/L**	33.450	247	0.000
⌈	Zn	66	**0.014**	**ug/L**	132.315	281	0.000
|	Zn	67		**ug/L**		12314	-0.004
|	Zn	68		**ug/L**		1308	-0.001
|>	Ge	74		**ug/L**		356803	356802.598
|	As	75	**0.674**	**ug/L**	69.402	353	0.002
|	Se	77		**ug/L**		5775	-0.001
|	Se	82	**0.115**	**ug/L**	113.075	-4	0.000
⌊	Kr	83		**ug/L**		108	-0.000
⌈	Sr	88	**0.007**	**ug/L**	22.495	331	0.000
|	Y	89		**ug/L**		45	-0.000
|	Mo	98	**0.109**	**ug/L**	14.099	459	0.001
|	Ag	107	**0.004**	**ug/L**	44.351	94	0.000
|	Cd	111	**0.011**	**ug/L**	109.725	40	0.000
|	Cd	114		**ug/L**		71	0.000
|>	In	115		**ug/L**		222528	222527.577
|	Sn	120	**0.285**	**ug/L**	13.316	1914	0.007
|	Sb	121	**1.063**	**ug/L**	21.103	5677	0.023
⌊	Sb	123		**ug/L**		4355	0.017
⌈	Ba	135		**ug/L**		63	0.000
|	Ba	137	**0.010**	**ug/L**	23.851	89	0.000
|	Ho	165		**ug/L**		20	0.000
|>	Lu	175		**ug/L**		459694	459694.309
|	Tl	205	**0.240**	**ug/L**	40.238	10459	0.010
|	Pb	208	**0.022**	**ug/L**	19.047	1445	0.001
|	Bi	209		**ug/L**		220	0.000
|	Th	232	**0.117**	**ug/L**	26.183	6277	0.010
⌊	U	238	**0.053**	**ug/L**	12.709	2963	0.005

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45		97.3			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74		98.8			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115		99.4			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175		98.2			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202014492
Sample Date/Time: Thursday, January 14, 2010 22:33:05
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 941231|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\1202014492.053

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.118**	**ug/L**	3.808	177	0.000
	Be	9	**0.010**	**ug/L**	59.937	19	0.000
	B	11	**-4.097**	**ug/L**	4.853	1351	-0.003
	Na	23	**6.379**	**ug/L**	50.476	56449	0.053
	Mg	24	**0.503**	**ug/L**	138.826	5334	0.003
	Al	27	**2.106**	**ug/L**	48.457	16677	0.018
	P	31	**-16.737**	**ug/L**	9.856	5887	-0.007
	K	39	**22.506**	**ug/L**	41.308	742157	0.219
	Ca	43	**17.692**	**ug/L**	15.532	563	0.000
>	Sc	45		**ug/L**		524028	524028.439
	Ti	47	**0.123**	**ug/L**	47.514	569	0.000
	V	51	**-2.128**	**ug/L**	38.003	-7660	-0.025
	Cr	52	**-1.446**	**ug/L**	15.978	-11342	-0.014
	Cr	53		**ug/L**		248501	0.252
	Mn	55	**0.175**	**ug/L**	8.364	2605	0.003
	Fe	57	**9.143**	**ug/L**	4.675	6694	0.003
	Co	59	**0.023**	**ug/L**	9.551	325	0.000
	Ni	60	**0.039**	**ug/L**	31.219	283	0.000
	Cu	63		**ug/L**		2716	0.004
	Cu	65	**0.710**	**ug/L**	2.046	1294	0.002
	Zn	66	**1.819**	**ug/L**	4.464	2038	0.005
	Zn	67		**ug/L**		42664	0.086
	Zn	68		**ug/L**		3988	0.007
>	Ge	74		**ug/L**		343677	343676.838
	As	75	**-0.179**	**ug/L**	334.848	-504	-0.001
	Se	77		**ug/L**		16499	0.030
	Se	82	**-0.083**	**ug/L**	160.694	-22	-0.000
	Kr	83		**ug/L**		107	0.000
	Sr	88	**0.036**	**ug/L**	9.621	644	0.002
	Y	89		**ug/L**		53	0.000
	Mo	98	**0.033**	**ug/L**	10.720	218	0.000
	Ag	107	**-0.005**	**ug/L**	28.376	42	-0.000
	Cd	111	**-0.011**	**ug/L**	89.591	11	-0.000
	Cd	114		**ug/L**		37	-0.000
>	In	115		**ug/L**		210627	210627.152
	Sn	120	**0.497**	**ug/L**	36.768	2945	0.013
	Sb	121	**0.384**	**ug/L**	30.941	2326	0.008
	Sb	123		**ug/L**		1893	0.007
	Ba	135		**ug/L**		105	0.000
	Ba	137	**0.036**	**ug/L**	14.491	156	0.000
	Ho	165		**ug/L**		26	0.000
>	Lu	175		**ug/L**		462118	462118.083
	Tl	205	**-0.046**	**ug/L**	31.301	5001	-0.002
	Pb	208	**-0.003**	**ug/L**	30.247	662	-0.000
	Bi	209		**ug/L**		214	0.000
	Th	232	**0.016**	**ug/L**	47.712	2465	0.001
	U	238	**-0.001**	**ug/L**	126.797	763	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
>	Sc	45			95.2		
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
>	Ge	74			95.2		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
>	In	115			94.1		
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
>	Lu	175			98.7		
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202014493
Sample Date/Time: Thursday, January 14, 2010 22:39:16
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 941231|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\1202014493.054

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.980**	**ug/L**	6.524	51253	0.098
	Be	9	**55.317**	**ug/L**	2.900	16977	0.032
	B	11	**102.378**	**ug/L**	2.927	36783	0.065
	Na	23	**1953.091**	**ug/L**	2.902	8561220	16.318
	Mg	24	**2082.722**	**ug/L**	9.578	6379807	12.189
	Al	27	**1859.419**	**ug/L**	8.214	8236099	15.739
	P	31	**2056.199**	**ug/L**	1.090	455778	0.853
	K	39	**1943.124**	**ug/L**	3.199	10529089	18.936
	Ca	43	**1994.934**	**ug/L**	3.150	23736	0.045
>	Sc	45		**ug/L**		522951	522950.948
	Ti	47	**43.511**	**ug/L**	2.486	25167	0.047
	V	51	**43.088**	**ug/L**	2.199	275531	0.516
	Cr	52	**46.632**	**ug/L**	0.899	223396	0.435
	Cr	53		**ug/L**		289314	0.331
	Mn	55	**50.629**	**ug/L**	1.582	407025	0.776
	Fe	57	**2088.943**	**ug/L**	1.013	325654	0.613
	Co	59	**49.075**	**ug/L**	1.394	300246	0.574
	Ni	60	**50.333**	**ug/L**	1.191	66822	0.127
	Cu	63		**ug/L**		159990	0.305
	Cu	65	**50.113**	**ug/L**	0.835	77533	0.148
	Zn	66	**52.838**	**ug/L**	1.554	52557	0.151
	Zn	67		**ug/L**		56504	0.124
	Zn	68		**ug/L**		39626	0.110
>	Ge	74		**ug/L**		347223	347222.938
	As	75	**50.049**	**ug/L**	2.223	49625	0.144
	Se	77		**ug/L**		20521	0.041
	Se	82	**53.890**	**ug/L**	0.987	5029	0.015
	Kr	83		**ug/L**		128	0.000
	Sr	88	**51.211**	**ug/L**	2.129	580952	2.736
	Y	89		**ug/L**		95	0.000
	Mo	98	**47.912**	**ug/L**	1.410	136893	0.644
	Ag	107	**50.146**	**ug/L**	1.314	248663	1.171
	Cd	111	**49.690**	**ug/L**	0.593	60751	0.286
	Cd	114		**ug/L**		147034	0.693
>	In	115		**ug/L**		212223	212223.363
	Sn	120	**50.379**	**ug/L**	1.764	271685	1.279
	Sb	121	**52.831**	**ug/L**	0.532	239639	1.126
	Sb	123		**ug/L**		191631	0.901
	Ba	135		**ug/L**		68997	0.148
	Ba	137	**46.144**	**ug/L**	4.240	121238	0.261
	Ho	165		**ug/L**		49	0.000
>	Lu	175		**ug/L**		464658	464658.343
	Tl	205	**48.593**	**ug/L**	2.921	949463	2.031
	Pb	208	**51.122**	**ug/L**	1.962	1615340	3.476
	Bi	209		**ug/L**		1275709	2.746
	Th	232	**49.052**	**ug/L**	2.958	1878401	4.040
	U	238	**50.513**	**ug/L**	5.094	2074222	4.465

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	0.9999
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovr	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
\>	Sc	45			95.0		
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
\>	Ge	74			96.2		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
\>	In	115			94.8		
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
\>	Lu	175			99.2		
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 243493001
Sample Date/Time: Thursday, January 14, 2010 22:45:26
Sample Type:
Sample Description: LANL 6020
Number of Replicates: 3
Batch ID: 941231|1|ba|
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\243493001.055

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**0.184**	**ug/L**	15.245	241	0.000
|	Be	9	**0.002**	**ug/L**	290.262	16	0.000
|	B	11	**19.120**	**ug/L**	1.879	8979	0.012
|	Na	23	**92.191**	**ug/L**	8.932	426991	0.770
|	Mg	24	**10.213**	**ug/L**	18.636	34710	0.060
|	Al	27	**29.885**	**ug/L**	16.476	138007	0.253
|	P	31	**-14.044**	**ug/L**	7.953	6385	-0.006
|	K	39	**127.350**	**ug/L**	5.994	1261340	1.241
|	Ca	43	**43.177**	**ug/L**	7.146	851	0.001
|>	Sc	45		**ug/L**		517363	517363.365
|	Ti	47	**0.773**	**ug/L**	8.826	927	0.001
|	V	51	**-1.703**	**ug/L**	72.795	-4961	-0.020
|	Cr	52	**-0.525**	**ug/L**	10.309	-6751	-0.005
|	Cr	53		**ug/L**		266755	0.293
|	Mn	55	**1.201**	**ug/L**	1.296	10706	0.018
|	Fe	57	**54.948**	**ug/L**	2.822	13558	0.016
|	Co	59	**0.028**	**ug/L**	8.282	351	0.000
|	Ni	60	**0.295**	**ug/L**	14.040	615	0.001
|	Cu	63		**ug/L**		4706	0.008
⌊	Cu	65	**1.303**	**ug/L**	5.633	2182	0.004
⌈	Zn	66	**2.597**	**ug/L**	1.204	2803	0.007
|	Zn	67		**ug/L**		48541	0.103
|	Zn	68		**ug/L**		4736	0.010
|>	Ge	74		**ug/L**		343949	343948.695
|	As	75	**-0.330**	**ug/L**	149.826	-649	-0.001
|	Se	77		**ug/L**		17375	0.033
|	Se	82	**-0.257**	**ug/L**	77.454	-38	-0.000
⌊	Kr	83		**ug/L**		132	0.000
⌈	Sr	88	**0.205**	**ug/L**	3.402	2514	0.011
|	Y	89		**ug/L**		299	0.001
|	Mo	98	**0.046**	**ug/L**	18.461	254	0.001
|	Ag	107	**-0.000**	**ug/L**	5894.274	67	-0.000
|	Cd	111	**0.002**	**ug/L**	384.321	27	0.000
|	Cd	114		**ug/L**		35	-0.000
|>	In	115		**ug/L**		208582	208582.167
|	Sn	120	**0.164**	**ug/L**	3.983	1156	0.004
|	Sb	121	**0.105**	**ug/L**	26.758	1066	0.002
⌊	Sb	123		**ug/L**		898	0.002
⌈	Ba	135		**ug/L**		539	0.001
|	Ba	137	**0.326**	**ug/L**	0.798	903	0.002
|	Ho	165		**ug/L**		44	0.000
|>	Lu	175		**ug/L**		456766	456765.999
|	Tl	205	**0.583**	**ug/L**	21.373	16986	0.024
|	Pb	208	**0.075**	**ug/L**	3.865	3071	0.005
|	Bi	209		**ug/L**		335	0.000
|	Th	232	**0.034**	**ug/L**	54.366	3128	0.003
⌊	U	238	**-0.005**	**ug/L**	18.694	598	-0.000

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		94.0			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		95.3			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		93.2			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		97.6			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202014494
Sample Date/Time: Thursday, January 14, 2010 22:51:36
Sample Type:
Sample Description: LANL 6020 DUP
Number of Replicates: 3
Batch ID: 941231|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\1202014494.056

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**0.161**	**ug/L**	10.647	218	0.000
|	Be	9	**0.010**	**ug/L**	94.922	18	0.000
|	B	11	**16.963**	**ug/L**	0.749	8271	0.011
|	Na	23	**73.821**	**ug/L**	12.750	347550	0.617
|	Mg	24	**7.355**	**ug/L**	16.286	26024	0.043
|	Al	27	**22.334**	**ug/L**	1.507	105052	0.189
|	P	31	**-15.226**	**ug/L**	10.837	6134	-0.006
|	K	39	**117.340**	**ug/L**	2.125	1211629	1.144
|	Ca	43	**45.520**	**ug/L**	15.279	878	0.001
|>	Sc	45		**ug/L**		517548	517548.180
|	Ti	47	**0.652**	**ug/L**	7.741	859	0.001
|	V	51	**-2.525**	**ug/L**	67.615	-10004	-0.030
|	Cr	52	**-0.549**	**ug/L**	13.358	-6869	-0.005
|	Cr	53		**ug/L**		270519	0.300
|	Mn	55	**1.111**	**ug/L**	0.530	10001	0.017
|	Fe	57	**30.284**	**ug/L**	5.063	9820	0.009
|	Co	59	**0.028**	**ug/L**	6.411	353	0.000
|	Ni	60	**0.267**	**ug/L**	4.932	579	0.001
|	Cu	63		**ug/L**		5383	0.009
⌊	Cu	65	**1.538**	**ug/L**	1.463	2542	0.005
⌈	Zn	66	**2.269**	**ug/L**	6.400	2460	0.006
|	Zn	67		**ug/L**		47850	0.102
|	Zn	68		**ug/L**		4422	0.009
|>	Ge	74		**ug/L**		341034	341033.613
|	As	75	**-0.625**	**ug/L**	84.080	-932	-0.002
|	Se	77		**ug/L**		17665	0.034
|	Se	82	**-0.096**	**ug/L**	170.188	-23	-0.000
⌊	Kr	83		**ug/L**		116	0.000
⌈	Sr	88	**0.192**	**ug/L**	1.724	2399	0.010
|	Y	89		**ug/L**		298	0.001
|	Mo	98	**0.003**	**ug/L**	12.728	134	0.000
|	Ag	107	**-0.000**	**ug/L**	1330.555	67	-0.000
|	Cd	111	**-0.005**	**ug/L**	93.003	18	-0.000
|	Cd	114		**ug/L**		32	-0.000
|>	In	115		**ug/L**		210889	210888.905
|	Sn	120	**0.079**	**ug/L**	6.423	712	0.002
|	Sb	121	**0.000**	**ug/L**	2862.544	606	0.000
⌊	Sb	123		**ug/L**		512	0.000
⌈	Ba	135		**ug/L**		570	0.001
|	Ba	137	**0.378**	**ug/L**	3.091	1040	0.002
|	Ho	165		**ug/L**		40	0.000
|>	Lu	175		**ug/L**		457550	457549.523
|	Tl	205	**0.075**	**ug/L**	7.891	7267	0.003
|	Pb	208	**0.069**	**ug/L**	6.540	2901	0.005
|	Bi	209		**ug/L**		266	0.000
|	Th	232	**-0.009**	**ug/L**	10.520	1499	-0.001
⌊	U	238	**-0.008**	**ug/L**	4.359	472	-0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	0.9999
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		94.0			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		94.5			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		94.2			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		97.7			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202014495
Sample Date/Time: Thursday, January 14, 2010 22:57:45
Sample Type:
Sample Description: LANL 6020 MS
Number of Replicates: 3
Batch ID: 941231|1|baj
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\1202014495.057

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**50.405**	**ug/L**	4.863	51681	0.099
|	Be	9	**55.220**	**ug/L**	0.445	16945	0.032
|	B	11	**123.892**	**ug/L**	1.309	43937	0.079
|	Na	23	**1980.194**	**ug/L**	8.324	8676426	16.544
|	Mg	24	**1867.836**	**ug/L**	5.801	5720285	10.931
|	Al	27	**1958.058**	**ug/L**	9.894	8675283	16.573
|	P	31	**2011.054**	**ug/L**	2.319	445879	0.835
|	K	39	**2135.426**	**ug/L**	4.338	11505499	20.810
|	Ca	43	**2000.691**	**ug/L**	1.898	23796	0.045
|>	Sc	45		**ug/L**		522870	522870.155
|	Ti	47	**44.346**	**ug/L**	1.717	25638	0.048
|	V	51	**43.000**	**ug/L**	4.777	274945	0.515
|	Cr	52	**48.146**	**ug/L**	1.714	230747	0.449
|	Cr	53		**ug/L**		296499	0.345
|	Mn	55	**50.001**	**ug/L**	0.632	401912	0.766
|	Fe	57	**2104.301**	**ug/L**	1.131	327939	0.617
|	Co	59	**48.612**	**ug/L**	2.383	297357	0.568
|	Ni	60	**49.795**	**ug/L**	1.766	66097	0.126
|	Cu	63		**ug/L**		164773	0.314
⌊	Cu	65	**50.941**	**ug/L**	0.211	78799	0.150
⌈	Zn	66	**53.863**	**ug/L**	1.736	52308	0.154
|	Zn	67		**ug/L**		55816	0.126
|	Zn	68		**ug/L**		39004	0.111
|>	Ge	74		**ug/L**		339043	339042.770
|	As	75	**78.412**	**ug/L**	0.553	76108	0.225
|	Se	77		**ug/L**		19173	0.039
|	Se	82	**22.050**	**ug/L**	2.776	2000	0.006
⌊	Kr	83		**ug/L**		130	0.000
⌈	Sr	88	**51.934**	**ug/L**	2.171	576986	2.775
|	Y	89		**ug/L**		308	0.001
|	Mo	98	**48.649**	**ug/L**	1.003	136134	0.654
|	Ag	107	**51.199**	**ug/L**	1.583	248656	1.196
|	Cd	111	**10.456**	**ug/L**	0.480	12539	0.060
|	Cd	114		**ug/L**		28921	0.139
|>	In	115		**ug/L**		207855	207854.806
|	Sn	120	**51.409**	**ug/L**	1.229	271538	1.305
|	Sb	121	**205.095**	**ug/L**	0.647	909428	4.372
⌊	Sb	123		**ug/L**		730181	3.511
⌈	Ba	135		**ug/L**		69334	0.150
|	Ba	137	**46.993**	**ug/L**	2.866	123099	0.266
|	Ho	165		**ug/L**		299	0.001
|>	Lu	175		**ug/L**		463117	463116.977
|	Tl	205	**89.197**	**ug/L**	4.037	1732217	3.729
|	Pb	208	**41.906**	**ug/L**	1.413	1320049	2.849
|	Bi	209		**ug/L**		657	0.001
|	Th	232	**49.897**	**ug/L**	3.015	1904693	4.110
⌊	U	238	**50.871**	**ug/L**	2.491	2082974	4.497

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	0.9999
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45		95.0			
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74		93.9			
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115		92.8			
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175		98.9			
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: 1202014496
Sample Date/Time: Thursday, January 14, 2010 23:03:54
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 941231|5|ba|
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\1202014496.058

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.017**	**ug/L**	38.047	75	0.000
	Be	9	**0.011**	**ug/L**	111.268	19	0.000
	B	11	**0.787**	**ug/L**	90.218	3060	0.001
	Na	23	**12.140**	**ug/L**	44.163	83926	0.101
	Mg	24	**0.663**	**ug/L**	208.451	6002	0.004
	Al	27	**3.774**	**ug/L**	37.256	24689	0.032
	P	31	**-13.326**	**ug/L**	7.991	6802	-0.006
	K	39	**13.175**	**ug/L**	28.115	713386	0.128
	Ca	43	**8.435**	**ug/L**	31.120	466	0.000
>	Sc	45		**ug/L**		538012	538012.076
	Ti	47	**0.011**	**ug/L**	612.183	519	0.000
	V	51	**0.172**	**ug/L**	118.101	6989	0.002
	Cr	52	**-0.122**	**ug/L**	27.266	-4997	-0.001
	Cr	53		**ug/L**		158194	0.072
	Mn	55	**0.220**	**ug/L**	2.602	3048	0.003
	Fe	57	**8.004**	**ug/L**	15.326	6694	0.002
	Co	59	**0.001**	**ug/L**	207.647	196	0.000
	Ni	60	**0.036**	**ug/L**	33.362	287	0.000
	Cu	63		**ug/L**		1212	0.001
	Cu	65	**0.234**	**ug/L**	3.945	572	0.001
	Zn	66	**0.570**	**ug/L**	4.195	839	0.002
	Zn	67		**ug/L**		18272	0.013
	Zn	68		**ug/L**		2092	0.002
>	Ge	74		**ug/L**		354126	354126.333
	As	75	**-0.124**	**ug/L**	208.225	-462	-0.000
	Se	77		**ug/L**		8858	0.007
	Se	82	**-0.021**	**ug/L**	934.191	-17	-0.000
	Kr	83		**ug/L**		104	-0.000
	Sr	88	**0.031**	**ug/L**	6.164	617	0.002
	Y	89		**ug/L**		114	0.000
	Mo	98	**0.011**	**ug/L**	96.300	163	0.000
	Ag	107	**-0.005**	**ug/L**	18.535	44	-0.000
	Cd	111	**-0.012**	**ug/L**	59.658	10	-0.000
	Cd	114		**ug/L**		34	-0.000
>	In	115		**ug/L**		219958	219957.626
	Sn	120	**0.007**	**ug/L**	36.037	339	0.000
	Sb	121	**0.072**	**ug/L**	46.990	969	0.002
	Sb	123		**ug/L**		810	0.001
	Ba	135		**ug/L**		138	0.000
	Ba	137	**0.056**	**ug/L**	2.583	210	0.000
	Ho	165		**ug/L**		25	0.000
>	Lu	175		**ug/L**		464799	464799.249
	Tl	205	**1.632**	**ug/L**	21.661	37669	0.068
	Pb	208	**0.004**	**ug/L**	37.270	894	0.000
	Bi	209		**ug/L**		170	-0.000
	Th	232	**-0.014**	**ug/L**	54.986	1340	-0.001
	U	238	**-0.012**	**ug/L**	6.416	319	-0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	0.9999
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			97.7		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.3		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, January 14, 2010 23:10:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 8.059

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**49.728**	**ug/L**	3.916	52490	0.097
	Be	9	**50.570**	**ug/L**	1.763	15976	0.030
	B	11	**91.489**	**ug/L**	1.240	34130	0.058
	Na	23	**4809.544**	**ug/L**	13.933	21658663	40.183
	Mg	24	**4912.041**	**ug/L**	3.880	15477481	28.748
	Al	27	**4565.651**	**ug/L**	5.012	20808449	38.645
	P	31	**4829.595**	**ug/L**	0.598	1088602	2.004
	K	39	**4764.605**	**ug/L**	1.940	25637011	46.432
	Ca	43	**4807.753**	**ug/L**	1.739	58357	0.108
>	Sc	45		**ug/L**		538241	538241.113
	Ti	47	**46.663**	**ug/L**	2.428	27743	0.051
	V	51	**48.751**	**ug/L**	2.497	320098	0.584
	Cr	52	**49.604**	**ug/L**	0.649	244862	0.463
	Cr	53		**ug/L**		146853	0.050
	Mn	55	**50.811**	**ug/L**	1.427	420408	0.779
	Fe	57	**5053.564**	**ug/L**	2.205	803115	1.482
	Co	59	**49.045**	**ug/L**	0.662	308846	0.573
	Ni	60	**50.253**	**ug/L**	3.051	68667	0.127
	Cu	63		**ug/L**		161409	0.299
	Cu	65	**49.182**	**ug/L**	1.081	78323	0.145
	Zn	66	**50.352**	**ug/L**	1.568	51521	0.144
	Zn	67		**ug/L**		21147	0.021
	Zn	68		**ug/L**		37885	0.102
>	Ge	74		**ug/L**		357063	357063.099
	As	75	**48.699**	**ug/L**	1.107	49650	0.140
	Se	77		**ug/L**		9742	0.010
	Se	82	**50.003**	**ug/L**	2.701	4797	0.013
	Kr	83		**ug/L**		111	0.000
	Sr	88	**50.719**	**ug/L**	0.823	600226	2.710
	Y	89		**ug/L**		108	0.000
	Mo	98	**48.108**	**ug/L**	2.697	143380	0.647
	Ag	107	**48.477**	**ug/L**	1.324	250775	1.132
	Cd	111	**48.860**	**ug/L**	0.736	62320	0.281
	Cd	114		**ug/L**		149497	0.675
>	In	115		**ug/L**		221411	221410.936
	Sn	120	**49.400**	**ug/L**	1.222	277934	1.254
	Sb	121	**49.873**	**ug/L**	1.914	236046	1.063
	Sb	123		**ug/L**		184687	0.832
	Ba	135		**ug/L**		72378	0.159
	Ba	137	**49.894**	**ug/L**	0.431	128127	0.282
	Ho	165		**ug/L**		39	0.000
>	Lu	175		**ug/L**		453893	453893.167
	Tl	205	**51.800**	**ug/L**	3.132	988584	2.166
	Pb	208	**52.494**	**ug/L**	1.069	1620619	3.569
	Bi	209		**ug/L**		452	0.001
	Th	232	**50.575**	**ug/L**	1.253	1892516	4.166
	U	238	**52.031**	**ug/L**	1.159	2088614	4.600

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	0.9999
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	0.9999
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	0.9999
U	238	Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Dif	Duplicate Rel. % Difference
⌈	Li	7	99.457				
|	Be	9	101.140				
|	B	11	91.489				
|	Na	23	96.191				
|	Mg	24	98.241				
|	Al	27	90.409				
|	P	31	96.592				
|	K	39	95.292				
|	Ca	43	96.155				
|>	Sc	45			97.8		
|	Ti	47	93.326				
|	V	51	97.503				
|	Cr	52	99.207				
|	Cr	53					
|	Mn	55	101.621				
|	Fe	57	101.071				
|	Co	59	98.090				
|	Ni	60	100.506				
|	Cu	63					
⌊	Cu	65	98.365				
⌈	Zn	66	100.704				
|	Zn	67					
|	Zn	68					
|>	Ge	74			98.9		
|	As	75	97.397				
|	Se	77					
|	Se	82	100.006				
⌊	Kr	83					
⌈	Sr	88	101.438				
|	Y	89					
|	Mo	98	96.216				
|	Ag	107	96.954				
|	Cd	111	97.720				
|	Cd	114					
|>	In	115			98.9		
|	Sn	120	98.800				
|	Sb	121	99.746				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	99.788				
|	Ho	165					
|>	Lu	175			96.9		
|	Tl	205	103.600				
|	Pb	208	104.989				
|	Bi	209					
|	Th	232	101.150				
⌊	U	238	104.062				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#5 - Summary Report

Sample ID: QC Std 9
Sample Date/Time: Thursday, January 14, 2010 23:16:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020 2.mth
Dataset File: C:\elandata\Dataset\100114\QC Std 9.060

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.001**	**ug/L**	972.394	58	0.000
	Be	9	**0.006**	**ug/L**	334.984	18	0.000
	B	11	**-3.193**	**ug/L**	19.120	1673	-0.002
	Na	23	**-0.057**	**ug/L**	87.419	28695	-0.000
	Mg	24	**-0.377**	**ug/L**	182.097	2667	-0.002
	Al	27	**0.733**	**ug/L**	39.929	10671	0.006
	P	31	**-3.531**	**ug/L**	68.149	8861	-0.001
	K	39	**-6.677**	**ug/L**	88.099	600719	-0.065
	Ca	43	**-2.678**	**ug/L**	10.821	327	-0.000
>	Sc	45		**ug/L**		530570	530569.519
	Ti	47	**-0.091**	**ug/L**	48.208	453	-0.000
	V	51	**0.001**	**ug/L**	61087.319	5816	0.000
	Cr	52	**0.038**	**ug/L**	82.356	-4136	0.000
	Cr	53		**ug/L**		116126	-0.004
	Mn	55	**-0.002**	**ug/L**	13.778	1200	-0.000
	Fe	57	**-1.891**	**ug/L**	42.327	5060	-0.001
	Co	59	**0.007**	**ug/L**	40.291	230	0.000
	Ni	60	**-0.012**	**ug/L**	113.256	218	-0.000
	Cu	63		**ug/L**		390	-0.000
	Cu	65	**-0.002**	**ug/L**	1274.599	194	-0.000
	Zn	66	**0.015**	**ug/L**	175.921	276	0.000
	Zn	67		**ug/L**		12886	-0.001
	Zn	68		**ug/L**		1294	-0.001
>	Ge	74		**ug/L**		348937	348937.115
	As	75	**0.253**	**ug/L**	90.932	-75	0.001
	Se	77		**ug/L**		6198	0.000
	Se	82	**-0.151**	**ug/L**	103.293	-29	-0.000
	Kr	83		**ug/L**		116	0.000
	Sr	88	**0.002**	**ug/L**	15.522	271	0.000
	Y	89		**ug/L**		42	-0.000
	Mo	98	**0.028**	**ug/L**	32.845	215	0.000
	Ag	107	**0.003**	**ug/L**	50.110	88	0.000
	Cd	111	**0.000**	**ug/L**	4044.561	25	0.000
	Cd	114		**ug/L**		67	0.000
>	In	115		**ug/L**		220057	220056.589
	Sn	120	**0.038**	**ug/L**	29.567	517	0.001
	Sb	121	**0.310**	**ug/L**	28.531	2084	0.007
	Sb	123		**ug/L**		1727	0.005
	Ba	135		**ug/L**		48	0.000
	Ba	137	**0.003**	**ug/L**	225.472	69	0.000
	Ho	165		**ug/L**		19	-0.000
>	Lu	175		**ug/L**		455602	455602.201
	Tl	205	**0.821**	**ug/L**	20.051	21424	0.034
	Pb	208	**0.004**	**ug/L**	19.068	869	0.000
	Bi	209		**ug/L**		154	-0.000
	Th	232	**0.059**	**ug/L**	39.242	4034	0.005
	U	238	**0.010**	**ug/L**	31.054	1182	0.001

Calibration

Analyte	MassCurve Type	Correlation Coefficient
Li	7Linear Thru Zero	1.0000
Be	9Linear Thru Zero	1.0000
B	11Linear Thru Zero	0.9999
Na	23Linear Thru Zero	1.0000
Mg	24Linear Thru Zero	1.0000
Al	27Linear Thru Zero	1.0000
P	31Linear Thru Zero	1.0000
K	39Linear Thru Zero	1.0000
Ca	43Linear Thru Zero	1.0000
Sc	45Linear Thru Zero	
Ti	47Linear Thru Zero	1.0000
V	51Linear Thru Zero	1.0000
Cr	52Linear Thru Zero	1.0000
Cr	53Linear Thru Zero	
Mn	55Linear Thru Zero	1.0000
Fe	57Linear Thru Zero	1.0000
Co	59Linear Thru Zero	1.0000
Ni	60Linear Thru Zero	1.0000
Cu	63Linear Thru Zero	
Cu	65Linear Thru Zero	1.0000
Zn	66Linear Thru Zero	1.0000
Zn	67Linear Thru Zero	
Zn	68Linear Thru Zero	
Ge	74Linear Thru Zero	
As	75Linear Thru Zero	1.0000
Se	77Linear Thru Zero	
Se	82Linear Thru Zero	1.0000
Kr	83Linear Thru Zero	
Sr	88Linear Thru Zero	1.0000
Y	89Linear Thru Zero	
Mo	98Linear Thru Zero	1.0000
Ag	107Linear Thru Zero	1.0000
Cd	111Linear Thru Zero	1.0000
Cd	114Linear Thru Zero	
In	115Linear Thru Zero	
Sn	120Linear Thru Zero	1.0000
Sb	121Linear Thru Zero	1.0000
Sb	123Linear Thru Zero	
Ba	135Linear Thru Zero	
Ba	137Linear Thru Zero	1.0000
Ho	165Linear Thru Zero	
Lu	175Linear Thru Zero	
Tl	205Linear Thru Zero	0.9999
Pb	208Linear Thru Zero	1.0000
Bi	209Linear Thru Zero	
Th	232Linear Thru Zero	0.9999
U	238Linear Thru Zero	0.9999

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recov	Dilution % Di	Duplicate Rel. % Difference
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		96.4			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		96.6			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		98.3			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		97.3			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Analysis Begun

Logged In Analyst: Administrator
Technique: AA FIMS-MHS
Spectrometer Model: FIMS-100, S/N B050-9550
Autosampler Model: S10

Sample Information File: C:\data-AA\Administrator\Sample Information\123009W1.SIF
Batch ID:
Results Data Set: 123009W1
Results Library: C:\data-AA\Administrator\Results\Results.mdb

Method Loaded
Method Name: WATER
Method Last Saved: 12/28/2009 15:47:50
Method Description: 7470A, 245.2, ILM04 ANALYST JXL

Sequence No.: 1
Autosampler Location: 1
Sample ID: Calib Blank
Date Collected: 12/30/2009 08:59:21
Analyst:
Data Type: Original

Replicate Data: Calib Blank

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0002	0.0002	0.0002	09:00:23	Yes
2		[0.00]	0.0002	0.0004	0.0002	09:00:57	Yes
Mean:		[0.00]	0.0002				
SD:		0.00	0.0000				
%RSD:		0.00	10.27				

Auto-zero performed.

Sequence No.: 2
Autosampler Location: 2
Sample ID: S0.2
Date Collected: 12/30/2009 09:01:16
Analyst:
Data Type: Original

Replicate Data: S0.2

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.2]	0.0020	0.0094	0.0022	09:02:17	Yes
2		[0.2]	0.0020	0.0097	0.0022	09:02:52	Yes
Mean:		[0.2]	0.0020				
SD:		0.0	0.0000				
%RSD:		0.0	0.40				

Standard number 1 applied. [0.2]
Correlation Coef.: 1.000000 Slope: 0.01001 Intercept: 0.00000

Sequence No.: 3
Autosampler Location: 3
Sample ID: S0.5
Date Collected: 12/30/2009 09:03:11
Analyst:
Data Type: Original

Replicate Data: S0.5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.5]	0.0051	0.0243	0.0053	09:04:12	Yes
2		[0.5]	0.0050	0.0230	0.0051	09:04:46	Yes
Mean:		[0.5]	0.0050				
SD:		0.0	0.0001				
%RSD:		0.0	1.95				

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999992 Slope: 0.01010 Intercept: -0.00001

Sequence No.: 4
Autosampler Location: 4
Sample ID: S2.0
Date Collected: 12/30/2009 09:05:06
Analyst:
Data Type: Original

Replicate Data: S2.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.0]	0.0200	0.0958	0.0202	09:06:08	Yes
2		[2.0]	0.0198	0.0938	0.0199	09:06:42	Yes
Mean:		[2.0]	0.0199				
SD:		0.0	0.0002				
%RSD:		0.0	0.94				

Standard number 3 applied. [2.0]
Correlation Coef.: 0.999993 Slope: 0.00994 Intercept: 0.00003

Sequence No.: 5 Autosampler Location: 5
Sample ID: S5.0 Date Collected: 12/30/2009 09:07:02
Analyst: Data Type: Original

Replicate Data: S5.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.0]	0.0491	0.2355	0.0493	09:08:04	Yes
2		[5.0]	0.0487	0.2330	0.0489	09:08:39	Yes
Mean:		[5.0]	0.0489				
SD:		0.0	0.0003				
%RSD:		0.0	0.61				

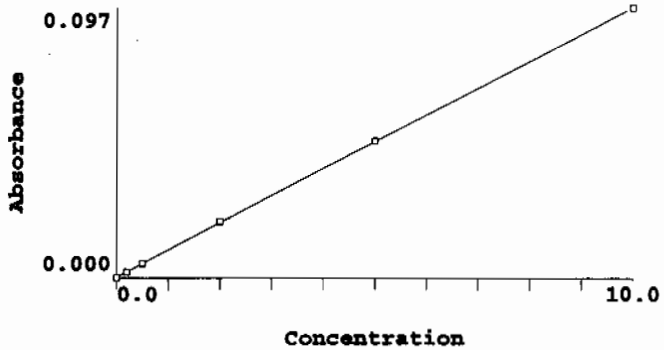
Standard number 4 applied. [5.0]
Correlation Coef.: 0.999975 Slope: 0.00978 Intercept: 0.00011

Sequence No.: 6 Autosampler Location: 6
Sample ID: S10.0 Date Collected: 12/30/2009 09:08:59
Analyst: Data Type: Original

Replicate Data: S10.0

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[10.0]	0.0974	0.4701	0.0976	09:09:59	Yes
2		[10.0]	0.0973	0.4658	0.0975	09:10:34	Yes
Mean:		[10.0]	0.0974				
SD:		0.0	0.0000				
%RSD:		0.0	0.04				

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999991 Slope: 0.00973 Intercept: 0.00017



Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib Blank	0.0000	0	-0.017	0.00	10.3
S0.2	0.0020	0.2	0.189	0.00	0.4
S0.5	0.0050	0.5	0.502	0.00	2.0
S2.0	0.0199	2.0	2.028	0.00	0.9

S5.0	0.0489	5.0	5.009	0.00	0.6
S10.0	0.0974	10.0	9.990	0.00	0.0

Correlation Coef.: 0.999991 Slope: 0.00973 Intercept: 0.00017

Sequence No.: 7 **Autosampler Location: 9**
Sample ID: ICV **Date Collected: 12/30/2009 09:10:53**
Analyst: **Data Type: Original**

Replicate Data: ICV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.132	5.132	0.0501	0.2407	0.0503	09:11:54	Yes
2	5.105	5.105	0.0498	0.2390	0.0500	09:12:29	Yes
Mean:	5.119	5.119	0.0500				
SD:	0.019	0.019	0.0002				
%RSD:	0.373	0.373	0.37				

QC value within limits for Hg 253.7 Recovery = 102.37%
All analyte(s) passed QC.

Sequence No.: 8 **Autosampler Location: 10**
Sample ID: ICB **Date Collected: 12/30/2009 09:12:48**
Analyst: **Data Type: Original**

Replicate Data: ICB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.022	-0.022	-0.0000	-0.0008	0.0001	09:13:50	Yes
2	-0.022	-0.022	-0.0001	-0.0007	0.0001	09:14:25	Yes
Mean:	-0.022	-0.022	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.575	1.575	6.92				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 9 **Autosampler Location: 11**
Sample ID: CRDL **Date Collected: 12/30/2009 09:14:45**
Analyst: **Data Type: Original**

Replicate Data: CRDL

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.184	0.184	0.0020	0.0087	0.0021	09:15:46	Yes
2	0.187	0.187	0.0020	0.0090	0.0021	09:16:21	Yes
Mean:	0.185	0.185	0.0020				
SD:	0.002	0.002	0.0000				
%RSD:	1.155	1.155	1.06				

QC value within limits for Hg 253.7 Recovery = 92.52%
All analyte(s) passed QC.

Sequence No.: 10 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/30/2009 09:16:41**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.114	5.114	0.0499	0.2387	0.0501	09:17:42	Yes
2	5.062	5.062	0.0494	0.2367	0.0496	09:18:16	Yes
Mean:	5.088	5.088	0.0497				
SD:	0.036	0.036	0.0004				
%RSD:	0.714	0.714	0.71				

QC value within limits for Hg 253.7 Recovery = 101.76%
All analyte(s) passed QC.

Sequence No.: 11 Autosampler Location: 8
Sample ID: CCB Date Collected: 12/30/2009 09:18:35
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.015	-0.015	0.0000	-0.0011	0.0002	09:19:36	Yes
2	-0.016	-0.016	0.0000	-0.0015	0.0002	09:20:11	Yes
Mean:	-0.016	-0.016	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	3.288	3.288	38.53				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 12 Autosampler Location: 12
Sample ID: 1202005730|937320|1 Date Collected: 12/30/2009 09:20:30
Analyst: JXL Data Type: Original

Replicate Data: 1202005730|937320|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	-0.0000	-0.0011	0.0001	09:21:32	Yes
2	-0.016	-0.016	0.0000	-0.0007	0.0002	09:22:07	Yes
Mean:	-0.019	-0.019	-0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	20.00	20.00	235.16				

Sequence No.: 13 Autosampler Location: 13
Sample ID: 1202005731|937320|1 Date Collected: 12/30/2009 09:22:27
Analyst: JXL Data Type: Original

Replicate Data: 1202005731|937320|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.068	2.068	0.0203	0.0977	0.0205	09:23:29	Yes
2	2.031	2.031	0.0199	0.0959	0.0201	09:24:04	Yes
Mean:	2.049	2.049	0.0201				
SD:	0.026	0.026	0.0003				
%RSD:	1.283	1.283	1.27				

Sequence No.: 14 Autosampler Location: 14
Sample ID: 243459001|937320|1 Date Collected: 12/30/2009 09:24:24
Analyst: JXL Data Type: Original

Replicate Data: 243459001|937320|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.012	-0.012	0.0000	0.0008	0.0002	09:25:24	Yes
2	-0.025	-0.025	-0.0001	-0.0010	0.0001	09:25:59	Yes
Mean:	-0.019	-0.019	-0.0000				
SD:	0.009	0.009	0.0001				
%RSD:	48.28	48.28	508.61				

Sequence No.: 15 Autosampler Location: 15
Sample ID: 243459002|937320|1 Date Collected: 12/30/2009 09:26:18
Analyst: JXL Data Type: Original

Replicate Data: 243459002|937320|1

Repl	SampleConc	StndConc	BlnkCorr	Peak	Peak	Time	Peak

Replicate Data: 243466002|937320|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.020	-0.020	-0.0000	-0.0000	0.0001	09:36:53	Yes
2	-0.021	-0.021	-0.0000	-0.0003	0.0001	09:37:28	Yes
Mean:	-0.021	-0.021	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.374	1.374	8.14				

Sequence No.: 21 **Autosampler Location: 21**
Sample ID: 1202005716|937315|1 **Date Collected: 12/30/2009 09:37:47**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005716|937315|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0000	0.0007	0.0002	09:38:48	Yes
2	-0.018	-0.018	-0.0000	0.0000	0.0002	09:39:23	Yes
Mean:	-0.018	-0.018	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	0.816	0.816	17.90				

Sequence No.: 22 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/30/2009 09:39:42**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.039	5.039	0.0492	0.2367	0.0494	09:40:43	Yes
2	5.031	5.031	0.0491	0.2344	0.0493	09:41:18	Yes
Mean:	5.035	5.035	0.0492				
SD:	0.006	0.006	0.0001				
%RSD:	0.111	0.111	0.11				

QC value within limits for Hg 253.7 Recovery = 100.70%
All analyte(s) passed QC.

Sequence No.: 23 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/30/2009 09:41:37**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0000	0.0004	0.0002	09:42:37	Yes
2	-0.011	-0.011	0.0001	0.0013	0.0002	09:43:12	Yes
Mean:	-0.014	-0.014	0.0000				
SD:	0.005	0.005	0.0001				
%RSD:	36.40	36.40	194.70				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 24 **Autosampler Location: 22**
Sample ID: 1202005717|937315|1 **Date Collected: 12/30/2009 09:43:32**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005717|937315|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.080	2.080	0.0204	0.0997	0.0206	09:44:33	Yes
2	2.076	2.076	0.0204	0.0990	0.0205	09:45:08	Yes

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.025	-0.025	-0.0001	-0.0000	0.0001	09:54:14	Yes
2	-0.024	-0.024	-0.0001	-0.0001	0.0001	09:54:49	Yes
Mean:	-0.024	-0.024	-0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	0.911	0.911	3.05				

Sequence No.: 30 **Autosampler Location: 28**
Sample ID: 1202005718|937315|1 **Date Collected: 12/30/2009 09:55:08**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005718|937315|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0000	0.0013	0.0002	09:56:09	Yes
2	-0.020	-0.020	-0.0000	0.0006	0.0001	09:56:44	Yes
Mean:	-0.017	-0.017	0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	22.80	22.80	>999.9%				

Sequence No.: 31 **Autosampler Location: 29**
Sample ID: 1202005719|937315|1 **Date Collected: 12/30/2009 09:57:03**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005719|937315|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.097	2.097	0.0206	0.0997	0.0207	09:58:04	Yes
2	2.098	2.098	0.0206	0.0989	0.0207	09:58:38	Yes
Mean:	2.098	2.098	0.0206				
SD:	0.001	0.001	0.0000				
%RSD:	0.029	0.029	0.03				

Sequence No.: 32 **Autosampler Location: 30**
Sample ID: 1202005720|937315|5 **Date Collected: 12/30/2009 09:58:58**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005720|937315|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.006	-0.006	0.0001	0.0023	0.0003	09:59:58	Yes
2	0.008	0.008	0.0002	0.0034	0.0004	10:00:33	Yes
Mean:	0.001	0.001	0.0002				
SD:	0.010	0.010	0.0001				
%RSD:	>999.9%	>999.9%	55.44				

Sequence No.: 33 **Autosampler Location: 31**
Sample ID: 243461002|937315|1 **Date Collected: 12/30/2009 10:00:52**
Analyst: JXL **Data Type: Original**

Replicate Data: 243461002|937315|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.007	-0.007	0.0001	0.0023	0.0003	10:01:53	Yes
2	-0.001	-0.001	0.0002	0.0028	0.0003	10:02:28	Yes
Mean:	-0.004	-0.004	0.0001				
SD:	0.004	0.004	0.0000				
%RSD:	109.1	109.1	33.85				

Sequence No.: 34 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/30/2009 10:02:47**

Analyst: Data Type: Original

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.155	5.155	0.0503	0.2426	0.0505	10:03:48	Yes
2	5.158	5.158	0.0504	0.2402	0.0505	10:04:23	Yes
Mean:	5.157	5.157	0.0503				
SD:	0.002	0.002	0.0000				
%RSD:	0.039	0.039	0.04				

QC value within limits for Hg 253.7 Recovery = 103.13%
All analyte(s) passed QC.

Sequence No.: 35 Autosampler Location: 8
Sample ID: CCB Date Collected: 12/30/2009 10:04:42
Analyst: Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0000	0.0005	0.0001	10:05:42	Yes
2	-0.017	-0.017	0.0000	0.0006	0.0002	10:06:17	Yes
Mean:	-0.018	-0.018	-0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	6.973	6.973	148.73				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 36 Autosampler Location: 32
Sample ID: 1202005700|937308|1 Date Collected: 12/30/2009 10:06:37
Analyst: JXL Data Type: Original

Replicate Data: 1202005700|937308|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.016	-0.016	0.0000	0.0011	0.0002	10:07:38	Yes
2	-0.014	-0.014	0.0000	0.0005	0.0002	10:08:12	Yes
Mean:	-0.015	-0.015	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	9.861	9.861	54.71				

Sequence No.: 37 Autosampler Location: 33
Sample ID: 1202005701|937308|1 Date Collected: 12/30/2009 10:08:32
Analyst: JXL Data Type: Original

Replicate Data: 1202005701|937308|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.150	2.150	0.0211	0.1010	0.0212	10:09:33	Yes
2	2.146	2.146	0.0210	0.1014	0.0212	10:10:08	Yes
Mean:	2.148	2.148	0.0211				
SD:	0.003	0.003	0.0000				
%RSD:	0.121	0.121	0.12				

Sequence No.: 38 Autosampler Location: 34
Sample ID: 243581001|937308|1 Date Collected: 12/30/2009 10:10:27
Analyst: JXL Data Type: Original

Replicate Data: 243581001|937308|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.004	-0.004	0.0001	0.0012	0.0003	10:11:29	Yes

Replicate Data: 243581005|937308|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.007	0.007	0.0002	0.0020	0.0004	10:21:11	Yes
2	0.010	0.010	0.0003	0.0022	0.0004	10:21:45	Yes
Mean:	0.009	0.009	0.0002				
SD:	0.003	0.003	0.0000				
%RSD:	30.73	30.73	10.21				

Sequence No.: 44 **Autosampler Location: 40**
Sample ID: 1202005775|937342|1 **Date Collected: 12/30/2009 10:22:05**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005775|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0000	0.0007	0.0002	10:23:06	Yes
2	-0.014	-0.014	0.0000	0.0012	0.0002	10:23:41	Yes
Mean:	-0.016	-0.016	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	18.26	18.26	342.73				

Sequence No.: 45 **Autosampler Location: 41**
Sample ID: 1202005776|937342|1 **Date Collected: 12/30/2009 10:24:00**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005776|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.106	2.106	0.0207	0.1000	0.0208	10:25:01	Yes
2	2.103	2.103	0.0206	0.0997	0.0208	10:25:36	Yes
Mean:	2.104	2.104	0.0206				
SD:	0.002	0.002	0.0000				
%RSD:	0.096	0.096	0.09				

Sequence No.: 46 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/30/2009 10:25:55**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.196	5.196	0.0507	0.2442	0.0509	10:26:56	Yes
2	5.193	5.193	0.0507	0.2433	0.0509	10:27:31	Yes
Mean:	5.194	5.194	0.0507				
SD:	0.002	0.002	0.0000				
%RSD:	0.033	0.033	0.03				

QC value within limits for Hg 253.7 Recovery = 103.89%
All analyte(s) passed QC.

Sequence No.: 47 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/30/2009 10:27:50**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.016	-0.016	0.0000	0.0006	0.0002	10:28:50	Yes
2	-0.012	-0.012	0.0000	0.0011	0.0002	10:29:25	Yes
Mean:	-0.014	-0.014	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	17.58	17.58	86.66				

QC value within limits for Hg 253.7 Recovery = Not calculated

All analyte(s) passed QC.

Sequence No.: 48 Autosampler Location: 42
Sample ID: 243386001|937342|1 Date Collected: 12/30/2009 10:29:45
Analyst: JXL Data Type: Original

Replicate Data: 243386001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.017	-0.017	0.0000	0.0008	0.0002	10:30:46	Yes
2	-0.015	-0.015	0.0000	0.0013	0.0002	10:31:21	Yes
Mean:	-0.016	-0.016	0.0000				
SD:	0.001	0.001	0.0000				
%RSD:	8.673	8.673	108.39				

Sequence No.: 49 Autosampler Location: 43
Sample ID: 243396001|937342|1 Date Collected: 12/30/2009 10:31:40
Analyst: JXL Data Type: Original

Replicate Data: 243396001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0000	0.0005	0.0002	10:32:41	Yes
2	-0.010	-0.010	0.0001	0.0014	0.0002	10:33:17	Yes
Mean:	-0.014	-0.014	0.0000				
SD:	0.006	0.006	0.0001				
%RSD:	43.23	43.23	204.01				

Sequence No.: 50 Autosampler Location: 44
Sample ID: 243405001|937342|1 Date Collected: 12/30/2009 10:33:36
Analyst: JXL Data Type: Original

Replicate Data: 243405001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0000	0.0008	0.0002	10:34:38	Yes
2	-0.017	-0.017	0.0000	0.0006	0.0002	10:35:12	Yes
Mean:	-0.016	-0.016	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	10.79	10.79	115.43				

Sequence No.: 51 Autosampler Location: 45
Sample ID: 243493001|937342|1 Date Collected: 12/30/2009 10:35:32
Analyst: JXL Data Type: Original

Replicate Data: 243493001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.017	-0.017	0.0000	0.0008	0.0002	10:36:33	Yes
2	-0.027	-0.027	-0.0001	-0.0006	0.0001	10:37:08	Yes
Mean:	-0.022	-0.022	-0.0000				
SD:	0.007	0.007	0.0001				
%RSD:	31.95	31.95	148.80				

Sequence No.: 52 Autosampler Location: 46
Sample ID: 243506001|937342|1 Date Collected: 12/30/2009 10:37:27
Analyst: JXL Data Type: Original

Replicate Data: 243506001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

1	-0.018	-0.018	-0.0000	0.0009	0.0002	10:38:29	Yes
2	-0.018	-0.018	-0.0000	0.0005	0.0002	10:39:04	Yes
Mean:	-0.018	-0.018	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.312	1.312	40.04				

Sequence No.: 53 **Autosampler Location: 47**
Sample ID: 243513001|937342|1 **Date Collected: 12/30/2009 10:39:23**
Analyst: JXL **Data Type: Original**

Replicate Data: 243513001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.016	-0.016	0.0000	0.0006	0.0002	10:40:25	Yes
2	-0.011	-0.011	0.0001	0.0014	0.0002	10:41:00	Yes
Mean:	-0.014	-0.014	0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	27.32	27.32	110.75				

Sequence No.: 54 **Autosampler Location: 48**
Sample ID: 243513002|937342|1 **Date Collected: 12/30/2009 10:41:20**
Analyst: JXL **Data Type: Original**

Replicate Data: 243513002|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.017	-0.017	0.0000	0.0006	0.0002	10:42:22	Yes
2	-0.017	-0.017	0.0000	0.0007	0.0002	10:42:56	Yes
Mean:	-0.017	-0.017	0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.579	1.579	101.26				

Sequence No.: 55 **Autosampler Location: 49**
Sample ID: 243539001|937342|1 **Date Collected: 12/30/2009 10:43:16**
Analyst: JXL **Data Type: Original**

Replicate Data: 243539001|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0001	0.0001	0.0001	10:44:18	Yes
2	-0.017	-0.017	0.0000	0.0009	0.0002	10:44:53	Yes
Mean:	-0.020	-0.020	-0.0000				
SD:	0.004	0.004	0.0000				
%RSD:	22.24	22.24	146.97				

Sequence No.: 56 **Autosampler Location: 50**
Sample ID: 1202005777|937342|1 **Date Collected: 12/30/2009 10:45:13**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005777|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0000	0.0008	0.0002	10:46:14	Yes
2	-0.016	-0.016	0.0000	0.0008	0.0002	10:46:49	Yes
Mean:	-0.017	-0.017	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	9.034	9.034	312.39				

Sequence No.: 57 **Autosampler Location: 51**
Sample ID: 1202005778|937342|1 **Date Collected: 12/30/2009 10:47:09**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005778|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	2.104	2.104	0.0206	0.1005	0.0208	10:48:10	Yes
2	2.100	2.100	0.0206	0.1003	0.0208	10:48:45	Yes
Mean:	2.102	2.102	0.0206				
SD:	0.003	0.003	0.0000				
%RSD:	0.139	0.139	0.14				

Sequence No.: 58 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/30/2009 10:49:04**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	5.206	5.206	0.0508	0.2443	0.0510	10:50:05	Yes
2	5.199	5.199	0.0508	0.2426	0.0509	10:50:39	Yes
Mean:	5.203	5.203	0.0508				
SD:	0.004	0.004	0.0000				
%RSD:	0.086	0.086	0.09				

QC value within limits for Hg 253.7 Recovery = 104.05%
All analyte(s) passed QC.

Sequence No.: 59 **Autosampler Location: 8**
Sample ID: CCB **Date Collected: 12/30/2009 10:50:58**
Analyst: **Data Type: Original**

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.017	-0.017	-0.0000	0.0005	0.0002	10:51:59	Yes
2	-0.022	-0.022	-0.0000	0.0002	0.0001	10:52:35	Yes
Mean:	-0.019	-0.019	-0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	16.14	16.14	138.23				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 60 **Autosampler Location: 52**
Sample ID: 1202005779|937342|5 **Date Collected: 12/30/2009 10:52:54**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005779|937342|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.017	-0.017	-0.0000	0.0001	0.0002	10:53:55	Yes
2	-0.013	-0.013	0.0000	0.0013	0.0002	10:54:30	Yes
Mean:	-0.015	-0.015	0.0000				
SD:	0.003	0.003	0.0000				
%RSD:	21.29	21.29	150.43				

Sequence No.: 61 **Autosampler Location: 53**
Sample ID: 243539002|937342|1 **Date Collected: 12/30/2009 10:54:49**
Analyst: JXL **Data Type: Original**

Replicate Data: 243539002|937342|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.014	-0.014	0.0000	0.0010	0.0002	10:55:51	Yes
2	-0.026	-0.026	-0.0001	-0.0004	0.0001	10:56:25	Yes
Mean:	-0.020	-0.020	-0.0000				

#	ug/L	ug/L	Signal	Area	Height		Stored
1	1.865	1.865	0.0183	0.0929	0.0185	11:05:29	Yes
2	1.850	1.850	0.0182	0.0920	0.0183	11:06:04	Yes
Mean:	1.857	1.857	0.0182				
SD:	0.010	0.010	0.0001				
%RSD:	0.561	0.561	0.56				

Sequence No.: 67 **Autosampler Location: 59**
Sample ID: 1202005774|937340|5 **Date Collected: 12/30/2009 11:06:24**
Analyst: JXL **Data Type: Original**

Replicate Data: 1202005774|937340|5

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.013	-0.013	0.0000	0.0014	0.0002	11:07:25	Yes
2	-0.023	-0.023	-0.0001	-0.0001	0.0001	11:08:00	Yes
Mean:	-0.018	-0.018	-0.0000				
SD:	0.007	0.007	0.0001				
%RSD:	39.20	39.20	856.25				

Sequence No.: 68 **Autosampler Location: 60**
Sample ID: 243436003|937340|1 **Date Collected: 12/30/2009 11:08:20**
Analyst: JXL **Data Type: Original**

Replicate Data: 243436003|937340|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.018	-0.018	-0.0000	0.0007	0.0002	11:09:22	Yes
2	-0.021	-0.021	-0.0000	0.0005	0.0001	11:09:57	Yes
Mean:	-0.020	-0.020	-0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	7.739	7.739	64.17				

Sequence No.: 69 **Autosampler Location: 61**
Sample ID: 243436004|937340|1 **Date Collected: 12/30/2009 11:10:17**
Analyst: JXL **Data Type: Original**

Replicate Data: 243436004|937340|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.021	-0.021	-0.0000	0.0003	0.0001	11:11:19	Yes
2	-0.021	-0.021	-0.0000	0.0005	0.0001	11:11:54	Yes
Mean:	-0.021	-0.021	-0.0000				
SD:	0.000	0.000	0.0000				
%RSD:	1.008	1.008	5.19				

Sequence No.: 70 **Autosampler Location: 7**
Sample ID: CCV **Date Collected: 12/30/2009 11:12:14**
Analyst: **Data Type: Original**

Replicate Data: CCV

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	4.989	4.989	0.0487	0.2352	0.0489	11:13:15	Yes
2	4.969	4.969	0.0485	0.2351	0.0487	11:13:49	Yes
Mean:	4.979	4.979	0.0486				
SD:	0.014	0.014	0.0001				
%RSD:	0.281	0.281	0.28				

QC value within limits for Hg 253.7 Recovery = 99.58%
All analyte(s) passed QC.

Sequence No.: 71 **Autosampler Location: 8**

Sample ID: CCB
Analyst:
Date Collected: 12/30/2009 11:14:08
Data Type: Original

Replicate Data: CCB

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.023	-0.023	-0.0001	0.0001	0.0001	11:15:09	Yes
2	-0.011	-0.011	0.0001	0.0015	0.0002	11:15:44	Yes
Mean:	-0.017	-0.017	0.0000				
SD:	0.009	0.009	0.0001				
%RSD:	50.79	50.79	>999.9%				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 72
Sample ID: 243436005|937340|1
Analyst: JXL
Autosampler Location: 62
Date Collected: 12/30/2009 11:16:04
Data Type: Original

Replicate Data: 243436005|937340|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.009	-0.009	0.0001	0.0019	0.0002	11:17:05	Yes
2	-0.019	-0.019	-0.0000	0.0006	0.0001	11:17:40	Yes
Mean:	-0.014	-0.014	0.0000				
SD:	0.007	0.007	0.0001				
%RSD:	51.74	51.74	220.92				

Sequence No.: 73
Sample ID: 243436006|937340|1
Analyst: JXL
Autosampler Location: 63
Date Collected: 12/30/2009 11:17:59
Data Type: Original

Replicate Data: 243436006|937340|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.015	-0.015	0.0000	0.0010	0.0002	11:19:01	Yes
2	-0.013	-0.013	0.0000	0.0010	0.0002	11:19:35	Yes
Mean:	-0.014	-0.014	0.0000				
SD:	0.002	0.002	0.0000				
%RSD:	11.64	11.64	53.00				

Sequence No.: 74
Sample ID: 243436007|937340|1
Analyst: JXL
Autosampler Location: 64
Date Collected: 12/30/2009 11:19:55
Data Type: Original

Replicate Data: 243436007|937340|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.011	-0.011	0.0001	0.0013	0.0002	11:20:56	Yes
2	-0.011	-0.011	0.0001	0.0012	0.0002	11:21:31	Yes
Mean:	-0.011	-0.011	0.0001				
SD:	0.000	0.000	0.0000				
%RSD:	1.672	1.672	2.89				

Sequence No.: 75
Sample ID: 243436008|937340|1
Analyst: JXL
Autosampler Location: 65
Date Collected: 12/30/2009 11:21:51
Data Type: Original

Replicate Data: 243436008|937340|1

Repl #	SampleConc ug/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.019	-0.019	-0.0000	0.0003	0.0001	11:22:52	Yes
2	-0.007	-0.007	0.0001	0.0017	0.0003	11:23:27	Yes

Miscellaneous

Prep LogBook

Analyst: BXA1 Verified by:_____

Batch: 936812

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202004436	UI091124-01	.25	mL
LCS	1202004436	UI091124-06	.25	mL
MS	1202004438	UI091124-01	.25	mL
MS	1202004438	UI091124-06	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202004435		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
LCS	1202004436		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
SAMPLE	243493001		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
SAMPLE	243554001		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
DUP	1202004437	243554001	SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
MS	1202004438	243554001	SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
SDILT	1202004439	243554001	SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
SAMPLE	243554002		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
SAMPLE	243554003		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER
SAMPLE	243554004		SW846 3005A	04-JAN-2010 16:14	<2	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1244970	2.5 mL	HYDROCHLORIC ACID
1234886	1 mL	Nitric Acid CONC.

Comments:

Prep LogBook

Analyst: BXAI Verified by:_____

Batch: 936814

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202004441	UI091124-A00	.5	mL
LCS	1202004441	UI091124-B	.5	mL
MS	1202004443	UI090828-A	.5	mL
MS	1202004443	UI090828-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202004440		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
LCS	1202004441		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
SAMPLE	243493001		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
DUP	1202004442	243493001	SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
MS	1202004443	243493001	SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
SDILT	1202004444	243493001	SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
SAMPLE	243554001		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
SAMPLE	243554002		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
SAMPLE	243554003		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER
SAMPLE	243554004		SW846 3005A	04-JAN-2010 16:20	<2	50 mL	50 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1244970	2.5 mL	HYDROCHLORIC ACID
1234886	1 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 941230

Lab SOP: GL-MA-E-006 REV# 9

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202014493	UI1246651-A	.25	mL
LCS	1202014493	UI1246654-B	.25	mL
MS	1202014495	UI090828-A	.25	mL
MS	1202014495	UI090828-B	.25	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202014492		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
LCS	1202014493		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
SAMPLE	243493001		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
DUP	1202014494	243493001	SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
MS	1202014495	243493001	SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
SDILT	1202014496	243493001	SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
SAMPLE	243554001		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
SAMPLE	243554002		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
SAMPLE	243554003		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER
SAMPLE	243554004		SW846 3005A	13-JAN-2010 12:45	<2	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1252838	1.25 mL	HYDROCHLORIC ACID
1252836	.5 mL	Nitric Acid CONC.

Comments

Prep LogBook

Analyst: BCD1 Verified by:_____

Batch: 937341

Lab SOP: GL-MA-E-010 REV# 23

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202005776	WHG1248082-13	.2	mL
MS	1202005778	WHG1248082-13	.2	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202005775		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
LCS	1202005776		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243386001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243396001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243405001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243493001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243506001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243513001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243513002		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243539001		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
DUP	1202005777	243539001	SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
MS	1202005778	243539001	SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SDILT	1202005779	243539001	SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER
SAMPLE	243539002		SW846 7470A Prep	29-DEC-2009 16:07	<2	20 mL	20 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
1176183	1 mL	Sulfuric Acid, Concentrated
1240182-1	.5 mL	NITRIC ACID
1234385-C	1.5 mL	5% Potassium Persulfate
1244904-C	3 mL	5% KMnO4 solution
1206350-C	1 mL	Hg reducing agent
WHG1248086-06	500 uL	Mercury Working 2nd Source 5.0/ICV
WHG1248088-01	20 uL	Mercury Working 1st Source CAL 0.2/CRA
WHG1248090-02	50 uL	Mercury Working 1st Source CAL 0.5
WHG1248092-05	1 mL	Mercury Working 1st Source CAL 10.0
WHG1248094-03	200 uL	Mercury Working 1st Source CAL 2.0
WHG1248096-04	500 uL	Mercury Working 1st Source CAL 5.0/CCV

Comments

DATA EXCEPTION REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
13-JAN-10	Industrial	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
ICP/MS	SW846 3005/6020	Liquid	LANL
Batch ID:	**Sample Numbers:**		
936815	See Below		

Potentially affected work order(s)(SDG): 243493(10-1037-1),243554(10-1087-1)

Application Issues:

Failed Recovery for MS/PS

Specification and Requirements Exception Description:	DER Disposition:
1. Failed Recovery for MS/PS: QC 1202004443MS	The matrix spike recovery failed outside of the control limits for Li and Pb due to possible matrix interferences and/or non-homogeneity. Per GEL's accredited methods and SOPs, a corrective action is not required and the data is qualified and reported.

Originator's Name:

Elizabeth Janssen 14-JAN-10

Data Validator/Group Leader:

Samantha Jacobs 15-JAN-10

Standard Logbook

Serial ID: UHG1167639-01 **Opened:** 13-AUG-09 **Amount :** 125 mL
Name: MHGSTOCK1 **Received:** 13-AUG-09 **Catalog Number :** PLHG4-2Y
Type: Source Material **Expires:** 13-AUG-10 **Lot Number :** 15-37HG
Employee: Bryan Davis **Solvent :** 10% HNO3
Supplier: Spex
Description: Mercury Source Standard #1 1,000 mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	1000 mg/L		

Serial ID: UI090422-40 **Opened:** 04-MAY-09 **Amount :** 500 mL
Name: TRACE ICP ICSA SOLN A **Received:** 22-APR-09 **Catalog Number :** 160005-01-03
Type: Source Material **Expires:** 04-MAY-10 **Lot Number :** 1013357
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: o2si
Description: TRACE ICP ICSA SOLN A mg/L+/-0.5%IN5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Calcium	5000 mg/L
Iron	2000 mg/L	Magnesium	5000 mg/L

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L

Standard Logbook

Analyte	Concentration	Analyte	Concentration
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L
Zirconium	2 mg/L		

Serial ID: UI090701-40 **Opened:** 01-JUL-09 **Amount :** 500 mL
Name: TRACE ICP Stock PQL St **Received:** 30-JUN-09 **Catalog Number :** 160543-01-03
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016475
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3+TrHF
Supplier: 02si
Description: TRACE ICP Stock PQL Standard
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	100 mg/L	Antimony	5 mg/L
Arsenic	15 mg/L	Barium	2.5 mg/L
Beryllium	2.5 mg/L	Boron	25 mg/L
Cadmium	2.5 mg/L	Calcium	100 mg/L
Chromium	2.5 mg/L	Cobalt	2.5 mg/L
Copper	5 mg/L	Iron	50 mg/L
Lead	5 mg/L	Magnesium	150 mg/L
Manganese	5 mg/L	Molybdenum	5 mg/L
Nickel	2.5 mg/L	Phosphorous	75 mg/L
Potassium	75 mg/L	Selenium	15 mg/L
Silicon	50 mg/L	Silver	2.5 mg/L

Analyte	Concentration	Analyte	Concentration
Sodium	150 mg/L	Strontium	2.5 mg/L
Sulfur	50 mg/L	Thallium	10 mg/L
Tin	5 mg/L	Titanium	2.5 mg/L
Uranium	25 mg/L	Vanadium	2.5 mg/L
Zinc	5 mg/L		

Serial ID: UI090828-42 **Opened:** 16-SEP-09 **Amount :** 500 mL
Name: TRACE ICP Na-1000SOUR **Received:** 27-AUG-09 **Catalog Number :** 060011-02-03
Type: Source Material **Expires:** 16-SEP-10 **Lot Number :** 1017098
Employee: Helen Camello **Solvent :** 1%HNO3
Supplier: 02SI
Description: Sodium 1000 +/- 3 ug/mL in 1% HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Sodium	1000 ug/mL		

Serial ID: UI090828-A **Opened:** 28-AUG-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 27-AUG-09 **Lot Number :** 1017141
Type: Source Material **Expires:** 28-AUG-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE liquid Spike Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	8 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Boron	10 mg/L	Cadmium	1 mg/L
Calcium	200 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	4 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorus, Total as P	200 mg/L	Potassium	200 mg/L
Selenium	2 mg/L	Silicon	200 mg/L
Sodium	200 mg/L	Strontium	5 mg/L
Thallium	10 mg/L	Thorium	5 mg/L
Total Uranium	5 mg/L	Uranium	5 mg/L
Uranium-235	.0364 mg/L	Uranium-238	4.96 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Standard Logbook

Serial ID: UI090828-B **Opened:** 28-AUG-09 **Catalog Number :** 160067-02
Name: ICP-MS DOE Liquid SPIKE **Received:** 27-AUG-09 **Lot Number :** 1017141
Type: Source Material **Expires:** 28-AUG-10
Employee: Francena Armstrong **Verified:** 21-NOV-08
Supplier: O2Si
Description: ICP-MS DOE Liquid Spike Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Serial ID: UI090925-40 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX38-500N
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909129
Employee: Helen Camello **Solvent :** 5%HNO3
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1A 5%HNO3
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Arsenic	100 mg/L
Barium	100 mg/L	Boron	100 mg/L
Cadmium	100 mg/L	Calcium	1000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	1000 mg/L
Lead	100 mg/L	Phosphorous	500 mg/L
Potassium	500 mg/L	Selenium	500 mg/L
Sodium	500 mg/L	Strontium	100 mg/L

Serial ID: UI090925-41 **Opened:** 23-OCT-09 **Amount :** 500 mL
Name: SECOND SOURCE STD -1 **Received:** 25-SEP-09 **Catalog Number :** SGELMX39-500B
Type: Source Material **Expires:** 30-SEP-10 **Lot Number :** 4909130
Employee: Helen Camello **Solvent :** 5%HNO3,TR.HF
Supplier: SPECTRO PURE
Description: SECOND SOURCE STD #1B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 mg/L	Beryllium	50 mg/L
Magnesium	1000 mg/L	Manganese	100 mg/L
Molybdenum	100 mg/L	Nickel	100 mg/L
Silver	50 mg/L	Sulfur	500 mg/L
Thallium	100 mg/L	Tin	100 mg/L
Titanium	100 mg/L	Uranium	100 mg/L

Analyte	Concentration	Analyte	Concentration
Vanadium	100 mg/L	Zinc	100 mg/L

Serial ID: UI091015-42 **Opened:** 28-OCT-09 **Amount :** 500 mL
Name: SI 1000mg/L **Received:** 15-OCT-09 **Catalog Number :** 060014-02-03
Type: Source Material **Expires:** 28-OCT-10 **Lot Number :** 1017581
Employee: Helen Camello **Solvent :** 0.3%H2O(NH4)2SiF6
Supplier: o2si
Description: Silicon 1000mg/L+/-0.3%in H2O(NH4)2SiF6
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091102-40 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1A SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-1-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930215
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Std #1A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2000 mg/L	Arsenic	200 mg/L
Barium	200 mg/L	Beryllium	200 mg/L
Boron	200 mg/L	Cadmium	200 mg/L
Calcium	2000 mg/L	Chromium	200 mg/L
Cobalt	200 mg/L	Copper	200 mg/L
Iron	2000 mg/L	Lead	200 mg/L
Magnesium	2000 mg/L	Manganese	200 mg/L
Nickel	200 mg/L	Phosphorous	1000 mg/L
Potassium	2000 mg/L	Selenium	200 mg/L
Sodium	2000 mg/L	Strontium	200 mg/L
Thallium	200 mg/L	Uranium	200 mg/L
Vanadium	200 mg/L	Zinc	200 mg/L

Serial ID: UI091102-41 **Opened:** 16-NOV-09 **Amount :** 500 mL
Name: TRACE CALSTD#1B SOUF **Received:** 02-NOV-09 **Catalog Number :** HP2270-2-500
Type: Source Material **Expires:** 31-OCT-10 **Lot Number :** 0930216
Employee: Helen Camello **Solvent :** HNO3
Supplier: Environmental Express
Description: Trace Calibration Standard #1B
Comments: None

Analyte	Concentration	Analyte	Concentration

Analyte	Concentration	Analyte	Concentration
Antimony	200 mg/L	Molybdenum	200 mg/L
Silver	200 mg/L	Sulfur	400 mg/L
Tin	200 mg/L	Titanium	200 mg/L

Serial ID: UI091102-42 **Opened:** 17-NOV-09 **Amount :** 200 mL
Name: SILICON **Received:** 02-NOV-09 **Catalog Number :** HP100050-4F
Type: Source Material **Expires:** 17-NOV-10 **Lot Number :** 0921924
Employee: Helen Camello **Solvent :** H20/tr HF
Supplier: ENVIRNMENTAL EXPRESS
Description: SILICON 1000mg/L H20/tr HF
Comments: None

Analyte	Concentration	Analyte	Concentration
Silica	2139 mg/L	Silicon	1000 mg/L

Serial ID: UI091124-01 **Opened:** 24-NOV-09 **Lot Number :** 1017642
Name: METALSPIKE-1 **Received:** 24-NOV-09
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix I
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 ug/mL	Arsenic	100 ug/mL
Barium	100 ug/mL	Beryllium	100 ug/mL
Boron	100 ug/mL	Cadmium	100 ug/mL
Calcium	1000 ug/mL	Cobalt	100 ug/mL
Iron	1000 ug/mL	Lead	100 ug/mL
Magnesium	1000 ug/mL	Phosphorous	100 ug/mL
Potassium	1000 ug/mL	Silver	100 ug/mL
Sodium	1000 ug/mL	Strontium	100 ug/mL

Serial ID: UI091124-06 **Opened:** 24-NOV-09 **Lot Number :** 1017643
Name: METALSPIKE-2 **Received:** 24-NOV-09
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: OS2I
Description: Metals Spike Mix II
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	100 ug/mL	Chromium	100 ug/mL
Copper	100 ug/mL	Manganese	100 ug/mL

Analyte	Concentration	Analyte	Concentration
Molybdenum	100 ug/mL	Nickel	100 ug/mL
Selenium	100 ug/mL	Silica	2141 ug/mL
Silicon	1000 ug/mL	Sulfur	1000 ug/mL
Thallium	100 ug/mL	Tin	100 ug/mL
Titanium	100 ug/mL	Uranium	100 ug/mL
Vanadium	100 ug/mL	Zinc	100 ug/mL

Serial ID: UI091124-A00 **Opened:** 24-NOV-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 24-NOV-09 **Lot Number :** 1017644
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI091124-B **Opened:** 24-NOV-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 24-NOV-09 **Lot Number :** 1017644
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UI091212-11 **Opened:** 12-DEC-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 12-DEC-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: 02SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI091212-60 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI091212-61 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI091215-48 **Opened:** 04-JAN-10 **Amount :** 1000 mL
Name: Trace ICP ICSA **Received:** 18-DEC-09 **Catalog Number :** 160005-02
Type: Source Material **Expires:** 04-JAN-11 **Lot Number :** 1018219
Employee: Helen Camello **Solvent :** 3% HCl + 1% HNO3
Supplier: o2si
Description: Trace ICP Interferent Check Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 UG/L	Calcium	500000 UG/L
Iron	200000 UG/L	Magnesium	500000 UG/L

Serial ID: UI091217-06 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 17-DEC-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018209
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI091217-07 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 17-DEC-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018210
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L

Analyte	Concentration	Analyte	Concentration
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI091217-08 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-DEC-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018211
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI091217-12 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 17-DEC-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018212
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Standard Logbook

Serial ID: UI091217-13 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 17-DEC-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1016926
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UI091228-40 **Opened:** 28-DEC-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD-A **Received:** 21-DEC-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 28-DEC-10 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION A
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10000 ug/L	Arsenic	10000 ug/L
Barium	15000 ug/L	Beryllium	3000 ug/L
Boron	5000 ug/L	Cadmium	10000 ug/L
Chromium	25000 ug/L	Cobalt	10000 ug/L
Copper	20000 ug/L	Lead	25000 ug/L
Manganese	10000 ug/L	Molybdenum	10000 ug/L
Nickel	10000 ug/L	Phosphorous	15000 ug/L
Potassium	300000 ug/L	Selenium	10000 ug/L
Silica	107000 ug/L	Silicon	50000 ug/L
Silver	1000 ug/L	Strontium	10000 ug/L
Sulfur	50000 ug/L	Thallium	10000 ug/L
Tin	10000 ug/L	Titanium	10000 ug/L
Vanadium	10000 ug/L	Zinc	15000 ug/L

Serial ID: UI091228-41 **Opened:** 28-DEC-09 **Amount :** 500 mL
Name: ICP HIGH RANGE STD B **Received:** 21-DEC-09 **Catalog Number :** 160211-05-03
Type: Source Material **Expires:** 28-DEC-10 **Lot Number :** 1018160
Employee: Helen Camello **Solvent :** +/-0.5%in2%HNO3
Supplier: 02SI
Description: ICP HIGH RANGE STD SOLUTION B
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	500000 ug/L	Calcium	500000 ug/L

Analyte	Concentration	Analyte	Concentration
Iron	500000 ug/L	Magnesium	500000 ug/L
Sodium	500000 ug/L	Uranium	15000 ug/L

Serial ID: UI1246651-A **Opened:** 23-DEC-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 23-DEC-09 **Lot Number :** 1018097
Type: Source Material **Expires:** 23-DEC-10
Employee: Bryan Davis
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI1246654-B **Opened:** 23-DEC-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 23-DEC-09 **Lot Number :** 1017644
Type: Source Material **Expires:** 23-DEC-10
Employee: Bryan Davis
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UMS090303-01 **Opened:** 03-MAR-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 03-MAR-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 14-81JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090303-02 **Opened:** 03-MAR-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 03-MAR-09 **Lot Number :** 14-83JB
Type: Source Material **Expires:** 28-FEB-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090303-03 **Opened:** 03-MAR-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 03-MAR-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 15-199JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Standard Logbook

Serial ID: WHG1248082-13 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGLIQLCSMSSPIKE **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 30-DEC-09
Employee: Jason Loy **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury working intermediate standard for LCS/MS
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UHG1167639-01	Mercury	1000 mg/L	.05 mL	250 mL	200 ug/L

Serial ID: WHG1248086-06 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGWORK5.0ICV **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 05-JAN-10
Employee: Jason Loy
Supplier: GEL
Description: Mercury Working 2nd Source 5.0/ICV
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	5 ug/L		

Serial ID: WHG1248088-01 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.2CRA **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 05-JAN-10
Employee: Jason Loy
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.2/CRA
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	.2 ug/L		

Serial ID: WHG1248090-02 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGWORKCAL0.5 **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 05-JAN-10
Employee: Jason Loy
Supplier: GEL
Description: Mercury Working 1st Source CAL 0.5
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	.5 ug/L		

Standard Logbook

Serial ID: WHG1248092-05 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGWORKCAL10.0 **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 05-JAN-10
Employee: Jason Loy **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 10.0
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	10 ug/L		

Serial ID: WHG1248094-03 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGWORKCAL2.0 **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 05-JAN-10
Employee: Jason Loy **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 2.0
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	2 ug/L		

Serial ID: WHG1248096-04 **Opened:** 29-DEC-09 **Pipet Id :** Hg1289245
Name: MHGWORKCAL5.0CCV **Received:** 29-DEC-09 **Solvent :** 2% HNO3-1240182
Type: Working **Expires:** 05-JAN-10
Employee: Jason Loy **Verified:** 20-JUL-07
Supplier: GEL
Description: Mercury Working 1st Source CAL 5.0/CCV
Comments: None

Analyte	Concentration	Analyte	Concentration
Mercury	5 ug/L		

Serial ID: WI100108-42 **Opened:** 08-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.1 PPM STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 09-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1249941
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.1 PPM CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100108-44	Aluminum	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100108-44	Antimony	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Arsenic	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Barium	1000 ug/L	10 mL	100 mL	100 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WI100108-44	Beryllium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Boron	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Cadmium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Calcium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100108-44	Chromium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Cobalt	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Copper	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Iron	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100108-44	Lead	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Magnesium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100108-44	Manganese	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Molybdenum	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Nickel	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Phosphorous	5000 ug/L	10 mL	100 mL	500 ug/L
WI100108-44	Potassium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100108-44	Selenium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Silica	10698 ug/L	10 mL	100 mL	1069 ug/L
WI100108-44	Silicon	5000 ug/L	10 mL	100 mL	500 ug/L
WI100108-44	Silver	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Sodium	10000 ug/L	10 mL	100 mL	1000 ug/L
WI100108-44	Strontium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Sulfur	2000 ug/L	10 mL	100 mL	200 ug/L
WI100108-44	Thallium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Tin	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Titanium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Uranium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Vanadium	1000 ug/L	10 mL	100 mL	100 ug/L
WI100108-44	Zinc	1000 ug/L	10 mL	100 mL	100 ug/L

Serial ID: WI100108-43 **Opened:** 08-JAN-10 **Balance Id :** 216
Name: TRACE ICP 0.5/CCV STD. **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 09-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1249941
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP 0.5/CCV CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090828-42	Sodium	1000 ug/mL	5 mL	1000 mL	5000 UG/L
UI091015-42	Silica	2139 mg/L	2.5 mL	1000 mL	5348.25 UG/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Barium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Boron	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Chromium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Copper	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Iron	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Lead	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Manganese	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Nickel	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	1000 mL	2500 UG/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Selenium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	1000 mL	5000 UG/L
UI091102-40	Strontium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Thallium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Uranium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-40	Zinc	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Antimony	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Silver	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	1000 mL	1000 UG/L
UI091102-41	Tin	200 mg/L	2.5 mL	1000 mL	500 UG/L
UI091102-41	Titanium	200 mg/L	2.5 mL	1000 mL	500 UG/L

Serial ID: WI100108-44 **Opened:** 08-JAN-10 **Balance Id :** 216
Name: TRACE ICP SCAL 1.0 **Received:** 02-NOV-09 **Pipet Id :** 1099667
Type: Working **Expires:** 09-JAN-10 **Solvent :** 3%HCL and 1 %HNO3-1249941
Employee: Helen Camello
Supplier: o2si
Description: Trace ICP Calibration Standard 1.0ppm
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091015-42	Silica	2139 mg/L	2.5 mL	500 mL	10698 ug/L
UI091015-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Aluminum	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Arsenic	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Barium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Beryllium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Boron	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cadmium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Calcium	2000 mg/L	2.5 mL	500 mL	10000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091102-40	Chromium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Cobalt	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Copper	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Iron	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Lead	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Magnesium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Manganese	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Nickel	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Phosphorous	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI091102-40	Potassium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Selenium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Sodium	2000 mg/L	2.5 mL	500 mL	10000 ug/L
UI091102-40	Strontium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Thallium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Uranium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Vanadium	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-40	Zinc	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Antimony	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Molybdenum	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Silver	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Sulfur	400 mg/L	2.5 mL	500 mL	2000 ug/L
UI091102-41	Tin	200 mg/L	2.5 mL	500 mL	1000 ug/L
UI091102-41	Titanium	200 mg/L	2.5 mL	500 mL	1000 ug/L

Serial ID: WI100108-45 **Opened:** 08-JAN-10 **Balance Id :** 216
Name: TRACE ICP S-10 STD **Received:** 22-APR-09 **Pipet Id :** 1099667
Type: Working **Expires:** 09-JAN-10 **Solvent :** 3%HCL and 1%HNO3 -1249941
Employee: Helen Camello
Supplier: GEL
Description: TRACE ICP S-10 CALIBRATION STD.
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090422-40	Aluminum	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Calcium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090422-40	Iron	2000 mg/L	5 mL	500 mL	20000 UG/L
UI090422-40	Magnesium	5000 mg/L	5 mL	500 mL	50000 UG/L
UI090828-42	Sodium	1000 ug/mL	10 mL	500 mL	20000 UG/L

Serial ID: WI100108-46 **Opened:** 08-JAN-10 **Balance Id :** 216
Name: ICP TRACE ICV **Received:** 25-SEP-09 **Pipet Id :** 1099667
Type: Working **Expires:** 09-JAN-10 **Solvent :** 3%HCL AND 1%HNO3-1249941
Employee: Helen Camello
Supplier: GEL
Description: Initial Calibration Verification ICP Trace Metals

Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090925-40	Aluminum	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Arsenic	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Barium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Boron	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cadmium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Calcium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Chromium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Cobalt	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Copper	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Iron	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-40	Lead	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-40	Phosphorous	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Potassium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Selenium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Sodium	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-40	Strontium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Antimony	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Beryllium	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Magnesium	1000 mg/L	2.5 mL	500 mL	5000 ug/L
UI090925-41	Manganese	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Molybdenum	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Nickel	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Silver	50 mg/L	2.5 mL	500 mL	250 ug/L
UI090925-41	Sulfur	500 mg/L	2.5 mL	500 mL	2500 ug/L
UI090925-41	Thallium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Tin	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Titanium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Uranium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Vanadium	100 mg/L	2.5 mL	500 mL	500 ug/L
UI090925-41	Zinc	100 mg/L	2.5 mL	500 mL	500 ug/L
UI091102-42	Silica	2139 mg/L	2.5 mL	500 mL	10695 ug/L
UI091102-42	Silicon	1000 mg/L	2.5 mL	500 mL	5000 ug/L

Serial ID: WI100108-47 **Opened:** 08-JAN-10 **Balance Id :** 216
Name: PQL Working Standard **Received:** 08-JAN-10 **Pipet Id :** 1099667
Type: Working **Expires:** 09-JAN-10 **Solvent :** 3%HCL &1%HNO3-1249941
Employee: Helen Camello
Supplier: 02si
Description: PQL Working Standard
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Aluminum	100 mg/L	2 mL	1000 mL	200 ug/L
UI090701-40	Antimony	5 mg/L	2 mL	1000 mL	10 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-40	Arsenic	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Barium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Beryllium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Boron	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Cadmium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Calcium	100 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Chromium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Cobalt	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Copper	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Iron	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Lead	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Magnesium	150 mg/L	2 mL	1000 mL	300 ug/L
UI090701-40	Manganese	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Molybdenum	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Nickel	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Phosphorous	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Potassium	75 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Selenium	15 mg/L	2 mL	1000 mL	15 ug/L
UI090701-40	Silicon	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Silver	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sodium	150 mg/L	2 mL	1000 mL	150 ug/L
UI090701-40	Strontium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Sulfur	50 mg/L	2 mL	1000 mL	100 ug/L
UI090701-40	Thallium	10 mg/L	2 mL	1000 mL	20 ug/L
UI090701-40	Tin	5 mg/L	2 mL	1000 mL	10 ug/L
UI090701-40	Titanium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Uranium	25 mg/L	2 mL	1000 mL	50 ug/L
UI090701-40	Vanadium	2.5 mg/L	2 mL	1000 mL	5 ug/L
UI090701-40	Zinc	5 mg/L	2 mL	1000 mL	10 ug/L

Serial ID: WMS100104-04B **Opened:** 04-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 04-JAN-10 **Solvent :** 2%HNO3/1%HCl- 1238829
Type: Working **Expires:** 05-JAN-10
Employee: Rose Jenkins
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS100105-04 **Opened:** 05-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 05-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 06-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1249336
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100105-04A **Opened:** 05-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 05-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 06-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100104-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100104-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100104-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100104-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100104-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100104-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100105-04B **Opened:** 05-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 05-JAN-10 **Balance Id :** 40245216
Type: Working **Expires:** 06-JAN-10 **Pipet Id :** 1758088
Employee: Rose Jenkins **Solvent :** 2%HNO3/1%HCl- 1238829
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Serial ID: WMS100105-05 **Opened:** 05-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 05-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 06-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100105-06 **Opened:** 05-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 05-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 06-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100105-07 **Opened:** 05-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 05-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 06-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1249336
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100105-08 **Opened:** 05-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 05-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 06-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB

Standard Logbook

Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100105-70 **Opened:** 05-JAN-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 05-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 06-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS100106-04 **Opened:** 06-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 06-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 07-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1249336
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100106-04A **Opened:** 06-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 06-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 07-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100105-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100105-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100105-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100105-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100105-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100106-05 **Opened:** 06-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 06-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 07-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100106-06 **Opened:** 06-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 06-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 07-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100106-07 **Opened:** 06-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 06-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 07-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1249336
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Standard Logbook

Serial ID: WMS100106-08 **Opened:** 06-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 06-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 07-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Standard Logbook

Serial ID: WMS100107-04B **Opened:** 07-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 07-JAN-10 **Balance Id :** 40245216
Type: Working **Expires:** 08-JAN-10 **Pipet Id :** 1758088
Employee: Rose Jenkins **Solvent :** 2%HNO3/1%HCl- 1238829
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5	50 mL	100 ug/l

Standard Logbook

Serial ID: WMS100108-04 **Opened:** 08-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 08-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 09-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1249336
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Serial ID: WMS100108-04A **Opened:** 08-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 08-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100107-04B	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100107-04B	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04B	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100107-04B	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04B	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Serial ID: WMS100108-05 **Opened:** 08-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 08-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 09-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS100108-06 **Opened:** 08-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 08-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 09-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS100108-07 **Opened:** 08-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 08-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 09-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1249336
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100108-08 **Opened:** 08-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 08-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 09-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100108-70 **Opened:** 08-JAN-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 08-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 09-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: WMS100114-04 **Opened:** 14-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 14-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 15-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1253206
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Serial ID: WMS100114-04A **Opened:** 14-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 14-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 15-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100114-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100114-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100114-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100114-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100114-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100114-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Serial ID: WMS100114-05 **Opened:** 14-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 14-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 15-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Serial ID: WMS100114-06 **Opened:** 14-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 14-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 15-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Serial ID: WMS100114-07 **Opened:** 14-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 14-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 15-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1253206
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100114-08 **Opened:** 14-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 14-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 15-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100114-70 **Opened:** 14-JAN-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 14-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 15-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1253206
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1156689-A **Opened:** 20-JUL-09 **Lot Number :** 41226920
Name: B-KMnO4(VWR)-MER **Received:** 20-JUL-09
Type: Reagent/Solvent **Expires:** 20-JUL-10
Employee: Tara Griffin **Verified:** 07-AUG-07
Supplier: VWR
Description: Potassium Permanganate
Comments: None

Serial ID: 1164796-A **Opened:** 06-AUG-09 **Lot Number :** 49149927
Name: B-NH2OH.HCl-MER **Received:** 06-AUG-09
Type: Reagent/Solvent **Expires:** 06-AUG-10
Employee: Tara Griffin
Supplier: Fisher Scientific
Description: Hydroxlyamine Hydrochloride
Comments: None

Standard Logbook

Serial ID: 1176183 **Opened:** 24-AUG-09 **Lot Number :** H20001
Name: B-H2SO4-MER **Received:** 24-AUG-09
Type: Reagent/Solvent **Expires:** 24-AUG-10
Employee: Tara Griffin
Supplier: Mallinckrodt
Description: Sulfuric Acid, Concentrated
Comments: None

Serial ID: 1206350-C **Opened:** 22-OCT-09 **Balance Id :** BAL-002
Name: B-NaCl,NH2OH.HCl-MER **Received:** 22-OCT-09
Type: Reagent/Solvent **Expires:** 15-JAN-10
Employee: Tara Griffin
Supplier: GEL
Description: Hg reducing agent
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1164796-A	B-NH2OH.HCl-MER	N/A	120 g	1000 mL	N/A

Serial ID: 1215906 **Opened:** 06-NOV-09 **Lot Number :** H44465
Name: B-K2S2O8S-MER **Received:** 06-NOV-09
Type: Reagent/Solvent **Expires:** 06-NOV-10
Employee: Tara Griffin
Supplier: J.T BAKER
Description: Potassium Persulfate Concentrate.
Comments: None

Serial ID: 1234385-C **Opened:** 25-NOV-09 **Balance Id :** BAL-002
Name: B-K2S2O8-MER **Received:** 25-NOV-09
Type: Reagent/Solvent **Expires:** 25-MAY-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% Potassium Persulfate
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1215906	B-K2S2O8S-MER	N/A	50 g	1000 mL	N/A

Serial ID: 1234886 **Opened:** 27-NOV-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 27-NOV-09
Type: Reagent/Solvent **Expires:** 27-NOV-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.

Comments: None

Serial ID: 1238345 **Opened:** 04-DEC-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 04-DEC-09
Type: Reagent/Solvent **Expires:** 04-DEC-10
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1240182-1 **Opened:** 09-DEC-09 **Instrument Id :** MERCURY
Name: B-HNO3-MER **Received:** 09-DEC-09 **Lot Number :** H34040
Type: Reagent/Solvent **Expires:** 09-DEC-10
Employee: Tara Griffin
Supplier: Mallinckrodt Chemicals
Description: NITRIC ACID
Comments: None

Serial ID: 1244904-C **Opened:** 18-DEC-09 **Balance Id :** BAL-002
Name: B-KMnO4-MER **Received:** 18-DEC-09
Type: Reagent/Solvent **Expires:** 18-JUN-10
Employee: Tara Griffin
Supplier: GEL
Description: 5% KMnO4 solution
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1156689-A	B-KMnO4(VWR)-MER	Crystals	50 g	1000 mL	3%

Serial ID: 1244970 **Opened:** 18-DEC-09 **Lot Number :** H41032
Name: I-HCL **Received:** 18-DEC-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 18-DEC-10
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1249336 **Opened:** 04-JAN-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 04-JAN-10
Type: Reagent/Solvent **Expires:** 11-JAN-10
Employee: Paul Boyd
Supplier: GEL

Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

Serial ID: 1249941 **Opened:** 04-JAN-10 **Amount :** 20 L
Name: B-ICP-RINSE SOLN **Received:** 15-DEC-10 **Lot Number :** H04040+G34050
Type: Reagent/Solvent **Expires:** 10-JAN-10 **Solvent :** 3%HCL+1%HNO3
Employee: Helen Camello
Supplier: GEL
Description: 3%HCL+1%HNO3 RINSE SOLN.
Comments: None

Serial ID: 1252836 **Opened:** 08-JAN-10 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 08-JAN-10
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1252838 **Opened:** 08-JAN-10 **Lot Number :** H41032
Name: I-HCL **Received:** 08-JAN-10 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 08-JAN-11
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1253206 **Opened:** 11-JAN-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 11-JAN-10
Type: Reagent/Solvent **Expires:** 18-JAN-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

Metals Analysis

Case Narrative

Metals Fractional Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037-2

Sample Analysis

Sample ID	Client ID
243494001	RE12-10-7867
243494002	RE12-10-7868
1202005691	Method Blank (MB) **ICP-MS**
1202005692	Laboratory Control Sample (LCS)
1202005693	Laboratory Control Sample Duplicate (LCSD)
1202005695	243494001(RE12-10-7867L) Serial Dilution (SD)

The samples in this SDG were analyzed on an "as received" basis.

Method/Analysis Information

Analytical Batch:	937303
Prep Batch :	937302
Standard Operating Procedures:	GL-MA-E-014 REV# 21 and GL-MA-E-009 REV# 19
Analytical Method:	SW846 3050B/6020
Prep Method :	SW846 3050B

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis - ICPMS was performed on a Perkin Elmer ELAN 6100E inductively coupled plasma mass spectrometer (ICP-MS). The instrument is equipped with a cross-flow nebulizer, quadrupole mass spectrometer, and dual mode electron multiplier detector. Internal

standards of scandium, germanium, indium, tantalum, and/or lutetium were utilized to cover the mass spectrum. Operating conditions are set at 1400W power and combined argon pressures of 360+/-7 kPa for the plasma and auxiliary gases, and 0.85 L/min carrier gas flow, and an initial lens voltage of 5.2.

Calibration Information

Instrument Calibration
All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL Requirements
All CRDL standard(s) met the referenced advisory control limits.

ICSA/ICSAB Statement
All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blank (CCB) Requirements
All continuing calibration blanks (CCB) bracketing this batch met the acceptance criteria.

Continuing Calibration Verification (CCV) Requirements
All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery
The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement
The relative percent difference (RPD) obtained from the laboratory control sample (LCS) and it's duplicate (LCSD) is evaluated based on acceptance criteria of 20% and it is within the required acceptance limits.

Quality Control (QC) Sample Statement
The following sample was selected as the quality control (QC) sample for this SDG: 243494001 (RE12-10-7867).

Matrix Spike (MS) Recovery Statement
The percent recoveries (%R) obtained from the MS analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. All applicable elements met the acceptance criteria.

Serial Dilution % Difference Statement
The serial dilution is used to assess matrix suppression or enhancement. Raw element concentrations that are 25X the IDL/MDL for CVAA, 50X the IDL/MDL for ICP, and 100X the IDL/MDL for ICP-MS analyses are applicable for serial dilution assessment. All applicable analytes met the acceptance criteria of less than 10% difference (%D).

Technical Information

Holding Time Specifications
GEL assigns holding times based on the associated methodology, which assigns the date and time from sample collection of sample receipt. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Sample Dilutions
Dilutions are performed to minimize matrix interferences resulting from elevated mineral element concentrations present in solid samples and/or to bring over range target analyte concentrations into the linear calibration range of the instrument. The samples in this SDG did not require dilutions.

Preparation Information
The samples in this SDG were prepared exactly according to the cited SOP.

Miscellaneous Information

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation
Data exception reports (DERs) are generated to document procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Kristen Parson **Date:** 1/18/10

Sample Data Summary

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037-2 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243494001 **BASIS:** As Received **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7867 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SWIPE **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-61-1	Uranium	0.292	ug/Filter		0.0066	0.02	0.02	2	MS	SKJ	01/07/10 15:46	100107-1	937303

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
937303	937302	SW846 3050B	1	Filter	50	mL	12/31/09	FGA

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: 10-1037-2 **CONTRACT:** LANL01004 **METHOD TYPE:** SW846

SAMPLE ID: 243494002 **BASIS:** As Received **DATE COLLECTED** 18-DEC-09

CLIENT ID: RE12-10-7868 **LEVEL:** Low **DATE RECEIVED** 23-DEC-09

MATRIX: SWIPE **%SOLIDS:** 0

CAS No.	Analyte	Result	Units	Qual	MDL	PQL	CRDL	DF	M*	Analyst	Run Date	Analytical Run	Analytical Batch
7440-61-1	Uranium	0.901	ug/Filter		0.0066	0.02	0.02	2	MS	SKJ	01/07/10 15:59	100107-1	937303

Prep Information:

Analytical Batch	Prep Batch	Prep Method	Initial wt./vol.	Units	Final wt./vol.	Units	Date	Analyst
937303	937302	SW846 3050B	1	Filter	50	mL	12/31/09	FGA

Quality Control Summary

METALS
-2a-
Initial and Continuing Calibration Verification

SDG No: 10-1037-2

Contract: LANL01004 **Lab Code:** GEL

Initial Calibration Source: Solutions Plus

Continuing Calibration Source: O2Si

Instrument ID: ICPMS4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	M	Analysis Date/Time	Run Number
ICV01										
	Uranium	51.9	ug/L	50	ug/L	103.9	90.0 - 110.0	MS	07-JAN-10 14:19	100107-1
CCV01										
	Uranium	51.3	ug/L	50	ug/L	102.7	90.0 - 110.0	MS	07-JAN-10 14:50	100107-1
CCV02										
	Uranium	52.6	ug/L	50	ug/L	105.2	90.0 - 110.0	MS	07-JAN-10 15:09	100107-1
CCV03										
	Uranium	52.2	ug/L	50	ug/L	104.5	90.0 - 110.0	MS	07-JAN-10 16:05	100107-1

METALS
-2b-
CRDL Standard for AA & ICP

SDG No: 10-1037-2

Contract: LANL01004 **Lab Code:** GEL

AA CRDL Standard Source: SPEX

ICP CRDL Standard Source Solutions Plus

Instrument ID: ICPMS4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Advisory Limits (%R)	M	Analysis Date/Time	Run Number
CRDL01	Uranium	.208	ug/L	.2	ug/L	104	70.0 - 130.0	MS	07-JAN-10 14:32	100107-1

Metals
-3a-
Initial and Continuing Calibration Blank Summary

SDG No.: 10-1037-2

Contract: LANL01004 **Lab Code: GEL**

Sample ID	Analyte	Result ug/L	Acceptance	Conc Qual	MDL	RDL	Matrix	M	Analysis Date/Time	Run
ICB01	Uranium	0.066	+/-.2	U	0.066	0.2	FIL	MS	07-JAN-10 14:25	100107-1
CCB01	Uranium	0.066	+/-.2	U	0.066	0.2	FIL	MS	07-JAN-10 14:56	100107-1
CCB02	Uranium	0.071	+/-.2	J	0.066	0.2	FIL	MS	07-JAN-10 15:15	100107-1
CCB03	Uranium	0.066	+/-.2	U	0.066	0.2	FIL	MS	07-JAN-10 16:11	100107-1

METALS
-3b-
PREPARATION BLANK SUMMARY

SDG NO. 10-1037-2
Contract: LANL01004
Matrix: SWIPE

Sample ID	Analyte	Result	Units	Acceptance Window	Conc Qual	M	MDL	RDL
1202005691	Uranium	0.0066	ug/Filter	+/-0.02	U	MS	0.0066	0.02

METALS
–4–
Interference Check Sample

SDG No: 10–1037–2

Contract: LANL01004 **Lab Code:** GEL

ICS: O2Si

Instrument: ICPMS4

Sample ID	Analyte	Result	Units	True Value	Units	% Recovery	Acceptance Window (%R)	Analysis Date/Time	Run Number
ICSA01									
	Uranium	–0.013	ug/L					07–JAN–10 14:38	100107–1
ICSAB01									
	Uranium	20.2	ug/L	20	ug/L	101	80.0 – 120.0	07–JAN–10 14:44	100107–1

Metals
–6–
Duplicate Sample Summary

SDG No.: 10–1037–2

Contract: LANL01004 **Lab Code:** GEL

Matrix: FILTER **Level:** Low **Client ID:** LCSD for batch 937302

Sample ID: 1202005692 **Duplicate ID:** 1202005693 **Percent Solids for Dup:** N/A

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Uranium	ug/Filter	+/–20	2.58		2.66		3.17		MS

METALS
–7–
Laboratory Control Sample Summary

SDG NO. 10–1037–2

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** O2si

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202005692								
	Uranium	ug/Filter	2.5	2.58		103	80–120	MS

METALS
-7-
Laboratory Control Sample Summary

SDG NO. 10-1037-2

Contract: LANL01004

Aqueous LCS Source: **Solid LCS Source:** O2si

Sample ID	Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limit	M
1202005693								
	Uranium	ug/Filter	2.5	2.66		106	80-120	MS

METALS
-9-
Serial Dilution Sample Summary

SDG NO. 10-1037-2 **Client ID** RE12-10-7867L

Contract: LANL01004

Matrix: FILTER **Level:** Low

Sample ID: 243494001 **Serial Dilution ID:** 1202005695

Analyte	Initial Value ug/L	C	Serial Value ug/L	C	% Difference	Qual	Acceptance Limit	M
Uranium	2.92		2.78		4.97			MS

METALS
-13-
SAMPLE PREPARATION SUMMARY

SDG No: 10-1037-2 **Method Type:** MS

Contract: LANL01004 **Lab Code:** GEL

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size	Final Sample Volume	Percent Solids
Batch Number 937302							
1202005691	MB for batch 937302	MB	s	31-DEC-09	1Filter	50mL	
1202005692	LCS for batch 937302	LCS	s	31-DEC-09	1Filter	50mL	
1202005693	LCSD for batch 937302	LCSD	s	31-DEC-09	1Filter	50mL	
243494001	RE12-10-7867	SAMPLE	s	31-DEC-09	1Filter	50mL	
243494002	RE12-10-7868	SAMPLE	s	31-DEC-09	1Filter	50mL	

Metals
-14-
Analysis Run Log

Contract: LANL01004
Lab Code: GEL
Inst Name: ICPMS4
Start Date: 07-JAN-10
End Date: 07-JAN-10
Client Sdg: 10-1037-2
Method MS
Data File: 100107-1

Samp No.	D/F	Run Time	U
S0.0	1	14:01	X
S10	1	14:07	X
S100	1	14:13	X
ICV01	1	14:19	X
ICB01	1	14:25	X
CRDL01	1	14:32	X
ICSA01	1	14:38	X
ICSAB01	1	14:44	X
CCV01	1	14:50	X
CCB01	1	14:56	X
LR01	1	15:03	X
CCV02	1	15:09	X
CCB02	1	15:15	X
1202005691	2	15:21	X
1202005692	2	15:27	X
ZZZZZZ	2	15:34	
1202005693	2	15:40	X
243494001	2	15:46	X
1202005695	10	15:52	X
243494002	2	15:59	X
CCV03	1	16:05	X
CCB03	1	16:11	X

Standards

METALS
-10-
Instrument Detection Limits

SDG NO. 10-1037-2

Contract: LANL01004 **Lab Code: GEL** **MDL Effective Date:** 01-JUL-09

ICP/MS	Analyte	Wavelength (nm)	MDL ug/L	RDL ug/L
FILTER	Uranium		0.066	.2

METALS
-12-
Linear Ranges

SDG NO. 10-1037-2

Contract: LANL01004 **Lab Code: GEL**

Instrument ID ICPMS4

Analyte	Integration Time (msec)	LDR	Units	Effective Date
Uranium	1000	5000	ug/L	01-NOV-09

Raw Data

Daily Performance Report

Sample ID: Sample
Sample Date/Time: Thursday, January 07, 2010 10:41:36
Sample Description:
Method File: c:\elandata\Method\daily2.mth
Dataset File: c:\elandata\Dataset\090811\Sample.347
Tuning File: c:\elandata\Tuning\default2.tun
Optimization File: c:\elandata\Optimize\default.dac
Dual Detector Mode: Pulse
Acq. Dead Time(ns): 35
Current Dead Time (ns): 35

Summary

	Analyte	Mass	Meas. Intens. Mean	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Be	9.0	1035.6	1035.638	39.109	3.8
	Mg	24.0	19340.7	19340.684	122.061	0.6
	Co	58.9	50689.4	50689.371	155.025	0.3
	Rh	102.9	84264.2	84264.192	495.230	0.6
	In	114.9	107705.7	107705.718	943.088	0.9
	Pb	208.0	38437.6	38437.644	325.734	0.8
⌈>	Ba	137.9	85539.0	85538.975	598.451	0.7
⌊	Ba++	69.0	1678.6	0.020	0.000	1.0
⌈>	Ce	139.9	100755.1	100755.059	304.348	0.3
⌊	CeO	155.9	2306.1	0.023	0.001	2.4
	Bkgd	220.0	8.5	8.500	1.458	17.1

Current Optimization File Data

Current Value	Description
0.84	Nebulizer Gas Flow
6.00	Lens Voltage
1000.00	ICP RF Power
-1875.00	Analog Stage Voltage
1100.00	Pulse Stage Voltage
50.00	Discriminator Threshold
-2.00	AC Rod Offset

Current Autolens Data

Analyte	Mass	Num of Pts	DAC Value	Maximum Intensity
Be	9	17	7.0	862.7
Co	59	17	8.5	33104.6
In	115	17	9.5	79556.6

ICPMS #4 TUNING REPORT

File Name: default2.tun
File Path: c:\elandata\Tuning

Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas Peak W
He	3.0	3.0	617	2060	0.671
Be	9.0	9.1	2062	2045	0.678
Mg	24.0	24.0	5671	2075	0.585
Mg	25.0	24.9	5957	2080	0.645
Mg	26.0	26.0	6149	2085	0.616
Co	58.9	58.9	14186	2140	0.623
Rh	102.9	102.9	24869	2230	0.628
In	114.9	114.9	27789	2255	0.664
Ce	139.9	139.9	33855	2310	0.640
Pb	206.0	206.0	49930	2500	0.686
Pb	207.0	207.0	50101	2380	0.636
Pb	208.0	208.0	50448	2570	0.638
U	238.1	238.1	57705	2510	0.677

ICPMS#4 - Summary Report

Sample ID: Blank
Sample Date/Time: Thursday, January 07, 2010 14:01:08
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\Blank.050

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7		ug/L		22	
|	Be	9		ug/L		3	
|	B	11		ug/L		81	
|	Na	23		ug/L		12673	
|	Mg	24		ug/L		1667	
|	Al	27		ug/L		2000	
|	P	31		ug/L		1735	
|	K	39		ug/L		365300	
|	Ca	43		ug/L		361	
| >	Sc	45		ug/L		227878	
|	Ti	47		ug/L		151	
|	V	51		ug/L		4141	
|	Cr	52		ug/L		3470	
|	Cr	53		ug/L		134673	
|	Mn	55		ug/L		759	
|	Fe	57		ug/L		5226	
|	Co	59		ug/L		141	
|	Ni	60		ug/L		38	
|	Cu	63		ug/L		84	
⌊	Cu	65		ug/L		51	
⌈	Zn	66		ug/L		91	
|	Zn	67		ug/L		5479	
|	Zn	68		ug/L		387	
| >	Ge	74		ug/L		91496	
|	As	75		ug/L		66	
|	Se	77		ug/L		5653	
|	Se	82		ug/L		-7	
⌊	Kr	83		ug/L		49	
⌈	Sr	88		ug/L		75	
|	Y	89		ug/L		13	
|	Zr	90		ug/L		226	
|	Mo	98		ug/L		34	
|	Ag	107		ug/L		45	
|	Cd	111		ug/L		8	
|	Cd	114		ug/L		29	
| >	In	115		ug/L		51435	
|	Sn	120		ug/L		148	
|	Sb	121		ug/L		389	
⌊	Sb	123		ug/L		356	
⌈	Ba	135		ug/L		14	
|	Ba	137		ug/L		24	
|	Ho	165		ug/L		11	
| >	Lu	175		ug/L		43879	
|	Tl	205		ug/L		64	
|	Pb	208		ug/L		316	
|	Bi	209		ug/L		16	
|	Th	232		ug/L		233	
⌊	U	238		ug/L		100	

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Simple Linear	
Be	9	Simple Linear	
B	11	Simple Linear	
Na	23	Simple Linear	
Mg	24	Simple Linear	
Al	27	Simple Linear	
P	31	Simple Linear	
K	39	Simple Linear	
Ca	43	Simple Linear	
Sc	45	Simple Linear	
Ti	47	Simple Linear	
V	51	Simple Linear	
Cr	52	Simple Linear	
Cr	53	Simple Linear	
Mn	55	Simple Linear	
Fe	57	Simple Linear	
Co	59	Simple Linear	
Ni	60	Simple Linear	
Cu	63	Simple Linear	
Cu	65	Simple Linear	
Zn	66	Simple Linear	
Zn	67	Simple Linear	
Zn	68	Simple Linear	
Ge	74	Simple Linear	
As	75	Simple Linear	
Se	77	Simple Linear	
Se	82	Simple Linear	
Kr	83	Simple Linear	
Sr	88	Simple Linear	
Y	89	Simple Linear	
Zr	90	Simple Linear	
Mo	98	Simple Linear	
Ag	107	Simple Linear	
Cd	111	Simple Linear	
Cd	114	Simple Linear	
In	115	Simple Linear	
Sn	120	Simple Linear	
Sb	121	Simple Linear	
Sb	123	Simple Linear	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Simple Linear	
Th	232	Simple Linear	
U	238	Simple Linear	

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, January 07, 2010 14:07:20
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\Standard 1.051

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**10.000**	**ug/L**	2.950	1918	0.008
	Be	9	**10.000**	**ug/L**	8.835	524	0.002
	B	11	**20.000**	**ug/L**	6.564	948	0.004
	Na	23	**1000.000**	**ug/L**	4.664	1043104	4.514
	Mg	24	**1000.000**	**ug/L**	7.269	688928	3.011
	Al	27	**1000.000**	**ug/L**	5.529	1014910	4.434
	P	31	**1000.000**	**ug/L**	1.199	59965	0.255
	K	39	**1000.000**	**ug/L**	8.263	2304575	8.491
	Ca	43	**1000.000**	**ug/L**	2.617	4251	0.017
>	Sc	45		**ug/L**		228351	228350.670
	Ti	47	**10.000**	**ug/L**	1.695	1963	0.008
	V	51	**10.000**	**ug/L**	6.269	17723	0.059
	Cr	52	**10.000**	**ug/L**	1.321	21438	0.079
	Cr	53		**ug/L**		135242	0.001
	Mn	55	**10.000**	**ug/L**	2.601	30211	0.129
	Fe	57	**1000.000**	**ug/L**	1.636	64371	0.259
	Co	59	**10.000**	**ug/L**	0.150	22363	0.097
	Ni	60	**10.000**	**ug/L**	2.281	4743	0.021
	Cu	63		**ug/L**		10737	0.047
	Cu	65	**10.000**	**ug/L**	0.613	5180	0.022
	Zn	66	**10.000**	**ug/L**	3.109	2730	0.029
	Zn	67		**ug/L**		5629	0.001
	Zn	68		**ug/L**		2264	0.020
>	Ge	74		**ug/L**		91803	91803.397
	As	75	**10.000**	**ug/L**	16.910	3015	0.032
	Se	77		**ug/L**		5863	0.002
	Se	82	**10.000**	**ug/L**	8.580	294	0.003
	Kr	83		**ug/L**		45	-0.000
	Sr	88	**10.000**	**ug/L**	1.554	44150	0.850
	Y	89		**ug/L**		17	0.000
	Zr	90	**10.000**	**ug/L**	1.581	24041	0.459
	Mo	98	**10.000**	**ug/L**	2.032	10065	0.193
	Ag	107	**10.000**	**ug/L**	1.309	15662	0.301
	Cd	111	**10.000**	**ug/L**	1.033	3615	0.070
	Cd	114		**ug/L**		8383	0.161
>	In	115		**ug/L**		51848	51847.785
	Sn	120	**10.000**	**ug/L**	1.056	16330	0.312
	Sb	121	**10.000**	**ug/L**	5.478	12036	0.225
	Sb	123		**ug/L**		9340	0.173
	Ba	135		**ug/L**		3773	0.085
	Ba	137	**10.000**	**ug/L**	2.427	6385	0.144
	Ho	165		**ug/L**		3	-0.000
>	Lu	175		**ug/L**		44059	44058.612
	Tl	205	**10.000**	**ug/L**	1.273	13066	0.295
	Pb	208	**10.000**	**ug/L**	0.806	36400	0.819
	Bi	209		**ug/L**		16	-0.000
	Th	232	**10.000**	**ug/L**	1.890	46426	1.048
	U	238	**10.000**	**ug/L**	0.334	48889	1.107

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	1.0000
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: Standard 2
Sample Date/Time: Thursday, January 07, 2010 14:13:29
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\Standard 2.052

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**99.942**	**ug/L**	0.811	18182	0.078
	Be	9	**100.019**	**ug/L**	0.927	5390	0.023
	B	11	**200.004**	**ug/L**	1.305	8878	0.038
	Na	23	**9997.338**	**ug/L**	3.024	10182711	43.957
	Mg	24	**9998.124**	**ug/L**	3.558	6838271	29.552
	Al	27	**10003.327**	**ug/L**	7.498	10611942	45.880
	P	31	**9998.340**	**ug/L**	0.561	582192	2.508
	K	39	**9995.542**	**ug/L**	3.631	19167801	81.247
	Ca	43	**10000.049**	**ug/L**	0.564	39811	0.170
>	Sc	45		**ug/L**		231439	231439.343
	Ti	47	**100.008**	**ug/L**	1.601	18680	0.080
	V	51	**100.236**	**ug/L**	0.781	184793	0.780
	Cr	52	**99.988**	**ug/L**	2.616	183356	0.777
	Cr	53		**ug/L**		148340	0.050
	Mn	55	**99.982**	**ug/L**	1.512	294027	1.267
	Fe	57	**9998.502**	**ug/L**	1.588	595722	2.551
	Co	59	**99.971**	**ug/L**	2.590	218948	0.946
	Ni	60	**99.959**	**ug/L**	1.965	45821	0.198
	Cu	63		**ug/L**		103658	0.448
	Cu	65	**99.957**	**ug/L**	0.066	49872	0.215
	Zn	66	**99.980**	**ug/L**	0.794	26160	0.282
	Zn	67		**ug/L**		9587	0.044
	Zn	68		**ug/L**		19033	0.202
>	Ge	74		**ug/L**		92467	92466.589
	As	75	**100.039**	**ug/L**	1.807	30923	0.334
	Se	77		**ug/L**		7686	0.021
	Se	82	**99.955**	**ug/L**	0.770	2894	0.031
	Kr	83		**ug/L**		50	0.000
	Sr	88	**99.992**	**ug/L**	0.680	436299	8.434
	Y	89		**ug/L**		52	0.001
	Zr	90	**99.988**	**ug/L**	1.696	234845	4.536
	Mo	98	**100.011**	**ug/L**	1.911	101192	1.956
	Ag	107	**99.988**	**ug/L**	1.343	153942	2.976
	Cd	111	**99.999**	**ug/L**	1.197	35943	0.695
	Cd	114		**ug/L**		84087	1.625
>	In	115		**ug/L**		51721	51720.906
	Sn	120	**100.006**	**ug/L**	1.899	162546	3.140
	Sb	121	**100.064**	**ug/L**	4.517	124517	2.400
	Sb	123		**ug/L**		95074	1.831
	Ba	135		**ug/L**		36850	0.833
	Ba	137	**99.996**	**ug/L**	1.050	63676	1.439
	Ho	165		**ug/L**		13	0.000
>	Lu	175		**ug/L**		44242	44242.180
	Tl	205	**100.002**	**ug/L**	1.218	130851	2.956
	Pb	208	**100.005**	**ug/L**	0.565	364304	8.227
	Bi	209		**ug/L**		38	0.000
	Th	232	**100.029**	**ug/L**	0.539	478003	10.799
	U	238	**100.017**	**ug/L**	1.362	498387	11.263

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45					
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74					
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115					
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175					
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, January 07, 2010 14:19:38
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 1.053

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**52.726**	**ug/L**	1.001	9665	0.041
	Be	9	**49.224**	**ug/L**	1.673	2671	0.011
	B	11	**103.289**	**ug/L**	1.192	4655	0.020
	Na	23	**5269.795**	**ug/L**	9.651	5410808	23.170
	Mg	24	**5237.788**	**ug/L**	4.759	3607082	15.481
	Al	27	**4766.256**	**ug/L**	7.736	5091780	21.860
	P	31	**4921.456**	**ug/L**	0.585	289305	1.235
	K	39	**5030.047**	**ug/L**	2.131	9895445	40.886
	Ca	43	**4921.137**	**ug/L**	1.570	19903	0.084
>	Sc	45		**ug/L**		232916	232916.111
	Ti	47	**49.282**	**ug/L**	1.052	9342	0.039
	V	51	**49.637**	**ug/L**	2.023	94229	0.386
	Cr	52	**50.599**	**ug/L**	1.446	95154	0.393
	Cr	53		**ug/L**		137599	-0.000
	Mn	55	**51.636**	**ug/L**	1.172	153226	0.655
	Fe	57	**4978.012**	**ug/L**	0.399	301213	1.270
	Co	59	**50.335**	**ug/L**	0.982	111045	0.476
	Ni	60	**51.567**	**ug/L**	1.241	23809	0.102
	Cu	63		**ug/L**		52986	0.227
	Cu	65	**50.751**	**ug/L**	1.307	25509	0.109
	Zn	66	**51.106**	**ug/L**	2.427	13516	0.144
	Zn	67		**ug/L**		7324	0.019
	Zn	68		**ug/L**		10009	0.103
>	Ge	74		**ug/L**		93170	93170.122
	As	75	**49.636**	**ug/L**	0.896	15495	0.166
	Se	77		**ug/L**		6708	0.010
	Se	82	**49.992**	**ug/L**	2.414	1455	0.016
	Kr	83		**ug/L**		51	0.000
	Sr	88	**50.268**	**ug/L**	1.103	223455	4.240
	Y	89		**ug/L**		21	0.000
	Zr	90	**48.631**	**ug/L**	1.563	116468	2.206
	Mo	98	**48.320**	**ug/L**	1.026	49818	0.945
	Ag	107	**50.116**	**ug/L**	1.053	78621	1.491
	Cd	111	**50.240**	**ug/L**	1.971	18397	0.349
	Cd	114		**ug/L**		42247	0.801
>	In	115		**ug/L**		52684	52684.080
	Sn	120	**50.396**	**ug/L**	0.413	83515	1.582
	Sb	121	**49.568**	**ug/L**	5.553	63039	1.189
	Sb	123		**ug/L**		48036	0.905
	Ba	135		**ug/L**		18960	0.420
	Ba	137	**49.703**	**ug/L**	3.205	32318	0.715
	Ho	165		**ug/L**		11	-0.000
>	Lu	175		**ug/L**		45173	45173.446
	Tl	205	**48.203**	**ug/L**	0.408	64434	1.425
	Pb	208	**50.195**	**ug/L**	2.491	186808	4.129
	Bi	209		**ug/L**		49	0.001
	Th	232	**50.142**	**ug/L**	0.744	244742	5.413
	U	238	**51.932**	**ug/L**	1.168	264242	5.848

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7	105.453				
|	Be	9	98.449				
|	B	11	103.289				
|	Na	23	105.396				
|	Mg	24	104.756				
|	Al	27	94.381				
|	P	31	98.429				
|	K	39	100.601				
|	Ca	43	98.423				
|>	Sc	45			102.2		
|	Ti	47	98.563				
|	V	51	99.275				
|	Cr	52	101.198				
|	Cr	53					
|	Mn	55	103.273				
|	Fe	57	99.560				
|	Co	59	100.669				
|	Ni	60	103.133				
|	Cu	63					
⌊	Cu	65	101.502				
⌈	Zn	66	102.213				
|	Zn	67					
|	Zn	68					
|>	Ge	74			101.8		
|	As	75	99.272				
|	Se	77					
|	Se	82	99.983				
⌊	Kr	83					
⌈	Sr	88	100.535				
|	Y	89					
|	Zr	90	97.262				
|	Mo	98	96.640				
|	Ag	107	100.231				
|	Cd	111	100.479				
|	Cd	114					
|>	In	115			102.4		
|	Sn	120	100.793				
|	Sb	121	99.136				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	99.405				
|	Ho	165					
|>	Lu	175			103.0		
|	Tl	205	96.406				
|	Pb	208	100.390				
|	Bi	209					
|	Th	232	100.283				
⌊	U	238	103.864				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Thursday, January 07, 2010 14:25:50
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 2.054

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.043**	**ug/L**	70.280	30	0.000
	Be	9	**0.042**	**ug/L**	108.692	6	0.000
	B	11	**4.276**	**ug/L**	5.095	270	0.001
	Na	23	**2.742**	**ug/L**	159.108	15676	0.012
	Mg	24	**-1.983**	**ug/L**	42.985	333	-0.006
	Al	27	**0.916**	**ug/L**	3.296	3000	0.004
	P	31	**-0.885**	**ug/L**	103.578	1709	-0.000
	K	39	**-3.878**	**ug/L**	265.440	363232	-0.032
	Ca	43	**-2.480**	**ug/L**	254.289	356	-0.000
>	Sc	45		**ug/L**		231204	231204.356
	Ti	47	**-0.020**	**ug/L**	373.850	149	-0.000
	V	51	**-2.128**	**ug/L**	21.077	372	-0.017
	Cr	52	**0.199**	**ug/L**	12.280	3878	0.002
	Cr	53		**ug/L**		135398	-0.005
	Mn	55	**0.019**	**ug/L**	27.165	826	0.000
	Fe	57	**-0.800**	**ug/L**	316.098	5254	-0.000
	Co	59	**0.007**	**ug/L**	46.477	159	0.000
	Ni	60	**0.015**	**ug/L**	111.049	45	0.000
	Cu	63		**ug/L**		94	0.000
	Cu	65	**0.012**	**ug/L**	146.404	58	0.000
	Zn	66	**-0.036**	**ug/L**	121.366	82	-0.000
	Zn	67		**ug/L**		5317	-0.002
	Zn	68		**ug/L**		400	0.000
>	Ge	74		**ug/L**		91586	91585.889
	As	75	**1.211**	**ug/L**	69.119	436	0.004
	Se	77		**ug/L**		5979	0.004
	Se	82	**-0.011**	**ug/L**	4471.033	-7	-0.000
	Kr	83		**ug/L**		47	-0.000
	Sr	88	**0.008**	**ug/L**	36.009	112	0.001
	Y	89		**ug/L**		11	-0.000
	Zr	90	**0.115**	**ug/L**	20.677	503	0.005
	Mo	98	**0.043**	**ug/L**	8.936	79	0.001
	Ag	107	**0.017**	**ug/L**	20.143	72	0.001
	Cd	111	**0.023**	**ug/L**	100.800	16	0.000
	Cd	114		**ug/L**		33	0.000
>	In	115		**ug/L**		52228	52228.358
	Sn	120	**0.211**	**ug/L**	18.981	496	0.007
	Sb	121	**1.006**	**ug/L**	14.465	1654	0.024
	Sb	123		**ug/L**		1330	0.019
	Ba	135		**ug/L**		17	0.000
	Ba	137	**-0.000**	**ug/L**	1531.432	24	-0.000
	Ho	165		**ug/L**		8	-0.000
>	Lu	175		**ug/L**		44491	44490.623
	Tl	205	**0.059**	**ug/L**	35.258	143	0.002
	Pb	208	**0.002**	**ug/L**	267.025	328	0.000
	Bi	209		**ug/L**		18	0.000
	Th	232	**0.107**	**ug/L**	15.673	750	0.012
	U	238	**0.007**	**ug/L**	4.888	137	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			101.5		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			100.1		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			101.5		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			101.4		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 3
Sample Date/Time: Thursday, January 07, 2010 14:32:02
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 3.055

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**12.623**	**ug/L**	1.861	2292	0.010
	Be	9	**0.575**	**ug/L**	28.238	34	0.000
	B	11	**17.288**	**ug/L**	2.975	834	0.003
	Na	23	**272.607**	**ug/L**	11.729	287214	1.199
	Mg	24	**13.275**	**ug/L**	15.982	10671	0.039
	Al	27	**32.086**	**ug/L**	22.038	35713	0.147
	P	31	**49.960**	**ug/L**	3.435	4614	0.013
	K	39	**330.591**	**ug/L**	7.811	982736	2.687
	Ca	43	**207.924**	**ug/L**	3.750	1174	0.004
>	Sc	45		**ug/L**		229037	229036.809
	Ti	47	**9.393**	**ug/L**	4.107	1873	0.008
	V	51	**6.497**	**ug/L**	20.998	15749	0.051
	Cr	52	**10.723**	**ug/L**	4.061	22574	0.083
	Cr	53		**ug/L**		127681	-0.034
	Mn	55	**5.697**	**ug/L**	3.732	17298	0.072
	Fe	57	**106.006**	**ug/L**	6.369	11445	0.027
	Co	59	**1.110**	**ug/L**	3.386	2547	0.011
	Ni	60	**2.235**	**ug/L**	9.906	1050	0.004
	Cu	63		**ug/L**		1275	0.005
	Cu	65	**1.174**	**ug/L**	5.186	630	0.003
	Zn	66	**10.964**	**ug/L**	0.435	2952	0.031
	Zn	67		**ug/L**		5315	-0.002
	Zn	68		**ug/L**		2310	0.021
>	Ge	74		**ug/L**		92508	92507.824
	As	75	**6.015**	**ug/L**	21.105	1925	0.020
	Se	77		**ug/L**		5605	-0.001
	Se	82	**6.028**	**ug/L**	13.576	168	0.002
	Kr	83		**ug/L**		46	-0.000
	Sr	88	**11.122**	**ug/L**	0.249	49095	0.938
	Y	89		**ug/L**		10	-0.000
	Zr	90	**1.975**	**ug/L**	2.983	4912	0.090
	Mo	98	**0.535**	**ug/L**	3.492	581	0.010
	Ag	107	**1.024**	**ug/L**	1.699	1638	0.030
	Cd	111	**1.031**	**ug/L**	6.393	383	0.007
	Cd	114		**ug/L**		922	0.017
>	In	115		**ug/L**		52250	52249.761
	Sn	120	**5.289**	**ug/L**	2.067	8826	0.166
	Sb	121	**3.114**	**ug/L**	6.663	4299	0.075
	Sb	123		**ug/L**		3359	0.057
	Ba	135		**ug/L**		786	0.017
	Ba	137	**2.059**	**ug/L**	3.439	1360	0.030
	Ho	165		**ug/L**		9	-0.000
>	Lu	175		**ug/L**		45085	45085.148
	Tl	205	**1.010**	**ug/L**	1.426	1411	0.030
	Pb	208	**2.150**	**ug/L**	2.066	8300	0.177
	Bi	209		**ug/L**		18	0.000
	Th	232	**1.023**	**ug/L**	3.249	5217	0.110
	U	238	**0.208**	**ug/L**	1.429	1159	0.023

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7	126.227				
|	Be	9	115.068				
|	B	11	115.255				
|	Na	23	109.043				
|	Mg	24	88.503				
|	Al	27	106.952				
|	P	31	99.919				
|	K	39	110.197				
|	Ca	43	103.962				
|>	Sc	45			100.5		
|	Ti	47	93.931				
|	V	51	64.971				
|	Cr	52	107.231				
|	Cr	53					
|	Mn	55	113.936				
|	Fe	57	106.006				
|	Co	59	111.026				
|	Ni	60	111.734				
|	Cu	63					
⌊	Cu	65	117.372				
⌈	Zn	66	109.639				
|	Zn	67					
|	Zn	68					
|>	Ge	74			101.1		
|	As	75	120.310				
|	Se	77					
|	Se	82	120.555				
⌊	Kr	83					
⌈	Sr	88	111.225				
|	Y	89					
|	Zr	90	98.749				
|	Mo	98	106.969				
|	Ag	107	102.428				
|	Cd	111	103.143				
|	Cd	114					
|>	In	115			101.6		
|	Sn	120	105.779				
|	Sb	121	103.814				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	102.970				
|	Ho	165					
|>	Lu	175			102.7		
|	Tl	205	100.963				
|	Pb	208	107.507				
|	Bi	209					
|	Th	232	102.265				
⌊	U	238	103.993				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 3	V	51	CRDL is out of limits

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Thursday, January 07, 2010 14:38:13
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 4.056

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.109**	**ug/L**	48.168	41	0.000
	Be	9	**0.083**	**ug/L**	72.998	8	0.000
	B	11	**1.452**	**ug/L**	23.186	143	0.000
	Na	23	**101900.718**	**ug/L**	7.747	100951831	448.039
	Mg	24	**105736.470**	**ug/L**	5.924	70419007	312.526
	Al	27	**97694.005**	**ug/L**	0.915	100989684	448.073
	P	31	**98302.065**	**ug/L**	1.605	5559017	24.658
	K	39	**100402.062**	**ug/L**	5.119	184274915	816.096
	Ca	43	**97953.415**	**ug/L**	1.032	376615	1.669
>	Sc	45		**ug/L**		225386	225385.685
	Ti	47	**1491.106**	**ug/L**	0.373	269168	1.194
	V	51	**-4.367**	**ug/L**	20.672	-3574	-0.034
	Cr	52	**3.607**	**ug/L**	2.980	9752	0.028
	Cr	53		**ug/L**		107363	-0.115
	Mn	55	**5.811**	**ug/L**	1.350	17352	0.074
	Fe	57	**97446.283**	**ug/L**	1.391	5609198	24.866
	Co	59	**0.264**	**ug/L**	1.940	702	0.002
	Ni	60	**3.192**	**ug/L**	3.991	1461	0.006
	Cu	63		**ug/L**		2333	0.010
	Cu	65	**2.303**	**ug/L**	2.309	1169	0.005
	Zn	66	**3.596**	**ug/L**	7.954	969	0.010
	Zn	67		**ug/L**		4968	-0.003
	Zn	68		**ug/L**		572	0.002
>	Ge	74		**ug/L**		87104	87103.966
	As	75	**1.053**	**ug/L**	34.445	369	0.004
	Se	77		**ug/L**		4918	-0.005
	Se	82	**-0.148**	**ug/L**	525.047	-11	-0.000
	Kr	83		**ug/L**		72	0.000
	Sr	88	**1.154**	**ug/L**	1.258	4874	0.097
	Y	89		**ug/L**		143	0.003
	Zr	90	**0.501**	**ug/L**	49.391	1335	0.023
	Mo	98	**1940.201**	**ug/L**	0.947	1871104	37.943
	Ag	107	**0.041**	**ug/L**	2.964	104	0.001
	Cd	111	**0.620**	**ug/L**	26.027	220	0.004
	Cd	114		**ug/L**		1896	0.038
>	In	115		**ug/L**		49312	49312.410
	Sn	120	**0.168**	**ug/L**	9.850	402	0.005
	Sb	121	**0.245**	**ug/L**	21.747	663	0.006
	Sb	123		**ug/L**		565	0.005
	Ba	135		**ug/L**		257	0.005
	Ba	137	**0.605**	**ug/L**	10.294	413	0.009
	Ho	165		**ug/L**		160	0.003
>	Lu	175		**ug/L**		44674	44674.190
	Tl	205	**0.006**	**ug/L**	103.378	73	0.000
	Pb	208	**0.147**	**ug/L**	3.367	864	0.012
	Bi	209		**ug/L**		118	0.002
	Th	232	**0.107**	**ug/L**	49.860	751	0.012
	U	238	**-0.013**	**ug/L**	8.541	38	-0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23	101.901				
|	Mg	24	105.736				
|	Al	27	97.694				
|	P	31	98.302				
|	K	39	100.402				
|	Ca	43	97.953				
\>	Sc	45			98.9		
|	Ti	47	74.555				
|	V	51					
|	Cr	52	97.490				
|	Cr	53					
|	Mn	55	100.196				
|	Fe	57	97.446				
|	Co	59	105.475				
|	Ni	60	118.238				
|	Cu	63					
⌊	Cu	65	79.430				
⌈	Zn	66	99.898				
|	Zn	67					
|	Zn	68					
\>	Ge	74			95.2		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88	96.206				
|	Y	89					
|	Zr	90					
|	Mo	98	97.010				
|	Ag	107					
|	Cd	111	154.892				
|	Cd	114					
\>	In	115			95.9		
|	Sn	120					
|	Sb	121	245.324				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	90.250				
|	Ho	165					
\>	Lu	175			101.8		
|	Tl	205					
|	Pb	208	73.684				
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 4	Ti	47ICSA is out of limits

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 5
Sample Date/Time: Thursday, January 07, 2010 14:44:24
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 5.057

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**19.616**	**ug/L**	0.468	3513	0.015
	Be	9	**19.164**	**ug/L**	2.572	1014	0.004
	B	11	**21.243**	**ug/L**	3.866	996	0.004
	Na	23	**99474.105**	**ug/L**	3.314	99154469	437.370
	Mg	24	**100354.804**	**ug/L**	1.563	67232627	296.619
	Al	27	**96675.013**	**ug/L**	7.192	100469119	443.399
	P	31	**98242.493**	**ug/L**	0.938	5587783	24.643
	K	39	**102507.253**	**ug/L**	3.638	189191341	833.208
	Ca	43	**98264.387**	**ug/L**	0.560	379977	1.675
>	Sc	45		**ug/L**		226673	226672.841
	Ti	47	**1497.242**	**ug/L**	1.054	271814	1.199
	V	51	**19.216**	**ug/L**	10.335	38040	0.150
	Cr	52	**23.235**	**ug/L**	2.815	44389	0.181
	Cr	53		**ug/L**		106839	-0.120
	Mn	55	**25.637**	**ug/L**	1.433	74408	0.325
	Fe	57	**98795.625**	**ug/L**	2.836	5718741	25.210
	Co	59	**19.510**	**ug/L**	1.552	41969	0.185
	Ni	60	**22.183**	**ug/L**	1.367	9989	0.044
	Cu	63		**ug/L**		20908	0.092
	Cu	65	**20.988**	**ug/L**	1.955	10295	0.045
	Zn	66	**22.738**	**ug/L**	1.324	5761	0.064
	Zn	67		**ug/L**		5702	0.005
	Zn	68		**ug/L**		3866	0.039
>	Ge	74		**ug/L**		88489	88489.445
	As	75	**21.185**	**ug/L**	4.750	6319	0.071
	Se	77		**ug/L**		5167	-0.003
	Se	82	**22.253**	**ug/L**	7.923	611	0.007
	Kr	83		**ug/L**		69	0.000
	Sr	88	**21.815**	**ug/L**	1.471	92534	1.840
	Y	89		**ug/L**		131	0.002
	Zr	90	**20.808**	**ug/L**	1.252	47658	0.944
	Mo	98	**1905.824**	**ug/L**	2.115	1872703	37.271
	Ag	107	**19.146**	**ug/L**	1.511	28673	0.570
	Cd	111	**19.870**	**ug/L**	2.496	6944	0.138
	Cd	114		**ug/L**		17430	0.346
>	In	115		**ug/L**		50251	50250.902
	Sn	120	**20.262**	**ug/L**	2.609	32109	0.636
	Sb	121	**21.089**	**ug/L**	2.154	25797	0.506
	Sb	123		**ug/L**		19708	0.385
	Ba	135		**ug/L**		7458	0.164
	Ba	137	**19.498**	**ug/L**	1.254	12766	0.281
	Ho	165		**ug/L**		176	0.004
>	Lu	175		**ug/L**		45418	45417.875
	Tl	205	**18.072**	**ug/L**	0.848	24332	0.534
	Pb	208	**18.802**	**ug/L**	1.227	70575	1.547
	Bi	209		**ug/L**		184	0.004
	Th	232	**19.903**	**ug/L**	1.109	97822	2.149
	U	238	**20.229**	**ug/L**	1.741	103554	2.278

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	98.079				
	Be	9	95.822				
	B	11	106.216				
	Na	23	99.474				
	Mg	24	100.355				
	Al	27	96.675				
	P	31	98.242				
	K	39	102.507				
	Ca	43	98.264				
>	Sc	45			99.5		
	Ti	47	74.862				
	V	51	96.078				
	Cr	52	98.038				
	Cr	53					
	Mn	55	99.369				
	Fe	57	98.796				
	Co	59	96.346				
	Ni	60	97.721				
	Cu	63					
	Cu	65	91.649				
	Zn	66	96.348				
	Zn	67					
	Zn	68					
>	Ge	74			96.7		
	As	75	105.927				
	Se	77					
	Se	82	111.263				
	Kr	83					
	Sr	88	102.903				
	Y	89					
	Zr	90	104.040				
	Mo	98	95.291				
	Ag	107	95.729				
	Cd	111	97.403				
	Cd	114					
>	In	115			97.7		
	Sn	120	101.309				
	Sb	121	104.922				
	Sb	123					
	Ba	135					
	Ba	137	94.330				
	Ho	165					
>	Lu	175			103.5		
	Tl	205	90.362				
	Pb	208	93.079				
	Bi	209					
	Th	232	99.514				
	U	238	101.143				

QC Out Of Limits

Measurement Type	Analyte	MassOut of Limits Message
QC Std 5	Ti	47ICSAB is out of limits

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, January 07, 2010 14:50:36
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 6.058

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**52.593**	**ug/L**	1.677	9655	0.041
|	Be	9	**49.008**	**ug/L**	1.713	2664	0.011
|	B	11	**99.757**	**ug/L**	2.082	4505	0.019
|	Na	23	**5152.192**	**ug/L**	7.838	5298473	22.653
|	Mg	24	**5254.808**	**ug/L**	4.942	3624508	15.532
|	Al	27	**5024.590**	**ug/L**	5.963	5379176	23.045
|	P	31	**4995.281**	**ug/L**	0.943	294095	1.253
|	K	39	**5069.477**	**ug/L**	0.810	9986490	41.206
|	Ca	43	**5073.870**	**ug/L**	0.927	20543	0.086
|	> Sc	45		**ug/L**		233285	233285.023
|	Ti	47	**51.330**	**ug/L**	1.837	9739	0.041
|	V	51	**50.056**	**ug/L**	3.849	95134	0.390
|	Cr	52	**50.038**	**ug/L**	1.367	94291	0.389
|	Cr	53		**ug/L**		123988	-0.059
|	Mn	55	**50.592**	**ug/L**	1.104	150371	0.641
|	Fe	57	**4928.654**	**ug/L**	1.277	298742	1.258
|	Co	59	**49.303**	**ug/L**	0.346	108939	0.466
|	Ni	60	**50.731**	**ug/L**	2.033	23463	0.100
|	Cu	63		**ug/L**		52331	0.224
⌊	Cu	65	**50.225**	**ug/L**	1.893	25286	0.108
⌈	Zn	66	**50.334**	**ug/L**	1.073	13137	0.142
|	Zn	67		**ug/L**		6846	0.015
|	Zn	68		**ug/L**		9738	0.102
|	> Ge	74		**ug/L**		91922	91922.060
|	As	75	**48.325**	**ug/L**	3.879	14890	0.161
|	Se	77		**ug/L**		6251	0.006
|	Se	82	**51.621**	**ug/L**	1.679	1482	0.016
⌊	Kr	83		**ug/L**		47	-0.000
⌈	Sr	88	**50.141**	**ug/L**	0.927	224079	4.229
|	Y	89		**ug/L**		29	0.000
|	Zr	90	**47.760**	**ug/L**	1.514	114996	2.167
|	Mo	98	**47.797**	**ug/L**	0.341	49541	0.935
|	Ag	107	**49.134**	**ug/L**	0.676	77491	1.462
|	Cd	111	**49.051**	**ug/L**	1.077	18057	0.341
|	Cd	114		**ug/L**		42407	0.800
|	> In	115		**ug/L**		52963	52962.788
|	Sn	120	**49.851**	**ug/L**	2.123	83050	1.565
|	Sb	121	**47.186**	**ug/L**	4.964	60340	1.132
⌊	Sb	123		**ug/L**		46322	0.868
⌈	Ba	135		**ug/L**		19110	0.413
|	Ba	137	**49.412**	**ug/L**	0.870	32868	0.711
|	Ho	165		**ug/L**		11	0.000
|	> Lu	175		**ug/L**		46200	46199.712
|	Tl	205	**48.428**	**ug/L**	1.526	66210	1.432
|	Pb	208	**49.432**	**ug/L**	1.021	188211	4.067
|	Bi	209		**ug/L**		47	0.001
|	Th	232	**49.464**	**ug/L**	0.635	246949	5.340
⌊	U	238	**51.328**	**ug/L**	0.615	267138	5.780

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7	105.185				
|	Be	9	98.016				
|	B	11	99.757				
|	Na	23	103.044				
|	Mg	24	105.096				
|	Al	27	99.497				
|	P	31	99.906				
|	K	39	101.390				
|	Ca	43	101.477				
|>	Sc	45			102.4		
|	Ti	47	102.660				
|	V	51	100.112				
|	Cr	52	100.075				
|	Cr	53					
|	Mn	55	101.185				
|	Fe	57	98.573				
|	Co	59	98.605				
|	Ni	60	101.463				
|	Cu	63					
⌊	Cu	65	100.449				
⌈	Zn	66	100.669				
|	Zn	67					
|	Zn	68					
|>	Ge	74			100.5		
|	As	75	96.650				
|	Se	77					
|	Se	82	103.241				
⌊	Kr	83					
⌈	Sr	88	100.281				
|	Y	89					
|	Zr	90	95.519				
|	Mo	98	95.593				
|	Ag	107	98.269				
|	Cd	111	98.102				
|	Cd	114					
|>	In	115			103.0		
|	Sn	120	99.702				
|	Sb	121	94.372				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	98.824				
|	Ho	165					
|>	Lu	175			105.3		
|	Tl	205	96.857				
|	Pb	208	98.864				
|	Bi	209					
|	Th	232	98.929				
⌊	U	238	102.655				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, January 07, 2010 14:56:49
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 7.059

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.098**	**ug/L**	89.642	39	0.000
	Be	9	**0.024**	**ug/L**	156.099	5	0.000
	B	11	**1.863**	**ug/L**	17.568	163	0.000
	Na	23	**9.492**	**ug/L**	92.744	22353	0.042
	Mg	24	**2.424**	**ug/L**	138.004	3334	0.007
	Al	27	**5.048**	**ug/L**	46.066	7335	0.023
	P	31	**0.143**	**ug/L**	674.231	1754	0.000
	K	39	**-10.437**	**ug/L**	91.743	348202	-0.085
	Ca	43	**-17.578**	**ug/L**	49.226	294	-0.000
>	Sc	45		**ug/L**		229291	229290.830
	Ti	47	**0.305**	**ug/L**	37.901	208	0.000
	V	51	**-3.443**	**ug/L**	51.709	-1971	-0.027
	Cr	52	**-0.402**	**ug/L**	21.586	2776	-0.003
	Cr	53		**ug/L**		122759	-0.055
	Mn	55	**-0.018**	**ug/L**	46.898	713	-0.000
	Fe	57	**-11.943**	**ug/L**	11.466	4559	-0.003
	Co	59	**0.010**	**ug/L**	26.157	164	0.000
	Ni	60	**0.002**	**ug/L**	451.084	39	0.000
	Cu	63		**ug/L**		91	0.000
	Cu	65	**0.013**	**ug/L**	200.576	58	0.000
	Zn	66	**-0.040**	**ug/L**	84.895	82	-0.000
	Zn	67		**ug/L**		4847	-0.008
	Zn	68		**ug/L**		374	-0.000
>	Ge	74		**ug/L**		93028	93028.191
	As	75	**1.591**	**ug/L**	133.053	562	0.005
	Se	77		**ug/L**		5683	-0.001
	Se	82	**0.543**	**ug/L**	38.277	9	0.000
	Kr	83		**ug/L**		42	-0.000
	Sr	88	**0.011**	**ug/L**	52.879	129	0.001
	Y	89		**ug/L**		10	-0.000
	Zr	90	**0.085**	**ug/L**	21.987	436	0.004
	Mo	98	**0.120**	**ug/L**	5.764	159	0.002
	Ag	107	**0.022**	**ug/L**	8.195	81	0.001
	Cd	111	**0.000**	**ug/L**	7810.317	8	0.000
	Cd	114		**ug/L**		33	0.000
>	In	115		**ug/L**		52924	52924.008
	Sn	120	**0.135**	**ug/L**	13.507	376	0.004
	Sb	121	**0.566**	**ug/L**	25.447	1117	0.014
	Sb	123		**ug/L**		866	0.009
	Ba	135		**ug/L**		22	0.000
	Ba	137	**0.000**	**ug/L**	4211.503	25	0.000
	Ho	165		**ug/L**		6	-0.000
>	Lu	175		**ug/L**		45092	45091.840
	Tl	205	**0.072**	**ug/L**	11.034	162	0.002
	Pb	208	**0.000**	**ug/L**	3248.753	326	0.000
	Bi	209		**ug/L**		13	-0.000
	Th	232	**0.061**	**ug/L**	21.120	537	0.007
	U	238	**0.008**	**ug/L**	90.787	144	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		100.6			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		101.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		102.9			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		102.8			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Thursday, January 07, 2010 15:03:01
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 10.060

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**990.624**	**ug/L**	3.716	176632	0.778
	Be	9	**970.236**	**ug/L**	2.413	51274	0.226
	B	11	**1.049**	**ug/L**	4.665	126	0.000
	Na	23	**49330.048**	**ug/L**	5.742	49277674	216.895
	Mg	24	**50758.424**	**ug/L**	3.708	34094271	150.027
	Al	27	**48472.629**	**ug/L**	2.982	50494842	222.319
	P	31	**23774.255**	**ug/L**	1.000	1356457	5.964
	K	39	**51069.557**	**ug/L**	2.706	94686715	415.108
	Ca	43	**49218.253**	**ug/L**	0.349	190903	0.839
>	Sc	45		**ug/L**		227154	227154.342
	Ti	47	**30.793**	**ug/L**	0.637	5749	0.025
	V	51	**955.253**	**ug/L**	1.805	1693409	7.437
	Cr	52	**930.668**	**ug/L**	0.524	1646714	7.234
	Cr	53		**ug/L**		304962	0.752
	Mn	55	**969.815**	**ug/L**	0.340	2792985	12.293
	Fe	57	**48489.810**	**ug/L**	1.225	2815504	12.373
	Co	59	**901.344**	**ug/L**	1.810	1936451	8.526
	Ni	60	**924.539**	**ug/L**	0.999	415653	1.830
	Cu	63		**ug/L**		911113	4.011
	Cu	65	**906.231**	**ug/L**	2.790	443221	1.952
	Zn	66	**2270.202**	**ug/L**	1.991	580004	6.401
	Zn	67		**ug/L**		95824	0.998
	Zn	68		**ug/L**		414297	4.568
>	Ge	74		**ug/L**		90611	90611.380
	As	75	**919.161**	**ug/L**	0.384	277921	3.066
	Se	77		**ug/L**		14619	0.100
	Se	82	**477.996**	**ug/L**	0.814	13587	0.150
	Kr	83		**ug/L**		51	0.000
	Sr	88	**989.887**	**ug/L**	1.882	4215820	83.497
	Y	89		**ug/L**		147	0.003
	Zr	90	**495.958**	**ug/L**	0.842	1136419	22.502
	Mo	98	**968.535**	**ug/L**	1.825	956331	18.941
	Ag	107	**238.529**	**ug/L**	1.727	358446	7.099
	Cd	111	**962.167**	**ug/L**	2.485	337498	6.685
	Cd	114		**ug/L**		782218	15.491
>	In	115		**ug/L**		50496	50496.470
	Sn	120	**995.374**	**ug/L**	1.743	1578162	31.253
	Sb	121	**241.436**	**ug/L**	6.246	292737	5.791
	Sb	123		**ug/L**		224776	4.445
	Ba	135		**ug/L**		362948	7.709
	Ba	137	**917.841**	**ug/L**	1.572	621715	13.205
	Ho	165		**ug/L**		65	0.001
>	Lu	175		**ug/L**		47083	47083.268
	Tl	205	**458.663**	**ug/L**	0.605	638462	13.559
	Pb	208	**4650.726**	**ug/L**	1.201	18013830	382.611
	Bi	209		**ug/L**		397	0.008
	Th	232	**2351.091**	**ug/L**	1.121	11949969	253.813
	U	238	**4846.802**	**ug/L**	1.184	25696752	545.800

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7	99.062				
|	Be	9	97.024				
|	B	11					
|	Na	23	98.660				
|	Mg	24	101.517				
|	Al	27	96.945				
|	P	31	95.097				
|	K	39	102.139				
|	Ca	43	98.437				
|>	Sc	45			99.7		
|	Ti	47					
|	V	51	95.525				
|	Cr	52	93.067				
|	Cr	53					
|	Mn	55	96.982				
|	Fe	57	96.980				
|	Co	59	90.134				
|	Ni	60	92.454				
|	Cu	63					
⌊	Cu	65	90.623				
⌈	Zn	66	90.808				
|	Zn	67					
|	Zn	68					
|>	Ge	74			99.0		
|	As	75	91.916				
|	Se	77					
|	Se	82	95.599				
⌊	Kr	83					
⌈	Sr	88	98.989				
|	Y	89					
|	Zr	90	99.192				
|	Mo	98	96.854				
|	Ag	107	95.412				
|	Cd	111	96.217				
|	Cd	114					
|>	In	115			98.2		
|	Sn	120	99.537				
|	Sb	121	96.575				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	91.784				
|	Ho	165					
|>	Lu	175			107.3		
|	Tl	205	91.733				
|	Pb	208	93.015				
|	Bi	209					
|	Th	232	94.044				
⌊	U	238	96.936				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 11
Sample Date/Time: Thursday, January 07, 2010 15:09:10
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 11.061

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**51.178**	**ug/L**	1.459	9511	0.040
	Be	9	**49.432**	**ug/L**	2.372	2721	0.012
	B	11	**101.269**	**ug/L**	4.174	4629	0.019
	Na	23	**5165.235**	**ug/L**	3.171	5375704	22.711
	Mg	24	**5426.062**	**ug/L**	1.786	3788805	16.038
	Al	27	**4965.836**	**ug/L**	3.677	5379176	22.776
	P	31	**4974.258**	**ug/L**	2.237	296493	1.248
	K	39	**5314.775**	**ug/L**	3.400	10583972	43.200
	Ca	43	**4945.266**	**ug/L**	0.167	20279	0.084
>	Sc	45		**ug/L**		236173	236173.308
	Ti	47	**49.709**	**ug/L**	0.781	9553	0.040
	V	51	**48.797**	**ug/L**	5.994	93947	0.380
	Cr	52	**49.789**	**ug/L**	1.691	94988	0.387
	Cr	53		**ug/L**		123878	-0.066
	Mn	55	**51.058**	**ug/L**	0.973	153620	0.647
	Fe	57	**4860.384**	**ug/L**	3.011	298233	1.240
	Co	59	**49.610**	**ug/L**	1.552	110957	0.469
	Ni	60	**50.853**	**ug/L**	1.486	23808	0.101
	Cu	63		**ug/L**		52707	0.223
	Cu	65	**49.951**	**ug/L**	0.507	25458	0.108
	Zn	66	**51.106**	**ug/L**	1.688	13454	0.144
	Zn	67		**ug/L**		7010	0.016
	Zn	68		**ug/L**		10009	0.104
>	Ge	74		**ug/L**		92746	92746.070
	As	75	**48.227**	**ug/L**	1.685	14992	0.161
	Se	77		**ug/L**		5847	0.001
	Se	82	**50.639**	**ug/L**	3.064	1466	0.016
	Kr	83		**ug/L**		42	-0.000
	Sr	88	**50.656**	**ug/L**	0.703	227918	4.273
	Y	89		**ug/L**		27	0.000
	Zr	90	**51.393**	**ug/L**	3.497	124550	2.332
	Mo	98	**48.123**	**ug/L**	0.506	50221	0.941
	Ag	107	**49.428**	**ug/L**	0.415	78488	1.471
	Cd	111	**49.689**	**ug/L**	1.081	18419	0.345
	Cd	114		**ug/L**		42950	0.805
>	In	115		**ug/L**		53326	53325.594
	Sn	120	**53.306**	**ug/L**	0.722	89407	1.674
	Sb	121	**50.809**	**ug/L**	4.718	65405	1.219
	Sb	123		**ug/L**		50291	0.936
	Ba	135		**ug/L**		19591	0.417
	Ba	137	**49.175**	**ug/L**	0.816	33257	0.707
	Ho	165		**ug/L**		8	-0.000
>	Lu	175		**ug/L**		46969	46969.227
	Tl	205	**49.395**	**ug/L**	0.984	68649	1.460
	Pb	208	**50.884**	**ug/L**	1.167	196949	4.186
	Bi	209		**ug/L**		44	0.001
	Th	232	**51.967**	**ug/L**	2.283	263717	5.610
	U	238	**52.612**	**ug/L**	1.701	278355	5.925

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7	102.356				
	Be	9	98.865				
	B	11	101.269				
	Na	23	103.305				
	Mg	24	108.521				
	Al	27	98.333				
	P	31	99.485				
	K	39	106.295				
	Ca	43	98.905				
>	Sc	45			103.6		
	Ti	47	99.419				
	V	51	97.595				
	Cr	52	99.578				
	Cr	53					
	Mn	55	102.116				
	Fe	57	97.208				
	Co	59	99.221				
	Ni	60	101.706				
	Cu	63					
	Cu	65	99.902				
	Zn	66	102.211				
	Zn	67					
	Zn	68					
>	Ge	74			101.4		
	As	75	96.453				
	Se	77					
	Se	82	101.279				
	Kr	83					
	Sr	88	101.311				
	Y	89					
	Zr	90	102.787				
	Mo	98	96.245				
	Ag	107	98.855				
	Cd	111	99.379				
	Cd	114					
>	In	115			103.7		
	Sn	120	106.612				
	Sb	121	101.619				
	Sb	123					
	Ba	135					
	Ba	137	98.350				
	Ho	165					
>	Lu	175			107.0		
	Tl	205	98.789				
	Pb	208	101.768				
	Bi	209					
	Th	232	103.934				
	U	238	105.223				

QC Out Of Limits

Measurement Type Analyte Mass Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 12
Sample Date/Time: Thursday, January 07, 2010 15:15:22
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 12.062

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.224**	**ug/L**	22.335	63	0.000
	Be	9	**0.029**	**ug/L**	107.774	5	0.000
	B	11	**1.947**	**ug/L**	39.035	170	0.000
	Na	23	**3.554**	**ug/L**	106.883	16677	0.016
	Mg	24	**-0.059**	**ug/L**	1438.055	1667	-0.000
	Al	27	**1.502**	**ug/L**	70.092	3667	0.007
	P	31	**-1.033**	**ug/L**	72.728	1719	-0.000
	K	39	**-5.745**	**ug/L**	126.274	363917	-0.047
	Ca	43	**-7.536**	**ug/L**	36.295	340	-0.000
>	Sc	45		**ug/L**		233785	233784.901
	Ti	47	**-0.024**	**ug/L**	422.876	150	-0.000
	V	51	**-1.954**	**ug/L**	29.759	697	-0.015
	Cr	52	**-0.427**	**ug/L**	30.377	2785	-0.003
	Cr	53		**ug/L**		123470	-0.063
	Mn	55	**-0.009**	**ug/L**	104.900	753	-0.000
	Fe	57	**-19.031**	**ug/L**	6.407	4225	-0.005
	Co	59	**0.007**	**ug/L**	110.556	161	0.000
	Ni	60	**0.014**	**ug/L**	85.652	45	0.000
	Cu	63		**ug/L**		119	0.000
	Cu	65	**0.042**	**ug/L**	22.971	74	0.000
	Zn	66	**0.078**	**ug/L**	33.040	112	0.000
	Zn	67		**ug/L**		5177	-0.004
	Zn	68		**ug/L**		421	0.000
>	Ge	74		**ug/L**		92304	92303.875
	As	75	**2.810**	**ug/L**	7.747	931	0.009
	Se	77		**ug/L**		5350	-0.004
	Se	82	**0.373**	**ug/L**	33.987	4	0.000
	Kr	83		**ug/L**		43	-0.000
	Sr	88	**0.012**	**ug/L**	18.705	135	0.001
	Y	89		**ug/L**		13	-0.000
	Zr	90	**0.153**	**ug/L**	12.366	607	0.007
	Mo	98	**0.112**	**ug/L**	26.911	153	0.002
	Ag	107	**0.025**	**ug/L**	37.587	86	0.001
	Cd	111	**0.038**	**ug/L**	18.206	22	0.000
	Cd	114		**ug/L**		43	0.000
>	In	115		**ug/L**		53635	53634.520
	Sn	120	**0.921**	**ug/L**	8.690	1703	0.029
	Sb	121	**1.688**	**ug/L**	9.637	2576	0.040
	Sb	123		**ug/L**		2016	0.031
	Ba	135		**ug/L**		21	0.000
	Ba	137	**0.010**	**ug/L**	88.104	32	0.000
	Ho	165		**ug/L**		8	-0.000
>	Lu	175		**ug/L**		45613	45613.171
	Tl	205	**0.117**	**ug/L**	22.405	224	0.003
	Pb	208	**0.177**	**ug/L**	6.016	992	0.015
	Bi	209		**ug/L**		13	-0.000
	Th	232	**0.240**	**ug/L**	17.662	1421	0.026
	U	238	**0.071**	**ug/L**	7.629	468	0.008

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			102.6		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			100.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			104.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			104.0		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202005691
Sample Date/Time: Thursday, January 07, 2010 15:21:37
Sample Type:
Sample Description: LANL 6020 MB
Number of Replicates: 3
Batch ID: 937303|2|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\1202005691.063

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**0.253**	**ug/L**	16.655	69	0.000
|	Be	9	**0.004**	**ug/L**	512.763	4	0.000
|	B	11	**1.078**	**ug/L**	62.361	132	0.000
|	Na	23	**9.962**	**ug/L**	54.942	23353	0.044
|	Mg	24	**-1.532**	**ug/L**	106.532	667	-0.005
|	Al	27	**2.102**	**ug/L**	24.057	4334	0.010
|	P	31	**17.154**	**ug/L**	6.955	2802	0.004
|	K	39	**-1.677**	**ug/L**	513.560	373835	-0.014
|	Ca	43	**40.941**	**ug/L**	12.555	537	0.001
|>	Sc	45		**ug/L**		235238	235237.679
|	Ti	47	**0.564**	**ug/L**	19.270	261	0.000
|	V	51	**-11.965**	**ug/L**	30.361	-17533	-0.093
|	Cr	52	**2.865**	**ug/L**	7.082	8819	0.022
|	Cr	53		**ug/L**		291984	0.650
|	Mn	55	**0.510**	**ug/L**	0.420	2306	0.006
|	Fe	57	**-6.319**	**ug/L**	32.845	5015	-0.002
|	Co	59	**-0.005**	**ug/L**	150.675	135	-0.000
|	Ni	60	**0.013**	**ug/L**	283.601	45	0.000
|	Cu	63		**ug/L**		151	0.000
⌊	Cu	65	**0.068**	**ug/L**	49.402	87	0.000
⌈	Zn	66	**0.665**	**ug/L**	2.893	268	0.002
|	Zn	67		**ug/L**		13709	0.087
|	Zn	68		**ug/L**		967	0.006
|>	Ge	74		**ug/L**		93537	93537.249
|	As	75	**1.015**	**ug/L**	301.467	398	0.003
|	Se	77		**ug/L**		17132	0.121
|	Se	82	**0.131**	**ug/L**	91.296	-3	0.000
⌊	Kr	83		**ug/L**		44	-0.000
⌈	Sr	88	**0.021**	**ug/L**	12.408	167	0.002
|	Y	89		**ug/L**		18	0.000
|	Zr	90	**0.582**	**ug/L**	30.389	1599	0.026
|	Mo	98	**0.081**	**ug/L**	18.973	117	0.002
|	Ag	107	**0.016**	**ug/L**	19.078	70	0.000
|	Cd	111	**0.022**	**ug/L**	96.296	16	0.000
|	Cd	114		**ug/L**		28	-0.000
|>	In	115		**ug/L**		52074	52073.579
|	Sn	120	**2.092**	**ug/L**	43.029	3560	0.066
|	Sb	121	**1.757**	**ug/L**	21.945	2585	0.042
⌊	Sb	123		**ug/L**		2076	0.033
⌈	Ba	135		**ug/L**		23	0.000
|	Ba	137	**0.022**	**ug/L**	37.586	39	0.000
|	Ho	165		**ug/L**		6	-0.000
|>	Lu	175		**ug/L**		45564	45564.339
|	Tl	205	**0.076**	**ug/L**	23.124	169	0.002
|	Pb	208	**0.150**	**ug/L**	13.319	890	0.012
|	Bi	209		**ug/L**		18	0.000
|	Th	232	**0.303**	**ug/L**	28.319	1730	0.033
⌊	U	238	**0.028**	**ug/L**	29.846	249	0.003

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			103.2		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			102.2		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			101.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			103.8		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	V	51	Sample is out of limits (<-PQL)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: 1202005692
Sample Date/Time: Thursday, January 07, 2010 15:27:52
Sample Type:
Sample Description: LANL 6020 LCS
Number of Replicates: 3
Batch ID: 937303|2|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\1202005692.064

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**24.925**	**ug/L**	2.004	4758	0.020
	Be	9	**24.382**	**ug/L**	2.745	1376	0.006
	B	11	**54.115**	**ug/L**	5.157	2575	0.010
	Na	23	**951.939**	**ug/L**	7.500	1026012	4.186
	Mg	24	**984.654**	**ug/L**	2.301	706037	2.910
	Al	27	**961.220**	**ug/L**	5.865	1068594	4.409
	P	31	**934.667**	**ug/L**	0.625	58572	0.234
	K	39	**974.585**	**ug/L**	1.064	2304575	7.922
	Ca	43	**1008.339**	**ug/L**	1.078	4541	0.017
>	Sc	45		**ug/L**		241959	241958.662
	Ti	47	**22.768**	**ug/L**	3.394	4569	0.018
	V	51	**11.833**	**ug/L**	16.351	26665	0.092
	Cr	52	**26.437**	**ug/L**	1.466	53409	0.206
	Cr	53		**ug/L**		302365	0.659
	Mn	55	**25.093**	**ug/L**	2.013	77764	0.318
	Fe	57	**958.532**	**ug/L**	2.456	64730	0.245
	Co	59	**24.392**	**ug/L**	1.811	55978	0.231
	Ni	60	**24.456**	**ug/L**	1.304	11752	0.048
	Cu	63		**ug/L**		26893	0.111
	Cu	65	**24.793**	**ug/L**	0.636	12974	0.053
	Zn	66	**23.549**	**ug/L**	0.872	6404	0.066
	Zn	67		**ug/L**		15251	0.101
	Zn	68		**ug/L**		5395	0.053
>	Ge	74		**ug/L**		95036	95036.439
	As	75	**26.565**	**ug/L**	1.875	8492	0.089
	Se	77		**ug/L**		17070	0.118
	Se	82	**22.884**	**ug/L**	5.074	676	0.007
	Kr	83		**ug/L**		45	-0.000
	Sr	88	**25.038**	**ug/L**	1.650	109806	2.112
	Y	89		**ug/L**		18	0.000
	Zr	90	**24.894**	**ug/L**	2.235	58917	1.129
	Mo	98	**24.015**	**ug/L**	3.692	24443	0.470
	Ag	107	**25.007**	**ug/L**	0.703	38708	0.744
	Cd	111	**23.798**	**ug/L**	2.800	8598	0.165
	Cd	114		**ug/L**		19932	0.383
>	In	115		**ug/L**		51948	51947.615
	Sn	120	**25.091**	**ug/L**	0.460	41072	0.788
	Sb	121	**25.833**	**ug/L**	0.311	32578	0.620
	Sb	123		**ug/L**		25158	0.477
	Ba	135		**ug/L**		9097	0.195
	Ba	137	**23.216**	**ug/L**	3.566	15570	0.334
	Ho	165		**ug/L**		8	-0.000
>	Lu	175		**ug/L**		46536	46536.475
	Tl	205	**23.315**	**ug/L**	0.690	32144	0.689
	Pb	208	**25.029**	**ug/L**	0.520	96160	2.059
	Bi	209		**ug/L**		71564	1.537
	Th	232	**24.419**	**ug/L**	0.725	122925	2.636
	U	238	**25.764**	**ug/L**	2.023	135117	2.901

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			106.2		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			103.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			101.0		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			106.1		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202005693
Sample Date/Time: Thursday, January 07, 2010 15:40:22
Sample Type:
Sample Description: LANL 6020 LCSD
Number of Replicates: 3
Batch ID: 937303|2|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\1202005693.066

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**26.237**	**ug/L**	1.403	4614	0.021
|	Be	9	**25.508**	**ug/L**	2.742	1327	0.006
|	B	11	**55.607**	**ug/L**	2.401	2436	0.011
|	Na	23	**939.823**	**ug/L**	3.066	933546	4.132
|	Mg	24	**1054.274**	**ug/L**	4.024	696607	3.116
|	Al	27	**960.090**	**ug/L**	5.005	983422	4.403
|	P	31	**958.062**	**ug/L**	0.634	55283	0.240
|	K	39	**1006.756**	**ug/L**	1.182	2182233	8.183
|	Ca	43	**1043.282**	**ug/L**	1.746	4317	0.018
\>	Sc	45		**ug/L**		222991	222990.652
|	Ti	47	**23.886**	**ug/L**	2.068	4410	0.019
|	V	51	**8.313**	**ug/L**	33.398	18552	0.065
|	Cr	52	**26.061**	**ug/L**	1.612	48559	0.203
|	Cr	53		**ug/L**		275723	0.645
|	Mn	55	**25.319**	**ug/L**	2.975	72278	0.321
|	Fe	57	**983.584**	**ug/L**	1.340	61074	0.251
|	Co	59	**24.789**	**ug/L**	1.497	52419	0.234
|	Ni	60	**24.977**	**ug/L**	0.859	11060	0.049
|	Cu	63		**ug/L**		24797	0.111
⌊	Cu	65	**24.716**	**ug/L**	1.023	11920	0.053
⌈	Zn	66	**23.192**	**ug/L**	1.801	5893	0.065
|	Zn	67		**ug/L**		13717	0.095
|	Zn	68		**ug/L**		4847	0.050
\>	Ge	74		**ug/L**		88799	88798.783
|	As	75	**26.581**	**ug/L**	4.800	7944	0.089
|	Se	77		**ug/L**		14679	0.103
|	Se	82	**22.959**	**ug/L**	8.855	634	0.007
⌊	Kr	83		**ug/L**		45	-0.000
⌈	Sr	88	**25.034**	**ug/L**	1.380	103324	2.112
|	Y	89		**ug/L**		42	0.001
|	Zr	90	**24.749**	**ug/L**	1.266	55122	1.123
|	Mo	98	**24.086**	**ug/L**	2.744	23067	0.471
|	Ag	107	**25.109**	**ug/L**	1.271	36581	0.747
|	Cd	111	**24.188**	**ug/L**	1.155	8225	0.168
|	Cd	114		**ug/L**		18881	0.386
\>	In	115		**ug/L**		48896	48896.023
|	Sn	120	**25.039**	**ug/L**	1.610	38583	0.786
|	Sb	121	**26.079**	**ug/L**	0.577	30954	0.625
⌊	Sb	123		**ug/L**		23782	0.479
⌈	Ba	135		**ug/L**		8600	0.193
|	Ba	137	**22.902**	**ug/L**	0.270	14645	0.329
|	Ho	165		**ug/L**		9	-0.000
\>	Lu	175		**ug/L**		44376	44375.597
|	Tl	205	**23.408**	**ug/L**	0.818	30774	0.692
|	Pb	208	**25.200**	**ug/L**	0.232	92319	2.073
|	Bi	209		**ug/L**		70333	1.585
|	Th	232	**25.048**	**ug/L**	1.621	120228	2.704
⌊	U	238	**26.595**	**ug/L**	0.561	133000	2.995

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45			97.9		
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74			97.1		
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115			95.1		
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175			101.1		
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 243494001
Sample Date/Time: Thursday, January 07, 2010 15:46:39
Sample Type:
Sample Description: LANL
Number of Replicates: 3
Batch ID: 937303|2|sk|
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\243494001.067

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**5.961**	**ug/L**	8.548	1037	0.005
	Be	9	**0.220**	**ug/L**	67.597	14	0.000
	B	11	**5.504**	**ug/L**	4.515	305	0.001
	Na	23	**681.783**	**ug/L**	1.930	663387	2.998
	Mg	24	**805.192**	**ug/L**	3.365	518938	2.380
	Al	27	**7665.239**	**ug/L**	7.794	7643093	35.157
	P	31	**135.071**	**ug/L**	4.363	9014	0.034
	K	39	**1152.150**	**ug/L**	5.650	2384239	9.365
	Ca	43	**1397.302**	**ug/L**	1.144	5519	0.024
>	Sc	45		**ug/L**		217335	217334.539
	Ti	47	**243.078**	**ug/L**	0.426	42429	0.195
	V	51	**3.497**	**ug/L**	53.736	9910	0.027
	Cr	52	**11.701**	**ug/L**	3.138	23070	0.091
	Cr	53		**ug/L**		262354	0.617
	Mn	55	**83.373**	**ug/L**	1.996	230342	1.057
	Fe	57	**4459.928**	**ug/L**	2.253	252246	1.138
	Co	59	**1.857**	**ug/L**	3.353	3951	0.018
	Ni	60	**3.904**	**ug/L**	2.308	1715	0.008
	Cu	63		**ug/L**		21094	0.097
	Cu	65	**21.322**	**ug/L**	2.720	10024	0.046
	Zn	66	**25.923**	**ug/L**	1.640	6297	0.073
	Zn	67		**ug/L**		13583	0.100
	Zn	68		**ug/L**		5297	0.058
>	Ge	74		**ug/L**		84998	84998.383
	As	75	**4.352**	**ug/L**	52.988	1305	0.015
	Se	77		**ug/L**		13282	0.095
	Se	82	**0.071**	**ug/L**	337.502	-5	0.000
	Kr	83		**ug/L**		51	0.000
	Sr	88	**11.114**	**ug/L**	1.096	45012	0.937
	Y	89		**ug/L**		11532	0.240
	Zr	90	**5.663**	**ug/L**	5.367	12528	0.257
	Mo	98	**0.325**	**ug/L**	2.825	337	0.006
	Ag	107	**0.059**	**ug/L**	20.826	126	0.002
	Cd	111	**0.115**	**ug/L**	20.169	46	0.001
	Cd	114		**ug/L**		52	0.001
>	In	115		**ug/L**		47943	47942.984
	Sn	120	**4.638**	**ug/L**	1.585	7119	0.146
	Sb	121	**0.349**	**ug/L**	12.906	764	0.008
	Sb	123		**ug/L**		625	0.006
	Ba	135		**ug/L**		14385	0.327
	Ba	137	**39.489**	**ug/L**	0.720	24961	0.568
	Ho	165		**ug/L**		411	0.009
>	Lu	175		**ug/L**		43892	43892.100
	Tl	205	**0.224**	**ug/L**	11.060	354	0.007
	Pb	208	**16.366**	**ug/L**	1.120	59408	1.346
	Bi	209		**ug/L**		425	0.009
	Th	232	**2.482**	**ug/L**	2.013	11995	0.268
	U	238	**2.919**	**ug/L**	1.157	14529	0.329

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			95.4		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			92.9		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			93.2		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			100.0		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 1202005695
Sample Date/Time: Thursday, January 07, 2010 15:52:55
Sample Type:
Sample Description: LANL 6020 SDILT
Number of Replicates: 3
Batch ID: 937303|10|skj
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\1202005695.068

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**1.413**	**ug/L**	4.703	244	0.001
|	Be	9	**0.065**	**ug/L**	88.007	6	0.000
|	B	11	**0.926**	**ug/L**	21.494	108	0.000
|	Na	23	**164.514**	**ug/L**	11.788	157875	0.723
|	Mg	24	**190.291**	**ug/L**	14.196	115471	0.562
|	Al	27	**1507.088**	**ug/L**	6.787	1401705	6.912
|	P	31	**30.864**	**ug/L**	3.944	3111	0.008
|	K	39	**222.996**	**ug/L**	5.808	692048	1.813
|	Ca	43	**293.391**	**ug/L**	4.780	1333	0.005
\>	Sc	45		**ug/L**		202580	202579.982
|	Ti	47	**49.855**	**ug/L**	2.926	8217	0.040
|	V	51	**-1.715**	**ug/L**	182.052	1002	-0.013
|	Cr	52	**1.544**	**ug/L**	7.427	5516	0.012
|	Cr	53		**ug/L**		151942	0.159
|	Mn	55	**17.156**	**ug/L**	1.147	44725	0.217
|	Fe	57	**909.298**	**ug/L**	1.448	51647	0.232
|	Co	59	**0.368**	**ug/L**	8.005	831	0.003
|	Ni	60	**0.741**	**ug/L**	3.779	331	0.001
|	Cu	63		**ug/L**		4114	0.020
⌊	Cu	65	**4.493**	**ug/L**	3.927	2006	0.010
⌈	Zn	66	**5.661**	**ug/L**	2.546	1370	0.016
|	Zn	67		**ug/L**		6505	0.021
|	Zn	68		**ug/L**		1355	0.013
\>	Ge	74		**ug/L**		80832	80831.850
|	As	75	**1.886**	**ug/L**	38.530	566	0.006
|	Se	77		**ug/L**		6294	0.016
|	Se	82	**0.287**	**ug/L**	117.249	1	0.000
⌊	Kr	83		**ug/L**		40	-0.000
⌈	Sr	88	**2.228**	**ug/L**	2.422	8893	0.188
|	Y	89		**ug/L**		2196	0.046
|	Zr	90	**0.999**	**ug/L**	2.047	2336	0.045
|	Mo	98	**0.046**	**ug/L**	20.545	73	0.001
|	Ag	107	**0.008**	**ug/L**	99.192	52	0.000
|	Cd	111	**0.034**	**ug/L**	81.286	18	0.000
|	Cd	114		**ug/L**		23	-0.000
\>	In	115		**ug/L**		46974	46974.454
|	Sn	120	**0.905**	**ug/L**	1.603	1469	0.028
|	Sb	121	**-0.065**	**ug/L**	39.450	283	-0.002
⌊	Sb	123		**ug/L**		261	-0.001
⌈	Ba	135		**ug/L**		2927	0.068
|	Ba	137	**8.043**	**ug/L**	2.431	4959	0.116
|	Ho	165		**ug/L**		79	0.002
\>	Lu	175		**ug/L**		42652	42652.004
|	Tl	205	**0.055**	**ug/L**	20.727	132	0.002
|	Pb	208	**3.298**	**ug/L**	0.703	11879	0.271
|	Bi	209		**ug/L**		100	0.002
|	Th	232	**0.435**	**ug/L**	1.257	2228	0.047
⌊	U	238	**0.555**	**ug/L**	5.226	2765	0.063

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			88.9		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			88.3		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			91.3		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			97.2		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: 243494002
Sample Date/Time: Thursday, January 07, 2010 15:59:13
Sample Type:
Sample Description: LANL
Number of Replicates: 3
Batch ID: 937303|2|sk|
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\243494002.069

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
⌈	Li	7	**46.663**	**ug/L**	1.604	8400	0.037
|	Be	9	**2.435**	**ug/L**	8.434	133	0.001
|	B	11	**21.339**	**ug/L**	4.082	1009	0.004
|	Na	23	**1771.693**	**ug/L**	8.345	1794955	7.790
|	Mg	24	**6821.651**	**ug/L**	0.842	4612784	20.163
|	Al	27	**48461.145**	**ug/L**	0.808	50841886	222.267
|	P	31	**1712.743**	**ug/L**	2.629	100003	0.430
|	K	39	**7759.329**	**ug/L**	2.821	14791954	63.070
|	Ca	43	**6987.269**	**ug/L**	2.532	27601	0.119
|>	Sc	45		**ug/L**		228714	228713.644
|	Ti	47	**1945.660**	**ug/L**	0.636	356356	1.557
|	V	51	**89.308**	**ug/L**	4.166	163186	0.695
|	Cr	52	**49.270**	**ug/L**	1.161	91090	0.383
|	Cr	53		**ug/L**		235869	0.440
|	Mn	55	**579.149**	**ug/L**	0.925	1679724	7.341
|	Fe	57	**39855.449**	**ug/L**	0.737	2331224	10.170
|	Co	59	**12.356**	**ug/L**	0.756	26871	0.117
|	Ni	60	**21.554**	**ug/L**	1.736	9793	0.043
|	Cu	63		**ug/L**		38410	0.168
⌊	Cu	65	**37.640**	**ug/L**	0.746	18591	0.081
⌈	Zn	66	**125.170**	**ug/L**	0.651	29384	0.353
|	Zn	67		**ug/L**		15546	0.127
|	Zn	68		**ug/L**		22715	0.269
|>	Ge	74		**ug/L**		83032	83032.133
|	As	75	**9.372**	**ug/L**	9.065	2657	0.031
|	Se	77		**ug/L**		10706	0.067
|	Se	82	**-0.344**	**ug/L**	155.363	-15	-0.000
⌊	Kr	83		**ug/L**		89	0.001
⌈	Sr	88	**84.773**	**ug/L**	1.295	338727	7.151
|	Y	89		**ug/L**		107941	2.279
|	Zr	90	**49.872**	**ug/L**	1.542	107373	2.263
|	Mo	98	**1.337**	**ug/L**	3.632	1270	0.026
|	Ag	107	**0.287**	**ug/L**	1.787	445	0.009
|	Cd	111	**0.900**	**ug/L**	14.159	303	0.006
|	Cd	114		**ug/L**		232	0.004
|>	In	115		**ug/L**		47360	47360.060
|	Sn	120	**4.142**	**ug/L**	2.064	6294	0.130
|	Sb	121	**0.767**	**ug/L**	1.975	1229	0.018
⌊	Sb	123		**ug/L**		914	0.012
⌈	Ba	135		**ug/L**		137970	3.087
|	Ba	137	**367.075**	**ug/L**	2.242	236073	5.281
|	Ho	165		**ug/L**		4019	0.090
|>	Lu	175		**ug/L**		44699	44699.284
|	Tl	205	**0.527**	**ug/L**	4.120	761	0.016
|	Pb	208	**117.023**	**ug/L**	0.619	430639	9.627
|	Bi	209		**ug/L**		1971	0.044
|	Th	232	**21.106**	**ug/L**	0.456	102085	2.278
⌊	U	238	**9.014**	**ug/L**	0.979	45468	1.015

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7					
|	Be	9					
|	B	11					
|	Na	23					
|	Mg	24					
|	Al	27					
|	P	31					
|	K	39					
|	Ca	43					
|>	Sc	45		100.4			
|	Ti	47					
|	V	51					
|	Cr	52					
|	Cr	53					
|	Mn	55					
|	Fe	57					
|	Co	59					
|	Ni	60					
|	Cu	63					
⌊	Cu	65					
⌈	Zn	66					
|	Zn	67					
|	Zn	68					
|>	Ge	74		90.7			
|	As	75					
|	Se	77					
|	Se	82					
⌊	Kr	83					
⌈	Sr	88					
|	Y	89					
|	Zr	90					
|	Mo	98					
|	Ag	107					
|	Cd	111					
|	Cd	114					
|>	In	115		92.1			
|	Sn	120					
|	Sb	121					
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137					
|	Ho	165					
|>	Lu	175		101.9			
|	Tl	205					
|	Pb	208					
|	Bi	209					
|	Th	232					
⌊	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
	Ti	47	Sample is out of limits (over linear range)

QC Action

QC Action Line: No QC out of limits detected

ICPMS#4 - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Thursday, January 07, 2010 16:05:28
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 6.070

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**55.873**	**ug/L**	1.944	9868	0.044
	Be	9	**54.013**	**ug/L**	2.876	2824	0.013
	B	11	**100.540**	**ug/L**	0.675	4369	0.019
	Na	23	**5139.592**	**ug/L**	1.385	5085505	22.598
	Mg	24	**5510.950**	**ug/L**	0.831	3659359	16.289
	Al	27	**5190.945**	**ug/L**	5.305	5343929	23.808
	P	31	**5003.178**	**ug/L**	0.782	283528	1.255
	K	39	**5220.230**	**ug/L**	5.903	9884064	42.431
	Ca	43	**4959.512**	**ug/L**	1.293	19330	0.085
>	Sc	45		**ug/L**		224527	224527.367
	Ti	47	**49.668**	**ug/L**	1.324	9075	0.040
	V	51	**47.961**	**ug/L**	4.649	87931	0.373
	Cr	52	**49.550**	**ug/L**	2.162	89927	0.385
	Cr	53		**ug/L**		137468	0.022
	Mn	55	**51.619**	**ug/L**	1.708	147697	0.654
	Fe	57	**4983.905**	**ug/L**	1.291	290761	1.272
	Co	59	**50.075**	**ug/L**	1.594	106513	0.474
	Ni	60	**51.729**	**ug/L**	1.668	23030	0.102
	Cu	63		**ug/L**		51393	0.228
	Cu	65	**51.312**	**ug/L**	0.997	24860	0.111
	Zn	66	**51.734**	**ug/L**	0.740	13162	0.146
	Zn	67		**ug/L**		7550	0.024
	Zn	68		**ug/L**		9675	0.104
>	Ge	74		**ug/L**		89629	89628.636
	As	75	**47.029**	**ug/L**	1.813	14131	0.157
	Se	77		**ug/L**		5858	0.004
	Se	82	**49.145**	**ug/L**	1.709	1376	0.015
	Kr	83		**ug/L**		29	-0.000
	Sr	88	**50.337**	**ug/L**	1.098	217514	4.246
	Y	89		**ug/L**		60	0.001
	Zr	90	**47.956**	**ug/L**	2.044	111649	2.176
	Mo	98	**47.754**	**ug/L**	1.500	47859	0.934
	Ag	107	**49.619**	**ug/L**	1.082	75648	1.477
	Cd	111	**50.387**	**ug/L**	1.736	17935	0.350
	Cd	114		**ug/L**		41129	0.803
>	In	115		**ug/L**		51204	51204.328
	Sn	120	**49.991**	**ug/L**	0.786	80522	1.570
	Sb	121	**47.806**	**ug/L**	5.162	59135	1.147
	Sb	123		**ug/L**		45127	0.874
	Ba	135		**ug/L**		18310	0.403
	Ba	137	**48.372**	**ug/L**	2.510	31644	0.696
	Ho	165		**ug/L**		12	0.000
>	Lu	175		**ug/L**		45442	45441.617
	Tl	205	**48.099**	**ug/L**	0.823	64676	1.422
	Pb	208	**49.856**	**ug/L**	2.492	186683	4.102
	Bi	209		**ug/L**		56	0.001
	Th	232	**50.578**	**ug/L**	1.307	248338	5.460
	U	238	**52.230**	**ug/L**	0.999	267366	5.882

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈	Li	7	111.746				
|	Be	9	108.025				
|	B	11	100.540				
|	Na	23	102.792				
|	Mg	24	110.219				
|	Al	27	102.791				
|	P	31	100.064				
|	K	39	104.405				
|	Ca	43	99.190				
|>	Sc	45			98.5		
|	Ti	47	99.335				
|	V	51	95.922				
|	Cr	52	99.101				
|	Cr	53					
|	Mn	55	103.238				
|	Fe	57	99.678				
|	Co	59	100.151				
|	Ni	60	103.458				
|	Cu	63					
⌊	Cu	65	102.624				
⌈	Zn	66	103.469				
|	Zn	67					
|	Zn	68					
|>	Ge	74			98.0		
|	As	75	94.057				
|	Se	77					
|	Se	82	98.290				
⌊	Kr	83					
⌈	Sr	88	100.674				
|	Y	89					
|	Zr	90	95.912				
|	Mo	98	95.507				
|	Ag	107	99.237				
|	Cd	111	100.774				
|	Cd	114					
|>	In	115			99.6		
|	Sn	120	99.982				
|	Sb	121	95.612				
⌊	Sb	123					
⌈	Ba	135					
|	Ba	137	96.744				
|	Ho	165					
|>	Lu	175			103.6		
|	Tl	205	96.197				
|	Pb	208	99.713				
|	Bi	209					
|	Th	232	101.156				
⌊	U	238	104.461				

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message
QC Std 6	Li	7	CCV is out of limits (+/- 10%)
QC Std 6	Mg	24	CCV is out of limits (+/- 10%)

QC Action

QC Action Line: Continue

ICPMS#4 - Summary Report

Sample ID: QC Std 7
Sample Date/Time: Thursday, January 07, 2010 16:11:41
Sample Type:
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: c:\elandata\Method\6020.mth
Dataset File: C:\elandata\Dataset\100107\QC Std 7.071

Concentration Results

	Analyte	Mass	Conc. Mean	Report Unit	Conc. RSD	Meas. Intens. Mean	Net Intens. Mean
	Li	7	**0.076**	**ug/L**	2.087	35	0.000
	Be	9	**-0.018**	**ug/L**	123.897	2	-0.000
	B	11	**1.710**	**ug/L**	27.270	153	0.000
	Na	23	**4.310**	**ug/L**	77.900	16677	0.019
	Mg	24	**-0.462**	**ug/L**	186.436	1333	-0.001
	Al	27	**0.363**	**ug/L**	161.300	2334	0.002
	P	31	**-0.476**	**ug/L**	253.079	1678	-0.000
	K	39	**18.435**	**ug/L**	34.950	392317	0.150
	Ca	43	**3.578**	**ug/L**	141.032	368	0.000
>	Sc	45		**ug/L**		223827	223827.127
	Ti	47	**0.249**	**ug/L**	46.397	193	0.000
	V	51	**-2.380**	**ug/L**	4.044	-80	-0.019
	Cr	52	**-0.373**	**ug/L**	6.317	2759	-0.003
	Cr	53		**ug/L**		124723	-0.034
	Mn	55	**0.018**	**ug/L**	28.464	798	0.000
	Fe	57	**-10.886**	**ug/L**	7.164	4511	-0.003
	Co	59	**0.004**	**ug/L**	164.371	146	0.000
	Ni	60	**0.002**	**ug/L**	32.916	38	0.000
	Cu	63		**ug/L**		99	0.000
	Cu	65	**0.034**	**ug/L**	79.500	67	0.000
	Zn	66	**0.035**	**ug/L**	60.054	99	0.000
	Zn	67		**ug/L**		5352	-0.001
	Zn	68		**ug/L**		378	-0.000
>	Ge	74		**ug/L**		90279	90278.948
	As	75	**1.780**	**ug/L**	54.359	601	0.006
	Se	77		**ug/L**		4782	-0.009
	Se	82	**-0.158**	**ug/L**	218.842	-11	-0.000
	Kr	83		**ug/L**		47	-0.000
	Sr	88	**0.010**	**ug/L**	21.188	119	0.001
	Y	89		**ug/L**		14	0.000
	Zr	90	**0.107**	**ug/L**	22.418	470	0.005
	Mo	98	**0.030**	**ug/L**	51.202	64	0.001
	Ag	107	**0.013**	**ug/L**	61.373	64	0.000
	Cd	111	**0.005**	**ug/L**	467.256	9	0.000
	Cd	114		**ug/L**		30	0.000
>	In	115		**ug/L**		50864	50863.534
	Sn	120	**0.129**	**ug/L**	16.426	353	0.004
	Sb	121	**0.508**	**ug/L**	28.076	1003	0.012
	Sb	123		**ug/L**		854	0.010
	Ba	135		**ug/L**		17	0.000
	Ba	137	**0.016**	**ug/L**	32.376	34	0.000
	Ho	165		**ug/L**		6	-0.000
>	Lu	175		**ug/L**		43720	43719.908
	Tl	205	**0.075**	**ug/L**	31.191	161	0.002
	Pb	208	**0.021**	**ug/L**	8.582	390	0.002
	Bi	209		**ug/L**		14	-0.000
	Th	232	**0.094**	**ug/L**	37.580	676	0.010
	U	238	**0.011**	**ug/L**	24.911	152	0.001

Calibration

Analyte	Mass	Curve Type	Correlation Coefficient
Li	7	Linear Thru Zero	1.0000
Be	9	Linear Thru Zero	1.0000
B	11	Linear Thru Zero	1.0000
Na	23	Linear Thru Zero	1.0000
Mg	24	Linear Thru Zero	1.0000
Al	27	Linear Thru Zero	1.0000
P	31	Linear Thru Zero	1.0000
K	39	Linear Thru Zero	1.0000
Ca	43	Linear Thru Zero	1.0000
Sc	45	Linear Thru Zero	
Ti	47	Linear Thru Zero	1.0000
V	51	Linear Thru Zero	0.9997
Cr	52	Linear Thru Zero	1.0000
Cr	53	Linear Thru Zero	
Mn	55	Linear Thru Zero	1.0000
Fe	57	Linear Thru Zero	1.0000
Co	59	Linear Thru Zero	1.0000
Ni	60	Linear Thru Zero	1.0000
Cu	63	Linear Thru Zero	
Cu	65	Linear Thru Zero	1.0000
Zn	66	Linear Thru Zero	1.0000
Zn	67	Linear Thru Zero	
Zn	68	Linear Thru Zero	
Ge	74	Linear Thru Zero	
As	75	Linear Thru Zero	1.0000
Se	77	Linear Thru Zero	
Se	82	Linear Thru Zero	1.0000
Kr	83	Linear Thru Zero	
Sr	88	Linear Thru Zero	1.0000
Y	89	Linear Thru Zero	
Zr	90	Linear Thru Zero	1.0000
Mo	98	Linear Thru Zero	1.0000
Ag	107	Linear Thru Zero	1.0000
Cd	111	Linear Thru Zero	1.0000
Cd	114	Linear Thru Zero	
In	115	Linear Thru Zero	
Sn	120	Linear Thru Zero	1.0000
Sb	121	Linear Thru Zero	1.0000
Sb	123	Linear Thru Zero	
Ba	135	Linear Thru Zero	
Ba	137	Linear Thru Zero	1.0000
Ho	165	Linear Thru Zero	
Lu	175	Linear Thru Zero	
Tl	205	Linear Thru Zero	1.0000
Pb	208	Linear Thru Zero	1.0000
Bi	209	Linear Thru Zero	
Th	232	Linear Thru Zero	1.0000
U	238	Linear Thru Zero	1.0000

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
	Li	7					
	Be	9					
	B	11					
	Na	23					
	Mg	24					
	Al	27					
	P	31					
	K	39					
	Ca	43					
>	Sc	45			98.2		
	Ti	47					
	V	51					
	Cr	52					
	Cr	53					
	Mn	55					
	Fe	57					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	Zn	67					
	Zn	68					
>	Ge	74			98.7		
	As	75					
	Se	77					
	Se	82					
	Kr	83					
	Sr	88					
	Y	89					
	Zr	90					
	Mo	98					
	Ag	107					
	Cd	111					
	Cd	114					
>	In	115			98.9		
	Sn	120					
	Sb	121					
	Sb	123					
	Ba	135					
	Ba	137					
	Ho	165					
>	Lu	175			99.6		
	Tl	205					
	Pb	208					
	Bi	209					
	Th	232					
	U	238					

QC Out Of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

QC Action

QC Action Line: No QC out of limits detected

Miscellaneous

Prep LogBook

Analyst: FGA Verified by:_____

Batch: 937302

Lab SOP: GL-MA-E-009 REV# 19

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202005692	UI091124-A00	.5	mL
LCS	1202005692	UI091124-B	.5	mL
LCSD	1202005693	UI091124-A00	.5	mL
LCSD	1202005693	UI091124-B	.5	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202005691		SW846 3050B	31-DEC-2009 12:30	1 Filter	50 mL	50	SWIPE
LCS	1202005692		SW846 3050B	31-DEC-2009 12:30	1 Filter	50 mL	50	SWIPE
LCSD	1202005693		SW846 3050B	31-DEC-2009 12:30	1 Filter	50 mL	50	SWIPE
SAMPLE	243494001		SW846 3050B	31-DEC-2009 12:30	1 Filter	50 mL	50	SWIPE
SDILT	1202005695	243494001	SW846 3050B	31-DEC-2009 12:30	1 Filter	50 mL	50	SWIPE
SAMPLE	243494002		SW846 3050B	31-DEC-2009 12:30	1 Filter	50 mL	50	SWIPE

Reagent/Solvent Lot ID	Amount	Description
1203655-02	1.5 mL	Hydrogen Peroxide 30%
1234886	5 mL	Nitric Acid CONC.

Comments

Standard Logbook

Serial ID: UI090610-03 **Opened:** 10-JUN-09 **Catalog Number :** 060074-06-01
Name: ICPMS Tungsten - 10mg/L S **Received:** 10-JUN-09 **Lot Number :** 1016338
Type: Source Material **Expires:** 10-JUN-10 **Solvent :** 2% HNO3
Employee: Paul Boyd
Supplier: O2SI
Description: ICPMS Tungsten standard SPIKE - 10mg/L
Comments: None

Analyte	Concentration	Analyte	Concentration
Tungsten	10 mg/L		

Serial ID: UI090701-09 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #1 **Received:** 01-JUL-09 **Catalog Number :** 160044-09-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016477
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Master Soln #1
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	15 mg/L	Arsenic	5 mg/L
Barium	2 mg/L	Beryllium	.5 mg/L
Boron	15 mg/L	Cadmium	1 mg/L
Calcium	100 mg/L	Chromium	3 mg/L
Cobalt	1 mg/L	Copper	1 mg/L
Iron	25 mg/L	Lead	2 mg/L
Lithium	10 mg/L	Magnesium	15 mg/L
Manganese	5 mg/L	Nickel	2 mg/L
Phosphorous	50 mg/L	Potassium	300 mg/L
Selenium	5 mg/L	Sodium	250 mg/L
Strontium	10 mg/L	Thallium	1 mg/L
Thorium	1 mg/L	Uranium	.2 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UI090701-10 **Opened:** 01-JUL-09 **Amount :** 250 mL
Name: ICP-MS CRDL Master #2 **Received:** 01-JUL-09 **Catalog Number :** 160044-08-02
Type: Source Material **Expires:** 01-JUL-10 **Lot Number :** 1016476
Employee: Paul Boyd **Solvent :** +/- 0.5% IN 2% HNO3
Supplier: 02SI
Description: ICPMS CRDL Soln #2
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Molybdenum	.5 mg/L
Silver	1 mg/L	Tin	2 mg/L
Titanium	10 mg/L	Tungsten	5 mg/L

Analyte	Concentration	Analyte	Concentration
Zirconium	2 mg/L		

Serial ID: UI091124-A00 **Opened:** 24-NOV-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 24-NOV-09 **Lot Number :** 1017644
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: O2si
Description: ICP-MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution A).
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	200 mg/L	Arsenic	5 mg/L
Barium	5 mg/L	Beryllium	5 mg/L
Bismuth	5 mg/L	Boron	10 mg/L
Cadmium	5 mg/L	Calcium	200 mg/L
Cesium	5 mg/L	Chromium	5 mg/L
Cobalt	5 mg/L	Copper	5 mg/L
Iron	200 mg/L	Lead	5 mg/L
Lithium	5 mg/L	Magnesium	200 mg/L
Manganese	5 mg/L	Nickel	5 mg/L
Phosphorous	200 mg/L	Potassium	200 mg/L
Selenium	5 mg/L	Sodium	200 mg/L
Strontium	5 mg/L	Thallium	5 mg/L
Thorium	5 mg/L	Uranium	5 mg/L
Uranium-235	.036 mg/L	Uranium-238	4.964 mg/L
Vanadium	5 mg/L	Zinc	5 mg/L

Serial ID: UI091124-B **Opened:** 24-NOV-09 **Catalog Number :** 160067-05
Name: ICP-MS ALL OTHER SPIKE **Received:** 24-NOV-09 **Lot Number :** 1017644
Type: Source Material **Expires:** 24-NOV-10
Employee: Francena Armstrong
Supplier: O2si
Description: MS SPIKE FOR ALL CLIENTS EXCEPT DOE CLIENTS (Solution B).
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	5 mg/L	Molybdenum	5 mg/L
Silver	5 mg/L	Tin	5 mg/L
Titanium	5 mg/L	Zirconium	5 mg/L

Standard Logbook

Serial ID: UI091212-11 **Opened:** 12-DEC-09 **Amount :** 1000 mL
Name: ICP-MS ICSA Master A **Received:** 12-DEC-09 **Catalog Number :** 160013-01-01L
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1015303
Employee: Paul Boyd **Solvent :** 2% HNO3
Supplier: O2SI
Description: ICP-MS ICSA Master A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Carbon	2000 mg/L	Chloride	10000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Molybdenum	20 mg/L	Phosphorous	1000 mg/L
Potassium	1000 mg/L	Sodium	1000 mg/L
Sulfur	1000 mg/L	Titanium	20 mg/L

Serial ID: UI091212-60 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	5000 mg/L	Arsenic	100 mg/L
Barium	250 mg/L	Beryllium	100 mg/L
Cadmium	100 mg/L	Calcium	5000 mg/L
Chromium	100 mg/L	Cobalt	100 mg/L
Copper	100 mg/L	Iron	5000 mg/L
Lead	500 mg/L	Lithium	100 mg/L
Magnesium	5000 mg/L	Manganese	100 mg/L
Nickel	100 mg/L	Phosphorous	2500 mg/L
Potassium	5000 mg/L	Selenium	50 mg/L
Sodium	5000 mg/L	Strontium	100 mg/L
Thallium	50 mg/L	Thorium	250 mg/L
Uranium	500 mg/L	Vanadium	100 mg/L
Zinc	250 mg/L		

Serial ID: UI091212-61 **Opened:** 12-DEC-09 **Amount :** .5 mL
Name: ICPMS High Range Standar **Received:** 12-DEC-09 **Catalog Number :** 160212-02-01
Type: Source Material **Expires:** 12-DEC-10 **Lot Number :** 1018064
Employee: Paul Boyd **Solvent :** 2%HNO3 + Tr HF
Supplier: O2SI
Description: Linear Range Standard B
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	25 mg/L	Molybdenum	100 mg/L
Silver	25 mg/L	Tin	100 mg/L
Tungsten	100 mg/L	Zirconium	50 mg/L

Serial ID: UI091217-06 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master A **Received:** 17-DEC-09 **Catalog Number :** 160055-01
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018209
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV SOLN A - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	2020 mg/L	Calcium	2000 mg/L
Iron	2000 mg/L	Magnesium	2000 mg/L
Phosphorous	2000 mg/L	Potassium	2000 mg/L
Sodium	2000 mg/L		

Serial ID: UI091217-07 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master B **Received:** 17-DEC-09 **Catalog Number :** 160054-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018210
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln B - 10ppm
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	20 mg/L	Barium	20 mg/L
Beryllium	20 mg/L	Boron	40 mg/L
Cadmium	20 mg/L	Chromium	20 mg/L
Cobalt	20 mg/L	Copper	20 mg/L
Lead	20 mg/L	Lithium	20 mg/L
Manganese	20 mg/L	Nickel	20 mg/L
Selenium	20 mg/L	Strontium	20 mg/L
Thallium	20 mg/L	Thorium	20 mg/L
Uranium	20 mg/L	Vanadium	20 mg/L
Zinc	20 mg/L		

Serial ID: UI091217-08 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICV/CCV Master C **Received:** 17-DEC-09 **Catalog Number :** 160054-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018211
Employee: Paul Boyd **Solvent :** +/- 0.5% in 5% HNO3 100 cm2
Supplier: 02SI
Description: ICPMS ICV/CCV Soln C - 10ppm

Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	20 mg/L	Molybdenum	20 mg/L
Silver	20 mg/L	Tin	20 mg/L
Titanium	20 mg/L	Tungsten	20 mg/L
Zirconium	20 mg/L		

Serial ID: UI091217-12 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master B **Received:** 17-DEC-09 **Catalog Number :** 160033-02
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1018212
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	2 mg/L	Barium	2 mg/L
Beryllium	2 mg/L	Boron	2 mg/L
Cadmium	2 mg/L	Chromium	2 mg/L
Cobalt	2 mg/L	Copper	2 mg/L
Lead	2 mg/L	Lithium	2 mg/L
Manganese	2 mg/L	Nickel	2 mg/L
Selenium	2 mg/L	Strontium	2 mg/L
Thallium	2 mg/L	Thorium	2 mg/L
Uranium	2 mg/L	Vanadium	2 mg/L
Zinc	2 mg/L		

Serial ID: UI091217-13 **Opened:** 17-DEC-09 **Amount :** 250 mL
Name: ICP-MS ICSAB Master C **Received:** 17-DEC-09 **Catalog Number :** 160033-03
Type: Source Material **Expires:** 17-DEC-10 **Lot Number :** 1016926
Employee: Paul Boyd **Solvent :** +/- 0.5% in 2% HNO3
Supplier: 02SI
Description: ICPMS ICSAB Master C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	2 mg/L	Silver	2 mg/L
Tin	2 mg/L	Tungsten	2 mg/L
Zirconium	2 mg/L		

Serial ID: UMS090303-01 **Opened:** 03-MAR-09 **Amount :** 250 mL
Name: ICPMSCalSPIKEB **Received:** 03-MAR-09 **Catalog Number :** ZGEL-100-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 14-81JB
Employee: Paul Boyd
Supplier: SPEX

Description: ICPMS Calibration Standard Solution B
Comments: None

Analyte	Concentration	Analyte	Concentration
Arsenic	10 mg/L	Barium	10 mg/L
Beryllium	10 mg/L	Boron	20 mg/L
Cadmium	10 mg/L	Chromium	10 mg/L
Cobalt	10 mg/L	Copper	10 mg/L
Lead	10 mg/L	Lithium	10 mg/L
Manganese	10 mg/L	Nickel	10 mg/L
Selenium	10 mg/L	Silver	10 mg/L
Strontium	10 mg/L	Thallium	10 mg/L
Thorium	10 mg/L	Uranium	10 mg/L
Vanadium	10 mg/L	Zinc	10 mg/L

Serial ID: UMS090303-02 **Opened:** 03-MAR-09 **Catalog Number :** ZGEL-102-250
Name: ICPMSCalSPIKEA **Received:** 03-MAR-09 **Lot Number :** 14-83JB
Type: Source Material **Expires:** 28-FEB-10
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution A
Comments: None

Analyte	Concentration	Analyte	Concentration
Aluminum	1000 mg/L	Calcium	1000 mg/L
Iron	1000 mg/L	Magnesium	1000 mg/L
Phosphorous	1000 mg/L	Potassium	1000 mg/L
Sodium	1000 mg/L		

Serial ID: UMS090303-03 **Opened:** 03-MAR-09 **Amount :** 250 ml
Name: ICPMSCalSPIKEC **Received:** 03-MAR-09 **Catalog Number :** ZGEL-101-250
Type: Source Material **Expires:** 28-FEB-10 **Lot Number :** 15-199JB
Employee: Paul Boyd
Supplier: SPEX
Description: ICPMS Calibration Standard Solution C
Comments: None

Analyte	Concentration	Analyte	Concentration
Antimony	10 mg/L	Molybdenum	10 mg/L
Tin	10 mg/L	Titanium	10 mg/L
Zirconium	10 mg/L		

Standard Logbook

Serial ID: WMS100107-04 **Opened:** 07-JAN-10 **Amount :** 50 mL
Name: ICPMS Cal Standard 100 **Received:** 07-JAN-10 **Balance Id :** 4025216
Type: Working **Expires:** 08-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl-1249336
Supplier: GEL
Description: ICPMS Calibration Standard (100 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090610-03	Tungsten	10 mg/L	.5 mL	50 mL	100 ug/L
UMS090303-01	Arsenic	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Barium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Beryllium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Boron	20 mg/L	.5 mL	50 mL	200 ug/l
UMS090303-01	Cadmium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Chromium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Cobalt	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Copper	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lead	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Lithium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Manganese	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Nickel	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Selenium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Silver	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Strontium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thallium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Thorium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Uranium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Vanadium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-01	Zinc	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-02	Aluminum	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Calcium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Iron	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Magnesium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Phosphorous	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Potassium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-02	Sodium	1000 mg/L	.5 mL	50 mL	10000 ug/l
UMS090303-03	Antimony	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Molybdenum	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Tin	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Titanium	10 mg/L	.5 mL	50 mL	100 ug/l
UMS090303-03	Zirconium	10 mg/L	.5 mL	50 mL	100 ug/l

Standard Logbook

Serial ID: WMS100107-04A **Opened:** 07-JAN-10 **Balance Id :** 4025216
Name: ICPMS Cal Standard 10 **Received:** 07-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS Calibration Standard (10 ppb)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
WMS100107-04	Aluminum	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Antimony	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Arsenic	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Barium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Beryllium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Boron	200 ug/l	5 mL	50 mL	20 ug/l
WMS100107-04	Cadmium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Calcium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Chromium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Cobalt	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Copper	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Iron	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Lead	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Lithium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Magnesium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Manganese	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Molybdenum	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Nickel	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Phosphorous	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Potassium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Selenium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Silver	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Sodium	10000 ug/l	5 mL	50 mL	1000 ug/l
WMS100107-04	Strontium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Thallium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Thorium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Tin	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Titanium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Tungsten	100 ug/L	5 mL	50 mL	10 ug/L
WMS100107-04	Uranium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Vanadium	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Zinc	100 ug/l	5 mL	50 mL	10 ug/l
WMS100107-04	Zirconium	100 ug/l	5 mL	50 mL	10 ug/l

Standard Logbook

Serial ID: WMS100107-05 **Opened:** 07-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICV **Received:** 07-JAN-10 **Pipet Id :** 3541598
Type: Working **Expires:** 08-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICV
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-06	Aluminum	2020 mg/L	.125 mL	50 mL	5050 ug/L
UI091217-06	Calcium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Iron	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Magnesium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Phosphorous	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Potassium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-06	Sodium	2000 mg/L	.125 mL	50 mL	5000 ug/L
UI091217-07	Arsenic	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Barium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Beryllium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Boron	40 mg/L	.125 mL	50 mL	100 ug/L
UI091217-07	Cadmium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Chromium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Cobalt	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Copper	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lead	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Lithium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Manganese	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Nickel	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Selenium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Strontium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thallium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Thorium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Uranium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Vanadium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-07	Zinc	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Antimony	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Molybdenum	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Silver	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tin	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Titanium	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Tungsten	20 mg/L	.125 mL	50 mL	50 ug/L
UI091217-08	Zirconium	20 mg/L	.125 mL	50 mL	50 ug/L

Standard Logbook

Serial ID: WMS100107-06 **Opened:** 07-JAN-10 **Balance Id :** 40245216
Name: ICPMS CRDL **Received:** 07-JAN-10 **Pipet Id :** 3820544
Type: Working **Expires:** 08-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS CRDL
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI090701-09	Aluminum	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Arsenic	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Barium	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Beryllium	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-09	Boron	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Cadmium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Calcium	100 mg/L	.05 mL	50 mL	100 ug/L
UI090701-09	Chromium	3 mg/L	.05 mL	50 mL	3 ug/L
UI090701-09	Cobalt	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Copper	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Iron	25 mg/L	.05 mL	50 mL	25 ug/L
UI090701-09	Lead	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Lithium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Magnesium	15 mg/L	.05 mL	50 mL	15 ug/L
UI090701-09	Manganese	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Nickel	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-09	Phosphorous	50 mg/L	.05 mL	50 mL	50 ug/L
UI090701-09	Potassium	300 mg/L	.05 mL	50 mL	300 ug/L
UI090701-09	Selenium	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-09	Sodium	250 mg/L	.05 mL	50 mL	250 ug/L
UI090701-09	Strontium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Thallium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Thorium	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-09	Uranium	.2 mg/L	.05 mL	50 mL	.2 ug/L
UI090701-09	Vanadium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-09	Zinc	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Antimony	2 mg/L	.05 mL	50 mL	2 ug/L
UI090701-10	Molybdenum	.5 mg/L	.05 mL	50 mL	.5 ug/L
UI090701-10	Silver	1 mg/L	.05 mL	50 mL	1 ug/L
UI090701-10	Tin	2 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Titanium	10 mg/L	.05 mL	50 mL	10 ug/L
UI090701-10	Tungsten	5 mg/L	.05 mL	50 mL	5 ug/L
UI090701-10	Zirconium	2 mg/L	.05 mL	50 mL	2 ug/L

Standard Logbook

Serial ID: WMS100107-07 **Opened:** 07-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSA **Received:** 07-JAN-10 **Lot Number :** 1010773
Type: Working **Expires:** 08-JAN-10 **Pipet Id :** 3541598
Employee: Paul Boyd **Solvent :** 2%HNO3/1%HCl - 1249336
Supplier: GEL
Description: ICPMS ICSA
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L

Serial ID: WMS100107-08 **Opened:** 07-JAN-10 **Balance Id :** 40245216
Name: ICPMS ICSAB **Received:** 07-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 08-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: GEL
Description: ICPMS ICSAB
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-11	Aluminum	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Calcium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Chloride	10000 mg/L	5 mL	50 mL	1000000 ug/L
UI091212-11	Iron	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Magnesium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Molybdenum	20 mg/L	5 mL	50 mL	2000 ug/L
UI091212-11	Phosphorous	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Potassium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sodium	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Sulfur	1000 mg/L	5 mL	50 mL	100000 ug/L
UI091212-11	Titanium	20 mg/L	5 mL	50 mL	2000 ug/L
UI091217-12	Arsenic	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Barium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Beryllium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Boron	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Cadmium	2 mg/L	.5 mL	50 mL	20.2 ug/L
UI091217-12	Chromium	2 mg/L	.5 mL	50 mL	22.2 ug/L

Standard Logbook

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091217-12	Cobalt	2 mg/L	.5 mL	50 mL	20.4 ug/L
UI091217-12	Copper	2 mg/L	.5 mL	50 mL	23.4 ug/L
UI091217-12	Lead	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Lithium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Manganese	2 mg/L	.5 mL	50 mL	22.7 ug/L
UI091217-12	Nickel	2 mg/L	.5 mL	50 mL	22.4 ug/L
UI091217-12	Selenium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Strontium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thallium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Thorium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Uranium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Vanadium	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-12	Zinc	2 mg/L	.5 mL	50 mL	27 ug/L
UI091217-13	Antimony	2 mg/L	.5 mL	50 mL	20.5 ug/L
UI091217-13	Silver	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tin	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Tungsten	2 mg/L	.5 mL	50 mL	20 ug/L
UI091217-13	Zirconium	2 mg/L	.5 mL	50 mL	20 ug/L

Serial ID: WMS100107-70 **Opened:** 07-JAN-10 **Balance Id :** 40245216
Name: ICPMS LINEAR RANGE ST **Received:** 07-JAN-10 **Pipet Id :** 1758088
Type: Working **Expires:** 08-JAN-10 **Solvent :** 2%HNO3/1%HCl - 1249336
Employee: Paul Boyd
Supplier: 02SI
Description: ICPMS LINEAR RANGE STANDARD
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Aluminum	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Arsenic	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Barium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Beryllium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cadmium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Calcium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Chromium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Cobalt	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Copper	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Iron	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Lead	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Lithium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Magnesium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Manganese	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Nickel	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Phosphorous	2500 mg/L	.5 mL	50 mL	25000 ug/L
UI091212-60	Potassium	5000 mg/L	.5 mL	50 mL	50000 ug/L

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
UI091212-60	Selenium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Sodium	5000 mg/L	.5 mL	50 mL	50000 ug/L
UI091212-60	Strontium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Thallium	50 mg/L	.5 mL	50 mL	500 ug/L
UI091212-60	Thorium	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-60	Uranium	500 mg/L	.5 mL	50 mL	5000 ug/L
UI091212-60	Vanadium	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-60	Zinc	250 mg/L	.5 mL	50 mL	2500 ug/L
UI091212-61	Antimony	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Molybdenum	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Silver	25 mg/L	.5 mL	50 mL	250 ug/L
UI091212-61	Tin	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Tungsten	100 mg/L	.5 mL	50 mL	1000 ug/L
UI091212-61	Zirconium	50 mg/L	.5 mL	50 mL	500 ug/L

Serial ID: 1203655-02 **Opened:** 15-OCT-09 **Lot Number :** ZU74081198 mL
Name: B-H2O2 **Received:** 15-OCT-09
Type: Reagent/Solvent **Expires:** 15-OCT-10
Employee: Francena Armstrong
Supplier: EM SCIENCE
Description: Hydrogen Peroxide 30%
Comments: None

Serial ID: 1234886 **Opened:** 27-NOV-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 27-NOV-09
Type: Reagent/Solvent **Expires:** 27-NOV-10
Employee: Bryan Davis
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Serial ID: 1238345 **Opened:** 04-DEC-09 **Lot Number :** H20053 L
Name: I-HNO3 **Received:** 04-DEC-09
Type: Reagent/Solvent **Expires:** 04-DEC-10
Employee: Francena Armstrong
Supplier: BAKER
Description: Nitric Acid CONC.
Comments: None

Standard Logbook

Serial ID: 1244970 **Opened:** 18-DEC-09 **Lot Number :** H41032
Name: I-HCL **Received:** 18-DEC-09 **Preservative_Id :** 5 none
Type: Reagent/Solvent **Expires:** 18-DEC-10
Employee: Francena Armstrong
Supplier: J.T. BAKER
Description: HYDROCHLORIC ACID
Comments: None

Serial ID: 1249336 **Opened:** 04-JAN-10 **Solvent :** Type I Water
Name: B-2%HNO3/1%HCl-ICPMS **Received:** 04-JAN-10
Type: Reagent/Solvent **Expires:** 11-JAN-10
Employee: Paul Boyd
Supplier: GEL
Description: 2%HNO3/1%HCl Solution (Type I Water)
Comments: None

Parent Material	Analyte	Parent Conc.	Aliquot	Final Vol.	Final Conc.
1238345	I-HNO3	69.0-70.0	180 mL	9 l	N/A
1244970	I-HCL	36.5-38.0	90 mL	9 l	N/A

General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	936400	**Method:**	SW846 9012A
Prep Batch :	936399	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202003577	Method Blank (MB)
1202003578	243385008(RE12-10-7585) Sample Duplicate (DUP)
1202003579	243385008(RE12-10-7585) Matrix Spike (MS)
1202003580	243385008(RE12-10-7585) Matrix Spike Duplicate (MSD)
1202003581	Laboratory Control Sample (LCS)
1202004486	243505001(RE16-10-2853) Sample Duplicate (DUP)
1202004487	243505001(RE16-10-2853) Matrix Spike (MS)
1202004488	243505001(RE16-10-2853) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 12.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information
The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration
All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks
All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 243385008 (RE12-10-7585) and 243505001 (RE16-10-2853).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202003578 (RE12-10-7585) and 1202004486 (RE16-10-2853).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The following sample in this sample group was diluted due to high concentration: 1202003581 (LCS).

Sample Re-analysis
The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: Tom Lewis, Jr. **Date:** 19Jan10

Sample Data Summary

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1037 GEL Work Order: 243492

The Qualifiers in this report are defined as follows:

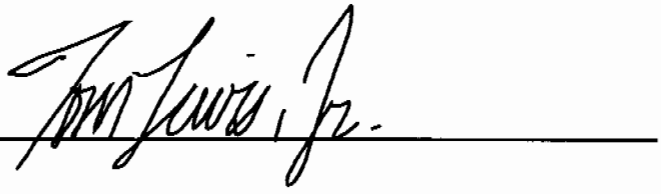
* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by 

GEL LABORATORIES LLC
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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7288	Project:	LANL01004
Sample ID:	243492001	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	9.18%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	69.3	255	ug/kg	1	AXC2 12/31/09	1024	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7290	Project:	LANL01004
Sample ID:	243492002	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	3.11%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	65.0	239	ug/kg	1	AXC2 12/31/09	1025	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7289	Project:	LANL01004
Sample ID:	243492003	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	9.89%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	71.2	262	ug/kg	1	AXC2 12/31/09	1026	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7291	Project:	LANL01004
Sample ID:	243492004	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	8.16%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Flow Injection Analysis											
SW9012A Cyanide, Total Federal "Dry Weight Corrected"											
Cyanide, Total	U	ND	71.2	262	ug/kg	1	AXC2	12/31/09	1027	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7292	Project:	LANL01004
Sample ID:	243492005	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	5.97%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	69.5	256	ug/kg	1	AXC2 12/31/09	1031	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7293	Project:	LANL01004
Sample ID:	243492006	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	2.52%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	67.1	247	ug/kg	1	AXC2 12/31/09	1032	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

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Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 6, 2010
Client SDG: 10-1037

Client Sample ID:	RE12-10-7296	Project:	LANL01004
Sample ID:	243492007	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	7.99%		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total Federal "Dry Weight Corrected"										
Cyanide, Total	U	ND	73.9	272	ug/kg	1	AXC2 12/31/09	1033	936400	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/30/09	1520	936399

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Quality Control Summary

QC Summary

Report Date: January 6, 2010
Page 1 of 2

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Flow Injection Analysis										
Batch 936400										
QC1202003578 243385008 DUP										
Cyanide, Total		U	ND	U	ND	ug/kg	N/A		AXC2	12/31/09 10:09
QC1202004486 243505001 DUP										
Cyanide, Total		U	ND	U	ND	ug/kg	N/A			12/31/09 10:35
QC1202003581 LCS										
Cyanide, Total	67900			63300	ug/kg		93.2	(46%-145%)		12/31/09 10:07
QC1202003577 MB										
Cyanide, Total			U	250	ug/kg					12/31/09 10:06
QC1202003579 243385008 MS										
Cyanide, Total	4960	U	ND	4960	ug/kg		100	(50%-130%)		12/31/09 10:10
QC1202004487 243505001 MS										
Cyanide, Total	4890	U	ND	5380	ug/kg		109	(50%-130%)		12/31/09 10:36
QC1202003580 243385008 MSD										
Cyanide, Total	5250	U	ND	4890	ug/kg	1.43	93.2	(0%-30%)		12/31/09 10:11
QC1202004488 243505001 MSD										
Cyanide, Total	5560	U	ND	5950	ug/kg	10.1	106	(0%-30%)		12/31/09 10:36

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M M if above MDC and less than LLD
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor

QC Summary

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 06-JAN-2010 08:55

GEL Laboratories LLC
Contract: LANL01004
SDG #: 10-1037

Flow Injection Analysis
Method: SW846 9012A Concentration Units:ug/L
Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**31-DEC-2009 10:01:18**	**OM_12-31-2009_09-50-50**	**150**	**150**	**100**	**(90%-110%)**	**Yes**
CCV	31-DEC-2009 10:15:36	OM_12-31-2009_09-50-50	105	100	105	(90%-110%)	Yes
CCV	31-DEC-2009 10:28:01	OM_12-31-2009_09-50-50	106	100	106	(90%-110%)	Yes
CCV	31-DEC-2009 10:40:23	OM_12-31-2009_09-50-50	106	100	106	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**31-DEC-2009 10:03:08**	**OM_12-31-2009_09-50-50**	**-1.31**	**5**	**Yes**
CCB	31-DEC-2009 10:17:26	OM_12-31-2009_09-50-50	-1.68	5	Yes
CCB	31-DEC-2009 10:29:51	OM_12-31-2009_09-50-50	-1.39	5	Yes
CCB	31-DEC-2009 10:42:13	OM_12-31-2009_09-50-50	-1.45	5	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 936399

Lab SOP: GL-GC-E-067 REV# 13

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202003581	URF1200957-01	.25	g
MS	1202003579	URF1184831-02	.025	mL
MS	1202004487	URF1184831-02	.025	mL
MSD	1202003580	URF1184831-02	.025	mL
MSD	1202004488	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202003577		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.5 g	25 mL	50	SOIL
LCS	1202003581		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.25 g	25 mL	100	SOIL
SAMPLE	243385008		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.52 g	25 mL	48.07692	SOIL
DUP	1202003578	243385008	SW846 9010B Prep	30-DEC-2009 15:20	>12	0.57 g	25 mL	43.85965	SOIL
MS	1202003579	243385008	SW846 9010B Prep	30-DEC-2009 15:20	>12	0.55 g	25 mL	45.45455	SOIL
MSD	1202003580	243385008	SW846 9010B Prep	30-DEC-2009 15:20	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	243385009		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.55 g	25 mL	45.45455	SOIL
SAMPLE	243385010		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.58 g	25 mL	43.10345	SOIL
SAMPLE	243385011		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	243457001		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.57 g	25 mL	43.85965	SOIL
SAMPLE	243457002		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	243457003		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	243457004		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.5 g	25 mL	50	SOIL
SAMPLE	243472001		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.5 g	25 mL	50	SOIL
SAMPLE	243472002		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	243472003		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.5 g	25 mL	50	SOIL
SAMPLE	243492001		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	243492002		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.54 g	25 mL	46.2963	SOIL
SAMPLE	243492003		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.53 g	25 mL	47.16981	SOIL
SAMPLE	243492004		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	243492005		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	243492006		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.52 g	25 mL	48.07692	SOIL
SAMPLE	243492007		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.5 g	25 mL	50	SOIL
SAMPLE	243505001		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.51 g	25 mL	49.01961	SOIL
DUP	1202004486	243505001	SW846 9010B Prep	30-DEC-2009 15:20	>12	0.55 g	25 mL	45.45455	SOIL
MS	1202004487	243505001	SW846 9010B Prep	30-DEC-2009 15:20	>12	0.58 g	25 mL	43.10345	SOIL
MSD	1202004488	243505001	SW846 9010B Prep	30-DEC-2009 15:20	>12	0.51 g	25 mL	49.01961	SOIL
SAMPLE	243505002		SW846 9010B Prep	30-DEC-2009 15:20	>12	0.54 g	25 mL	46.2963	SOIL

Prep LogBook

Reagent/Solvent Lot ID	Amount	Description
091211-C	25 mL	0.25N Sodium Hydroxide Solution
WCN091230-07	.0375 mL	150 ppb CN Distilled ICV Standard
1176724-C	1.25 mL	0.8N H3NO3S
1238146-C	2.5 mL	50% H2SO4 CN Prep
1176778-C	1 mL	51% MgCl2 Soln
1238142-C	1.25 mL	Bismuth Nitrate Solution

Comments:

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	12/31/2009 9:54:09	OM_12-31-2009_09-50-50
150 ppb		1	axc2	12/31/2009 9:55:01	OM_12-31-2009_09-50-50
100 ppb		1	axc2	12/31/2009 9:55:53	OM_12-31-2009_09-50-50
50 ppb		1	axc2	12/31/2009 9:56:46	OM_12-31-2009_09-50-50
10 ppb		1	axc2	12/31/2009 9:57:39	OM_12-31-2009_09-50-50
CRDL 5.0 ppb		1	axc2	12/31/2009 9:58:33	OM_12-31-2009_09-50-50
ICAL-00		1	axc2	12/31/2009 9:59:28	OM_12-31-2009_09-50-50
ICV		1	axc2	12/31/2009 10:01:18	OM_12-31-2009_09-50-50
ICB		1	axc2	12/31/2009 10:03:08	OM_12-31-2009_09-50-50
CRDL		1	axc2	12/31/2009 10:04:58	OM_12-31-2009_09-50-50
1202003577	936400	1	axc2	12/31/2009 10:06:47	OM_12-31-2009_09-50-50
1202003581	936400	25	axc2	12/31/2009 10:07:41	OM_12-31-2009_09-50-50
243385008	936400	1	axc2	12/31/2009 10:08:34	OM_12-31-2009_09-50-50
1202003578	936400	1	axc2	12/31/2009 10:09:27	OM_12-31-2009_09-50-50
1202003579	936400	1	axc2	12/31/2009 10:10:20	OM_12-31-2009_09-50-50
1202003580	936400	1	axc2	12/31/2009 10:11:13	OM_12-31-2009_09-50-50
243385009	936400	1	axc2	12/31/2009 10:12:05	OM_12-31-2009_09-50-50
243385010	936400	1	axc2	12/31/2009 10:12:58	OM_12-31-2009_09-50-50
243385011	936400	1	axc2	12/31/2009 10:13:51	OM_12-31-2009_09-50-50
243457001	936400	1	axc2	12/31/2009 10:14:43	OM_12-31-2009_09-50-50
CCV		1	axc2	12/31/2009 10:15:36	OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009 10:17:26	OM_12-31-2009_09-50-50
243457002	936400	1	axc2	12/31/2009 10:19:14	OM_12-31-2009_09-50-50
243457003	936400	1	axc2	12/31/2009 10:20:06	OM_12-31-2009_09-50-50
243457004	936400	1	axc2	12/31/2009 10:20:58	OM_12-31-2009_09-50-50
243472001	936400	1	axc2	12/31/2009 10:21:50	OM_12-31-2009_09-50-50
243472002	936400	1	axc2	12/31/2009 10:22:41	OM_12-31-2009_09-50-50
243472003	936400	1	axc2	12/31/2009 10:23:35	OM_12-31-2009_09-50-50
243492001	936400	1	axc2	12/31/2009 10:24:29	OM_12-31-2009_09-50-50
243492002	936400	1	axc2	12/31/2009 10:25:22	OM_12-31-2009_09-50-50
243492003	936400	1	axc2	12/31/2009 10:26:15	OM_12-31-2009_09-50-50
243492004	936400	1	axc2	12/31/2009 10:27:09	OM_12-31-2009_09-50-50
CCV		1	axc2	12/31/2009 10:28:01	OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009 10:29:51	OM_12-31-2009_09-50-50
243492005	936400	1	axc2	12/31/2009 10:31:40	OM_12-31-2009_09-50-50
243492006	936400	1	axc2	12/31/2009 10:32:33	OM_12-31-2009_09-50-50
243492007	936400	1	axc2	12/31/2009 10:33:26	OM_12-31-2009_09-50-50
243505001	936400	1	axc2	12/31/2009 10:34:18	OM_12-31-2009_09-50-50
1202004486	936400	1	axc2	12/31/2009 10:35:11	OM_12-31-2009_09-50-50
1202004487	936400	1	axc2	12/31/2009 10:36:03	OM_12-31-2009_09-50-50
1202004488	936400	1	axc2	12/31/2009 10:36:55	OM_12-31-2009_09-50-50
243505002	936400	1	axc2	12/31/2009 10:37:48	OM_12-31-2009_09-50-50
1202004505	936845	1	axc2	12/31/2009 10:38:39	OM_12-31-2009_09-50-50
1202004509	936845	25	axc2	12/31/2009 10:39:31	OM_12-31-2009_09-50-50
CCV		1	axc2	12/31/2009 10:40:23	OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009 10:42:13	OM_12-31-2009_09-50-50
243358001	936845	1	axc2	12/31/2009 10:44:04	OM_12-31-2009_09-50-50
243550005	936845	1	axc2	12/31/2009 10:44:58	OM_12-31-2009_09-50-50
1202004506	936845	1	axc2	12/31/2009 10:45:52	OM_12-31-2009_09-50-50
1202004507	936845	1	axc2	12/31/2009 10:46:44	OM_12-31-2009_09-50-50
1202004508	936845	1	axc2	12/31/2009 10:47:38	OM_12-31-2009_09-50-50
243550006	936845	1	axc2	12/31/2009 10:48:31	OM_12-31-2009_09-50-50
243550007	936845	1	axc2	12/31/2009 10:49:24	OM_12-31-2009_09-50-50
243550008	936845	1	axc2	12/31/2009 10:50:17	OM_12-31-2009_09-50-50
243550009	936845	1	axc2	12/31/2009 10:51:10	OM_12-31-2009_09-50-50
243550010	936845	1	axc2	12/31/2009 10:52:02	OM_12-31-2009_09-50-50
CCV		1	axc2	12/31/2009 10:52:55	OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009 10:54:45	OM_12-31-2009_09-50-50

243550011	936845	1	axc2	12/31/2009	10:56:33 OM_12-31-2009_09-50-50
243550012	936845	1	axc2	12/31/2009	10:57:27 OM_12-31-2009_09-50-50
243550013	936845	1	axc2	12/31/2009	10:58:18 OM_12-31-2009_09-50-50
243602001	936845	1	axc2	12/31/2009	10:59:11 OM_12-31-2009_09-50-50
1202006206	936845	1	axc2	12/31/2009	11:00:03 OM_12-31-2009_09-50-50
1202006207	936845	1	axc2	12/31/2009	11:00:56 OM_12-31-2009_09-50-50
1202006208	936845	1	axc2	12/31/2009	11:01:51 OM_12-31-2009_09-50-50
243602002	936845	1	axc2	12/31/2009	11:02:44 OM_12-31-2009_09-50-50
243602003	936845	1	axc2	12/31/2009	11:03:37 OM_12-31-2009_09-50-50
243602004	936845	1	axc2	12/31/2009	11:04:31 OM_12-31-2009_09-50-50
CCV		1	axc2	12/31/2009	11:05:24 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:07:15 OM_12-31-2009_09-50-50
243602005	936845	1	axc2	12/31/2009	11:09:04 OM_12-31-2009_09-50-50
243611001	936845	1	axc2	12/31/2009	11:09:58 OM_12-31-2009_09-50-50
243611002	936845	1	axc2	12/31/2009	11:10:50 OM_12-31-2009_09-50-50
243611003	936845	1	axc2	12/31/2009	11:11:43 OM_12-31-2009_09-50-50
CCV		1	axc2	12/31/2009	11:12:35 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50
CCB		1	axc2	12/31/2009	11:14:26 OM_12-31-2009_09-50-50

Author: axc2 Date : 12/31/2009

Original Run Filename: OM_12-31-2009_09-50-50.OMN created 12/31/2009 09:50:50
Original Run Author's Signature: [axc2]
Current Run Filename: OM_12-31-2009_09-50-50.OMN last modified 12/31/2009 11:15:32
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN091231-01	1	S1	200	7.27	12/31/2009@09:54:09			200 ppb
WCN091231-02	1	S2	150	5.46	12/31/2009@09:55:01			150 ppb
WCN091231-03	1	S3	100	3.56	12/31/2009@09:55:53			100 ppb
WCN091231-04	1	S4	50.0	1.96	12/31/2009@09:56:46			50 ppb
WCN091231-05	1	S5	10.0	0.454	12/31/2009@09:57:39			10 ppb
WCN091231-06	1	S6	5.00	0.263	12/31/2009@09:58:33			CRDL 5.0 ppb
WCN091231-08	1	S7	0.00	0.0241	12/31/2009@09:59:28			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99975 > 0.99500					
Message			Pass					
Action			Continue					
WCN091231-07	1	S8	150	5.44	12/31/2009@10:01:18			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-0.2 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.2 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN091231-08	1	S7	-1.31	0.0268	12/31/2009@10:03:08			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.31 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.31 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN091231-06	1	S6	5.65	0.276	12/31/2009@10:04:58			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.65 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.65 > 2.50					
Message			Pass					
Action			None					
1202003577|936400|MB	1	1	-2.06	-1.84e-4	12/31/2009@10:06:47			
1202003581||LCS	1	2	25.3	0.980	12/31/2009@10:07:41		25.00	
243385008	1	3	-0.828	0.0442	12/31/2009@10:08:34			
1202003578||DUP	1	4	-0.559	0.0538	12/31/2009@10:09:27			
1202003579||MS	1	5	100	3.68	12/31/2009@10:10:20			
1202003580||MSD	1	6	93.2	3.42	12/31/2009@10:11:13			
243385009	1	7	1.70	0.135	12/31/2009@10:12:05			
243385010	1	8	-0.0222	0.0731	12/31/2009@10:12:58			
243385011	1	9	1.56	0.130	12/31/2009@10:13:51			
243457001	1	10	0.0568	0.0759	12/31/2009@10:14:43			
WCN091231-03	1	S3	105	3.84	12/31/2009@10:15:36			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			5.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	5.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091231-08	1	S7	-1.68	0.0135	12/31/2009@10:17:26			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.68 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.68 > -5.00					
		Message	CCB Passed					
		Action	Continue					
243457002	1	11	-2.06	-1.40e-4	12/31/2009@10:19:14			
243457003	1	12	-0.480	0.0566	12/31/2009@10:20:06			
243457004	1	13	-0.817	0.0445	12/31/2009@10:20:58			
243472001	1	14	-1.24	0.0295	12/31/2009@10:21:50			
243472002	1	15	-1.53	0.0189	12/31/2009@10:22:41			
243472003	1	16	-0.958	0.0395	12/31/2009@10:23:35			
243492001	1	17	-0.475	0.0568	12/31/2009@10:24:29			
243492002	1	18	-2.06	-1.97e-4	12/31/2009@10:25:22			
243492003	1	19	-0.650	0.0505	12/31/2009@10:26:15			
243492004	1	20	0.203	0.0811	12/31/2009@10:27:09			
WCN091231-03	1	S3	106	3.86	12/31/2009@10:28:01			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	5.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	5.6 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091231-08	1	S7	-1.39	0.0240	12/31/2009@10:29:51			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.39 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.39 > -5.00					
		Message	CCB Passed					
		Action	Continue					
243492005	1	21	-0.535	0.0547	12/31/2009@10:31:40			
243492006	1	22	-0.999	0.0380	12/31/2009@10:32:33			
243492007	1	23	0.130	0.0785	12/31/2009@10:33:26			
243505001	1	24	0.927	0.107	12/31/2009@10:34:18			
1202004486||DUP	1	25	0.725	0.0998	12/31/2009@10:35:11			
1202004487||MS	1	26	110	4.01	12/31/2009@10:36:03			
1202004488||MSD	1	27	107	3.91	12/31/2009@10:36:55			
243505002	1	28	-0.444	0.0579	12/31/2009@10:37:48			
1202004505|936845|MB	1	29	-1.09	0.0347	12/31/2009@10:38:39			
1202004509||LCS	1	30	33.1	1.26	12/31/2009@10:39:31		25.00	
WCN091231-03	1	S3	106	3.88	12/31/2009@10:40:23			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	6.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	6.1 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091231-08	1	S7	-1.45	0.0217	12/31/2009@10:42:13			CCB
		Known Conc:	0.00					

DQM Test: > + Concentration Limit								
		Result:	-1.45 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.45 > -5.00					
		Message	CCB Passed					
		Action	Continue					
243358001	1	31	14.1	0.579	12/31/2009@10:44:04			
243550005	1	32	-1.04	0.0364	12/31/2009@10:44:58			
1202004506||DUP	1	33	-2.16	-0.00355	12/31/2009@10:45:52			
1202004507||MS	1	34	107	3.91	12/31/2009@10:46:44			
1202004508||MSD	1	35	111	4.04	12/31/2009@10:47:38			
243550006	1	36	-1.12	0.0337	12/31/2009@10:48:31			
243550007	1	37	-2.06	-1.33e-4	12/31/2009@10:49:24			
243550008	1	38	-2.06	-1.26e-4	12/31/2009@10:50:17			
243550009	1	39	-0.957	0.0395	12/31/2009@10:51:10			
243550010	1	40	-0.882	0.0422	12/31/2009@10:52:02			
WCN091231-03	1	S3	106	3.86	12/31/2009@10:52:55			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	5.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	5.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091231-08	1	S7	-2.16	-0.00350	12/31/2009@10:54:45			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-2.16 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-2.16 > -5.00					
		Message	CCB Passed					
		Action	Continue					
243550011	1	41	0.158	0.0795	12/31/2009@10:56:33			
243550012	1	42	-1.24	0.0294	12/31/2009@10:57:27			
243550013	1	43	6.74	0.316	12/31/2009@10:58:18			
243602001	1	44	-0.152	0.0684	12/31/2009@10:59:11			
1202006206||DUP	1	45	1.40	0.124	12/31/2009@11:00:03			
1202006207||MS	1	46	104	3.80	12/31/2009@11:00:56			
1202006208||MSD	1	47	105	3.84	12/31/2009@11:01:51			
243602002	1	48	0.279	0.0839	12/31/2009@11:02:44			
243602003	1	49	-1.02	0.0371	12/31/2009@11:03:37			
243602004	1	50	-0.548	0.0542	12/31/2009@11:04:31			
WCN091231-03	1	S3	106	3.88	12/31/2009@11:05:24			CCV
		Known Conc:	100					
DQM Test: > + Percent Relative Difference								
		Result:	6.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
DQM Test: < - Percent Relative Difference								
		Result:	6.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091231-08	1	S7	-1.35	0.0255	12/31/2009@11:07:15			CCB
		Known Conc:	0.00					
DQM Test: > + Concentration Limit								
		Result:	-1.35 < 5.00					
		Message	CCB Passed					
		Action	Continue					
DQM Test: < - Concentration Limit								
		Result:	-1.35 > -5.00					
		Message	CCB Passed					
		Action	Continue					

243602005	1	51	-1.28	0.0280	12/31/2009@11:09:04			
243611001	1	52	4.33	0.229	12/31/2009@11:09:58			
243611002	1	53	2.36	0.158	12/31/2009@11:10:50			
243611003	1	54	1.05	0.112	12/31/2009@11:11:43			
WCN091231-03	1	S3	106	3.87	12/31/2009@11:12:35			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			6.0 < 10.0					
Message			CCV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			6.0 < 10.0					
Message			CCV Passed					
Action			Continue					
WCN091231-08	1	S7	-1.37	0.0246	12/31/2009@11:14:26			CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-1.37 < 5.00					
Message			CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-1.37 > -5.00					
Message			CCB Passed					
Action			Continue					

Analyte Properties Table for OM_12-31-2009_09-50-50.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Author: axc2 Date : 12/31/2009

Channel 1: Current View

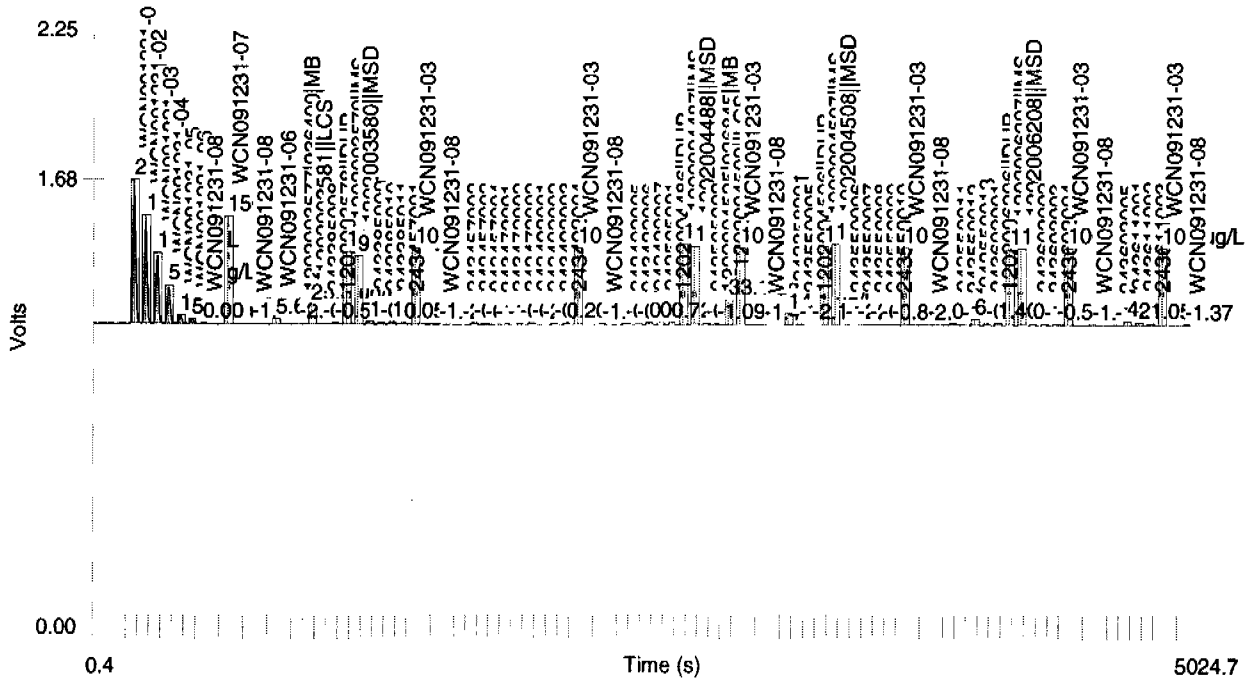
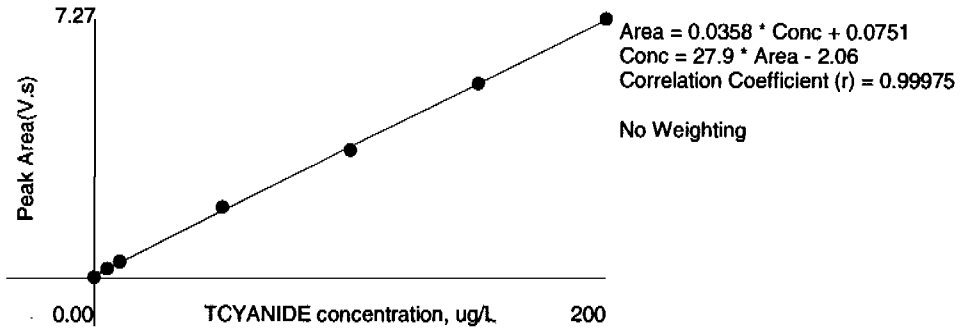


Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	7.27	0.534	-0.3	12/31/2009	09:55:12
2	150	1	5.46	0.402	-0.1	12/31/2009	09:56:04
3	100	1	3.56	0.263	2.8	12/31/2009	09:56:56
4	50.0	1	1.96	0.143	-5.2	12/31/2009	09:57:49
5	10.0	1	0.454	0.0322	-4.7	12/31/2009	09:58:42
6	5.00	1	0.263	0.0177	-3.4	12/31/2009	09:59:36
7	0.00	1	0.0241	0.00158		12/31/2009	10:00:30

Figure 1: TCYANIDE



General Chemistry Analysis

Case Narrative

General Chemistry Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037-1

Method/Analysis Information

Product:	**Cyanide, Total**		
Analytical Batch:	936398	**Method:**	SW846 9012A
Prep Batch :	936396	**Method:**	SW846 9010B Prep

Sample Analysis

The following samples were analyzed using the analytical protocol as established in SW846 9012A:

Sample ID	Client ID
243493001	RE12-10-7298
1202003566	Method Blank (MB)
1202003567	243396001(RE16-10-2848) Sample Duplicate (DUP)
1202003568	243400002(CAPA-10-6823) Sample Duplicate (DUP)
1202003570	243396001(RE16-10-2848) Matrix Spike (MS)
1202003571	243400002(CAPA-10-6823) Matrix Spike (MS)
1202003573	243396001(RE16-10-2848) Matrix Spike Duplicate (MSD)
1202003574	243400002(CAPA-10-6823) Matrix Spike Duplicate (MSD)
1202003576	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-095 REV# 12.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Flow Injection analysis was performed on a Lachat QuickChem FIA+ 8000 Series.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within

acceptance limits.

Calibration Verification Information (CCV)
All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule
The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information

Method Blank (MB) Statement
The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery
The LCS spike recovery met the acceptance limits.

Quality Control (QC) Designation
The following samples were selected for QC analysis: 243396001 (RE16-10-2848) and 243400002 (CAPA-10-6823).

Matrix Spike (MS)/Post Spike (PS) Recovery Statement
The MS/PS recoveries for this sample set were within the required acceptance limits.

Matrix Spike Duplicate (MSD) Recovery Statement
The MSD recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement
The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement
The values for the sample and duplicate are less than the Practical Quantitation Limit (PQL); therefore, the RPD is not applicable. 1202003567 (RE16-10-2848).

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times
All samples in this SDG met the specified holding time.

Sample Preservation/Integrity
All the samples from this sample group met the preservation and integrity requirements of the method.

Sample Dilutions
The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Nonconformance (NCR) Documentation
An NCR was not required for this SDG.

Additional Comments
Additional comments were not required for this SDG.

Electronic Packaging Comment
This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:
Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer: _____ **Date:** 19Jan10

Sample Data Summary

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1037-1 GEL Work Order: 243493

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: **LANL ER Project**

Report Date: January 4, 2010
Client SDG: 10-1037-1

Client Sample ID:	RE12-10-7298	Project:	LANL01004
Sample ID:	243493001	Client ID:	LANL010
Matrix:	W		
Collect Date:	18-DEC-09 12:00		
Receive Date:	23-DEC-09		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Flow Injection Analysis										
SW9012A Cyanide, Total "As Received"										
Cyanide, Total	U	ND	1.66	5.00	ug/L	1	AXC2 12/30/09	1041	936398	1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
SW846 9010B Prep	SW846 9010B Prep	AXS5	12/29/09	1423	936396

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	SW846 9012A	

Quality Control Summary

QC Summary

Report Date: January 4, 2010
Page 1 of 2

Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm111
Los Alamos, New Mexico

Contact: Ms. Joylene Valdez

Workorder: 243493

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Flow Injection Analysis											
Batch 936398											
QC1202003567 243396001 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A			AXC2	12/30/09 10:16
QC1202003568 243400002 DUP											
Cyanide, Total		U	ND	U	ND	ug/L	N/A				12/30/09 10:19
QC1202003576 LCS											
Cyanide, Total	50.0				49.9	ug/L		99.8	(90%-110%)		12/30/09 10:13
QC1202003566 MB											
Cyanide, Total				U	5.00	ug/L					12/30/09 10:12
QC1202003570 243396001 MS											
Cyanide, Total	100	U	ND		104	ug/L		104	(60%-127%)		12/30/09 10:17
QC1202003571 243400002 MS											
Cyanide, Total	100	U	ND		105	ug/L		105	(60%-127%)		12/30/09 10:20
QC1202003573 243396001 MSD											
Cyanide, Total	100	U	ND		103	ug/L	0.966	103	(0%-20%)		12/30/09 10:17
QC1202003574 243400002 MSD											
Cyanide, Total	100	U	ND		107	ug/L	1.89	107	(0%-20%)		12/30/09 10:25

Notes:
RER is calculated at the 95% confidence level (2-sigma).
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E Organics--Concentration of the target analyte exceeds the instrument calibration range
- F Estimated Value
- H Analytical holding time was exceeded
- J Value is estimated
- M Matrix Related Failure
- N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
- N/A RPD or %Recovery limits do not apply.
- ND Analyte concentration is not detected above the detection limit

QC Summary

Workorder: 243493

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Instrument QC Data Summary

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Report Run On: 04-JAN-2010 15:24

GEL Laboratories LLC
Contract: LANL01004
SDG #: 10-1037-1

Flow Injection Analysis
Method: SW846 9012A Concentration Units:ug/L
Instrument: Lachat QuickChem FIA+ 8000 Series

Parmname: Cyanide, Total

Sample Type	Run Date	Data File	Result	Nominal	Recovery	Limits	Within Limits
ICV	**30-DEC-2009 10:07:08**	**OM_12-30-2009_09-56-39**	**149**	**150**	**99**	**(90%-110%)**	**Yes**
CCV	30-DEC-2009 10:21:26	OM_12-30-2009_09-56-39	104	100	104	(90%-110%)	Yes
CCV	30-DEC-2009 10:33:51	OM_12-30-2009_09-56-39	104	100	104	(90%-110%)	Yes
CCV	30-DEC-2009 10:46:16	OM_12-30-2009_09-56-39	105	100	105	(90%-110%)	Yes

Sample Type	Run Date	Data File	Result	Limits	Within Limits
ICB	**30-DEC-2009 10:08:58**	**OM_12-30-2009_09-56-39**	**-2.07**	**5**	**Yes**
CCB	30-DEC-2009 10:23:16	OM_12-30-2009_09-56-39	-1.51	5	Yes
CCB	30-DEC-2009 10:35:41	OM_12-30-2009_09-56-39	-2.04	5	Yes
CCB	30-DEC-2009 10:48:05	OM_12-30-2009_09-56-39	-2.04	5	Yes

Cyanide, Total

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 936396

Lab SOP: GL-GC-E-067 REV# 13

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202003576	URF1184831-02	.0125	mL
MS	1202003570	URF1184831-02	.025	mL
MS	1202003571	URF1184831-02	.025	mL
MS	1202003572	URF1184831-02	.025	mL
MSD	1202003573	URF1184831-02	.025	mL
MSD	1202003574	URF1184831-02	.025	mL
MSD	1202003575	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
MB	1202003566		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
LCS	1202003576		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243386001		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243396001		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
DUP	1202003567	243396001	SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
MS	1202003570	243396001	SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
MSD	1202003573	243396001	SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243400002		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	GROUND WATER
DUP	1202003568	243400002	EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	GROUND WATER
MS	1202003571	243400002	EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	GROUND WATER
MSD	1202003574	243400002	EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	GROUND WATER
SAMPLE	243400003		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	GROUND WATER
SAMPLE	243443003		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WASTE WATER
DUP	1202003569	243443003	SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WASTE WATER
MS	1202003572	243443003	SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WASTE WATER
MSD	1202003575	243443003	SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	243443014		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	243443025		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WASTE WATER
SAMPLE	243459001		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243459002		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243461001		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	GROUND WATER
SAMPLE	243466001		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243466002		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243469007		EPA 335.4	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243493001		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243506001		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER

Prep LogBook

Analyst: AXS5 Verified by:_____

Batch: 936396

Lab SOP: GL-GC-E-067 REV# 13

Type	Sample Id	Lot. Id	Spike Amount	Spike Units
LCS	1202003576	URF1184831-02	.0125	mL
MS	1202003570	URF1184831-02	.025	mL
MS	1202003571	URF1184831-02	.025	mL
MS	1202003572	URF1184831-02	.025	mL
MSD	1202003573	URF1184831-02	.025	mL
MSD	1202003574	URF1184831-02	.025	mL
MSD	1202003575	URF1184831-02	.025	mL

Sample Type	Sample ID	Parent Sample ID	Method	Prep Date	Ph	Initial Wt.	Final Volume	Prep Factor	Matrix
SAMPLE	243554001		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243554002		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243554003		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER
SAMPLE	243554004		SW846 9010B Prep	29-DEC-2009 14:23	>12	25 mL	25 mL	1	WATER

Reagent/Solvent Lot ID	Amount	Description
091211-C	25 mL	0.25N Sodium Hydroxide Solution
WCN091229-07	.0375 mL	150 ppb CN Distilled ICV Standard
1176724-C	1.25 mL	0.8N H3NO3S
1238146-C	2.5 mL	50% H2SO4 CN Prep
1176778-C	1 mL	51% MgCl2 Soln
1238142-C	1.25 mL	Bismuth Nitrate Solution

Comments

This is runlog Lachat1

Sample ID	Batch	Dilution	Analyst	Runtime	Dataset
200 ppb		1	axc2	12/30/2009 9:59:59	OM_12-30-2009_09-56-39
150 ppb		1	axc2	12/30/2009 10:00:51	OM_12-30-2009_09-56-39
100 ppb		1	axc2	12/30/2009 10:01:44	OM_12-30-2009_09-56-39
50 ppb		1	axc2	12/30/2009 10:02:37	OM_12-30-2009_09-56-39
10 ppb		1	axc2	12/30/2009 10:03:30	OM_12-30-2009_09-56-39
CRDL 5.0 ppb		1	axc2	12/30/2009 10:04:23	OM_12-30-2009_09-56-39
ICAL-00		1	axc2	12/30/2009 10:05:17	OM_12-30-2009_09-56-39
ICV		1	axc2	12/30/2009 10:07:08	OM_12-30-2009_09-56-39
ICB		1	axc2	12/30/2009 10:08:58	OM_12-30-2009_09-56-39
CRDL		1	axc2	12/30/2009 10:10:49	OM_12-30-2009_09-56-39
1202003566	936398	1	axc2	12/30/2009 10:12:38	OM_12-30-2009_09-56-39
1202003576	936398	1	axc2	12/30/2009 10:13:31	OM_12-30-2009_09-56-39
243386001	936398	1	axc2	12/30/2009 10:14:24	OM_12-30-2009_09-56-39
243396001	936398	1	axc2	12/30/2009 10:15:18	OM_12-30-2009_09-56-39
1202003567	936398	1	axc2	12/30/2009 10:16:11	OM_12-30-2009_09-56-39
1202003570	936398	1	axc2	12/30/2009 10:17:03	OM_12-30-2009_09-56-39
1202003573	936398	1	axc2	12/30/2009 10:17:56	OM_12-30-2009_09-56-39
243400002	936398	1	axc2	12/30/2009 10:18:48	OM_12-30-2009_09-56-39
1202003568	936398	1	axc2	12/30/2009 10:19:41	OM_12-30-2009_09-56-39
1202003571	936398	1	axc2	12/30/2009 10:20:33	OM_12-30-2009_09-56-39
CCV		1	axc2	12/30/2009 10:21:26	OM_12-30-2009_09-56-39
CCB		1	axc2	12/30/2009 10:23:16	OM_12-30-2009_09-56-39
1202003574	936398	1	axc2	12/30/2009 10:25:04	OM_12-30-2009_09-56-39
243400003	936398	1	axc2	12/30/2009 10:25:56	OM_12-30-2009_09-56-39
243443003	936398	1	axc2	12/30/2009 10:26:48	OM_12-30-2009_09-56-39
1202003569	936398	1	axc2	12/30/2009 10:27:40	OM_12-30-2009_09-56-39
1202003572	936398	1	axc2	12/30/2009 10:28:31	OM_12-30-2009_09-56-39
1202003575	936398	1	axc2	12/30/2009 10:29:24	OM_12-30-2009_09-56-39
243443014	936398	1	axc2	12/30/2009 10:30:19	OM_12-30-2009_09-56-39
243443025	936398	1	axc2	12/30/2009 10:31:12	OM_12-30-2009_09-56-39
243459001	936398	1	axc2	12/30/2009 10:32:05	OM_12-30-2009_09-56-39
243459002	936398	1	axc2	12/30/2009 10:32:58	OM_12-30-2009_09-56-39
CCV		1	axc2	12/30/2009 10:33:51	OM_12-30-2009_09-56-39
CCB		1	axc2	12/30/2009 10:35:41	OM_12-30-2009_09-56-39
243461001	936398	1	axc2	12/30/2009 10:37:31	OM_12-30-2009_09-56-39
243466001	936398	1	axc2	12/30/2009 10:38:24	OM_12-30-2009_09-56-39
243466002	936398	1	axc2	12/30/2009 10:39:17	OM_12-30-2009_09-56-39
243469007	936398	1	axc2	12/30/2009 10:40:10	OM_12-30-2009_09-56-39
243493001	936398	1	axc2	12/30/2009 10:41:03	OM_12-30-2009_09-56-39
243506001	936398	1	axc2	12/30/2009 10:41:55	OM_12-30-2009_09-56-39
243554001	936398	1	axc2	12/30/2009 10:42:47	OM_12-30-2009_09-56-39
243554002	936398	1	axc2	12/30/2009 10:43:39	OM_12-30-2009_09-56-39
243554003	936398	1	axc2	12/30/2009 10:44:30	OM_12-30-2009_09-56-39
243554004	936398	1	axc2	12/30/2009 10:45:23	OM_12-30-2009_09-56-39
CCV		1	axc2	12/30/2009 10:46:16	OM_12-30-2009_09-56-39
CCB		1	axc2	12/30/2009 10:48:05	OM_12-30-2009_09-56-39

Author: axc2 Date : 12/30/2009

Original Run Filename: OM_12-30-2009_09-56-39.OMN created 12/30/2009 09:56:39
Original Run Author's Signature: [axc2]
Current Run Filename: OM_12-30-2009_09-56-39.OMN last modified 12/30/2009 10:49:10
Current Run Author's Signature: [axc2]
Description: GL-GC-E-095 EPA 335.1, 335.3, 335.4, 9012A, CLP335.2-M
Liquid LCS nominal 50 ug/L

Sample	Rep.	Cup No.	Channel 1 TCYANIDE Conc. (ug/L)	Area (Vs)	Detection Time	ADF	MDF	Description
WCN091230-01	1	S1	200	7.43	12/30/2009@09:59:59			200 ppb
WCN091230-02	1	S2	150	5.62	12/30/2009@10:00:51			150 ppb
WCN091230-03	1	S3	100	3.68	12/30/2009@10:01:44			100 ppb
WCN091230-04	1	S4	50.0	2.05	12/30/2009@10:02:37			50 ppb
WCN091230-05	1	S5	10.0	0.476	12/30/2009@10:03:30			10 ppb
WCN091230-06	1	S6	5.00	0.292	12/30/2009@10:04:23			CRDL 5.0 ppb
WCN091230-08	1	S7	0.00	0.0301	12/30/2009@10:05:17			0.0 ppb
DQM Test: Minimum Correlation Coefficient								
Result:			0.99974 > 0.99500					
Message			Pass					
Action			Continue					
WCN091230-07	1	S8	149	5.57	12/30/2009@10:07:08			ICV
Known Conc:			150					
DQM Test: > + Percent Relative Difference								
Result:			-0.6 < 10.0					
Message			ICV Passed					
Action			Continue					
DQM Test: < - Percent Relative Difference								
Result:			-0.6 < 10.0					
Message			ICV Passed					
Action			Continue					
Calibration:			Table/Fig. 1					
WCN091230-08	1	S7	-2.07	0.0199	12/30/2009@10:08:58			ICB/CCB
Known Conc:			0.00					
DQM Test: > + Concentration Limit								
Result:			-2.07 < 5.01					
Message			ICB/CCB Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			-2.07 > -5.01					
Message			ICB/CCB Passed					
Action			Continue					
WCN091230-06	1	S6	5.28	0.290	12/30/2009@10:10:49			CRDL
Known Conc:			5.00					
DQM Test: > + Concentration Limit								
Result:			5.28 < 7.50					
Message			CRDL Passed					
Action			Continue					
DQM Test: < - Concentration Limit								
Result:			5.28 > 2.50					
Message			Pass					
Action			None					
1202003566|936398|MB	1	1	-2.01	0.0223	12/30/2009@10:12:38			
1202003576||LCS	1	2	49.9	1.93	12/30/2009@10:13:31			
243386001	1	3	-1.49	0.0413	12/30/2009@10:14:24			
243396001	1	4	-1.66	0.0352	12/30/2009@10:15:18			
1202003567||DUP	1	5	-2.07	0.0202	12/30/2009@10:16:11			
1202003570||MS	1	6	104	3.92	12/30/2009@10:17:03			
1202003573||MSD	1	7	103	3.89	12/30/2009@10:17:56			
243400002	1	8	-1.93	0.0251	12/30/2009@10:18:48			
1202003568||DUP	1	9	-1.78	0.0307	12/30/2009@10:19:41			
1202003571||MS	1	10	105	3.95	12/30/2009@10:20:33			
WCN091230-03	1	S3	104	3.91	12/30/2009@10:21:26			CCV
Known Conc:			100					
DQM Test: > + Percent Relative Difference								
Result:			4.0 < 10.0					

		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	4.0 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091230-08	1	S7	-1.51	0.0405	12/30/2009@10:23:16			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-1.51 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-1.51 > -5.00					
		Message	CCB Passed					
		Action	Continue					
1202003574||MSD	1	11	107	4.03	12/30/2009@10:25:04			
243400003	1	12	-1.77	0.0311	12/30/2009@10:25:56			
243443003	1	13	-1.58	0.0380	12/30/2009@10:26:48			
1202003569||DUP	1	14	-1.62	0.0366	12/30/2009@10:27:40			
1202003572||MS	1	15	106	4.00	12/30/2009@10:28:31			
1202003575||MSD	1	16	100	3.77	12/30/2009@10:29:24			
243443014	1	17	-0.592	0.0743	12/30/2009@10:30:19			
243443025	1	18	-1.33	0.0471	12/30/2009@10:31:12			
243459001	1	19	-1.92	0.0256	12/30/2009@10:32:05			
243459002	1	20	-1.95	0.0243	12/30/2009@10:32:58			
WCN091230-03	1	S3	104	3.92	12/30/2009@10:33:51			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	4.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	4.3 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091230-08	1	S7	-2.04	0.0211	12/30/2009@10:35:41			CCB
		Known Conc:	0.00					
			DQM Test: > + Concentration Limit					
		Result:	-2.04 < 5.00					
		Message	CCB Passed					
		Action	Continue					
			DQM Test: < - Concentration Limit					
		Result:	-2.04 > -5.00					
		Message	CCB Passed					
		Action	Continue					
243461001	1	21	-1.77	0.0312	12/30/2009@10:37:31			
243466001	1	22	0.116	0.100	12/30/2009@10:38:24			
243466002	1	23	1.14	0.138	12/30/2009@10:39:17			
243469007	1	24	-2.42	0.00705	12/30/2009@10:40:10			
243493001	1	25	-2.82	-0.00760	12/30/2009@10:41:03			
243506001	1	26	-1.91	0.0261	12/30/2009@10:41:55			
243554001	1	27	-2.61	3.12e-4	12/30/2009@10:42:47			
243554002	1	28	-2.42	0.00720	12/30/2009@10:43:39			
243554003	1	29	-1.78	0.0307	12/30/2009@10:44:30			
243554004	1	30	-2.05	0.0207	12/30/2009@10:45:23			
WCN091230-03	1	S3	105	3.94	12/30/2009@10:46:16			CCV
		Known Conc:	100					
			DQM Test: > + Percent Relative Difference					
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
			DQM Test: < - Percent Relative Difference					
		Result:	4.7 < 10.0					
		Message	CCV Passed					
		Action	Continue					
WCN091230-08	1	S7	-2.04	0.0213	12/30/2009@10:48:05			CCB
		Known Conc:	0.00					

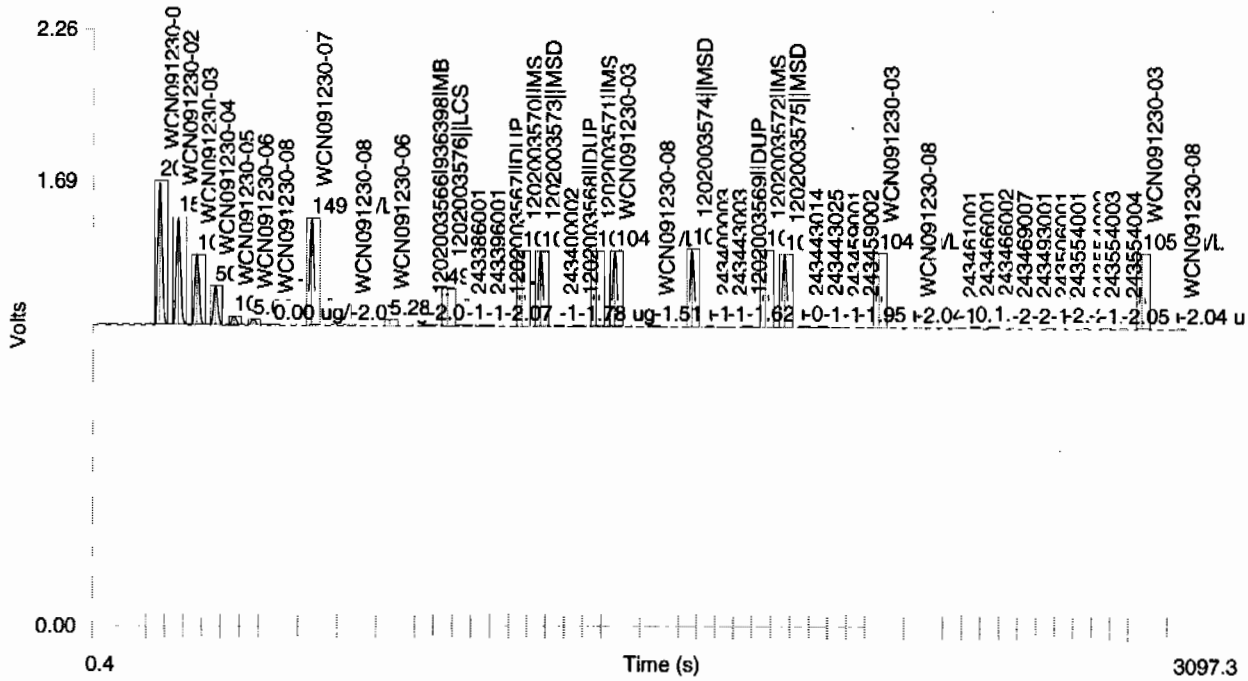
Author: axc2 Date : 12/30/2009

DQM Test: > + Concentration Limit						
Result:	-2.04 < 5.00					
Message	CCB Passed					
Action	Continue					
DQM Test: < - Concentration Limit						
Result:	-2.04 > -5.00					
Message	CCB Passed					
Action	Continue					

Analyte Properties Table for OM_12-30-2009_09-56-39.OMN

Property	Channel 1
	TCYANIDE
Concentration Units	ug/L
Callibration Fit Type	First Order
Clear Calibration	True
Force Through Zero	False
Calibration Weighting	None
Auto Dilution Trigger	True
% of High Standard	100
Quik Chem Method	10-204-00-1-A
Chemistry	Direct/Bipolar
Calibration by Height	False
Inject to Peak Start	22
Peak Base Width	39

Channel 1: Current View

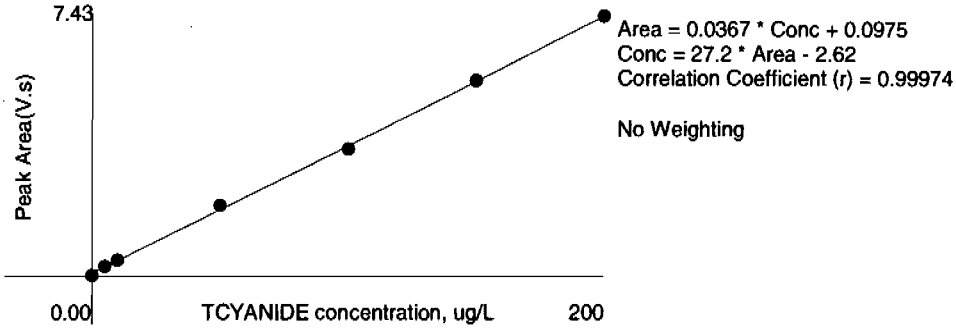


Author: axc2 Date : 12/30/2009

Table 1: TCYANIDE

	Conc. (ug/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	200	1	7.43	0.547	0.0	12/30/2009	10:01:02
2	150	1	5.62	0.411	-0.4	12/30/2009	10:01:54
3	100	1	3.68	0.269	2.4	12/30/2009	10:02:46
4	50.0	1	2.05	0.150	-5.9	12/30/2009	10:03:39
5	10.0	1	0.476	0.0340	-2.4	12/30/2009	10:04:33
6	5.00	1	0.292	0.0197	-3.8	12/30/2009	10:05:26
7	0.00	1	0.0301	0.00127		12/30/2009	10:06:21

Figure 1: TCYANIDE



RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037

Method/Analysis Information

Procedure:	**Dry Weight-Percent Moisture**
Analytical Method:	
Analytical Batch Number:	936632

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202004097	243492001(RE12-10-7288) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 9.

Calibration Information:

Quality Control (QC) Information:

Designated QC
The following sample was used for QC: 243492001 (RE12-10-7288). The QC was from LANL work order 243492.

QC Information
All of the QC samples met the required acceptance limits.

CSU
Not Applicable. The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
Not Applicable. The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**AM241**
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	937596
Prep Batch Number:	936638

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202006343	Method Blank (MB)
1202006344	243492007(RE12-10-7296) Sample Duplicate (DUP)
1202006345	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1202006343 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 243492007 (RE12-10-7296). The QC was from LANL work order 243492.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOPU**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified.
Prep Method:	Dry Soil Prep
Analytical Batch Number:	937598
Prep Batch Number:	936638

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202006346	Method Blank (MB)
1202006347	243492007(RE12-10-7296) Sample Duplicate (DUP)
1202006348	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly

using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1202006346 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 243492007 (RE12-10-7296). The QC was from LANL work order 243492.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**ISOU**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	937600
Prep Batch Number:	936638

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202006349	Method Blank (MB)
1202006350	243492007(RE12-10-7296) Sample Duplicate (DUP)
1202006351	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquot for sample 1202006349 (MB) was changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 243492007 (RE12-10-7296). The QC was from LANL work order 243492.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result for U-233/234 is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The MDCs are calculated using a blank population.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GAMMA SPEC**
Analytical Method:	DOE HASL 300, 4.5.2.3/Ga-01-R
Prep Method:	Dry Soil Prep
Analytical Batch Number:	936923
Prep Batch Number:	936638

Sample ID	Client ID
243492001	RE12-10-7288
243492002	RE12-10-7290
243492003	RE12-10-7289
243492004	RE12-10-7291
243492005	RE12-10-7292
243492006	RE12-10-7293
243492007	RE12-10-7296
1202004732	Method Blank (MB)
1202004733	243457001(RE12-10-7553) Sample Duplicate (DUP)
1202004734	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in January 2009, February 2009, April 2009, June 2009, November 2009 and December 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 243457001 (RE12-10-7553). The QC was from LANL work order 243457.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank 1202004732 (MB) result is greater than 1.65 times the CSU but less than the MDC for Th-234 and Y-88.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank 1202004732 (MB) result is greater than the decision level but less than the MDC for Tl-208 and Th-234.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to high counting uncertainty.	Thorium-234	243492001	RE12-10-7288
			243492003	RE12-10-7289
UI	Data rejected due to interference.	Bismuth-211	243492001	RE12-10-7288
			243492002	RE12-10-7290
			243492003	RE12-10-7289
			243492004	RE12-10-7291
			243492005	RE12-10-7292
			243492006	RE12-10-7293
			243492007	RE12-10-7296
			1202004733	RE12-10-7553(243457001DUP)
		Cadmium-109	243492001	RE12-10-7288

			243492002	RE12-10-7290
			243492003	RE12-10-7289
			243492005	RE12-10-7292
			243492006	RE12-10-7293
			243492007	RE12-10-7296
			1202004733	RE12-10-7553(243457001DUP)
		Radium-224	243492001	RE12-10-7288
			243492002	RE12-10-7290
			243492003	RE12-10-7289
			243492004	RE12-10-7291
			243492005	RE12-10-7292
			243492006	RE12-10-7293
			243492007	RE12-10-7296
			1202004733	RE12-10-7553(243457001DUP)
UI	Data rejected due to low abundance.	Cesium-134	243492002	RE12-10-7290
			243492002	RE12-10-7290
			243492005	RE12-10-7292
			243492005	RE12-10-7292
			243492007	RE12-10-7296
			243492007	RE12-10-7296
			1202004733	RE12-10-7553(243457001DUP)
			1202004733	RE12-10-7553(243457001DUP)
		Cesium-137	243492007	RE12-10-7296
			243492007	RE12-10-7296
		Strontium-85	243492003	RE12-10-7289
			243492003	RE12-10-7289
			243492007	RE12-10-7296
			243492007	RE12-10-7296
			1202004732	MB for batch 936923

1202004732	MB for batch 936923
1202004733	RE12-10-7553(243457001DUP)
1202004733	RE12-10-7553(243457001DUP)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: 1/8/10

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1037 GEL Work Order: 243492

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by _____ 1/8/10

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7288
Sample ID: 243492001
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 9.18%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	-0.00415	0.0197	+/-0.00337	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00279	0.0227	+/-0.00198	0.050	pCi/g		JXD2	01/04/10	1814	937598	3
Plutonium-239/240	U	0.0209	0.0255	+/-0.00587	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.22	0.153	+/-0.118	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0426	0.0947	+/-0.0185	0.100	pCi/g						
Uranium-238		1.59	0.0885	+/-0.146	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0265	0.252	+/-0.0779	0.200	pCi/g		MXR1	01/04/10	1359	936923	5
Bismuth-211	UI	4.21	0.312	+/-0.242		pCi/g						
Bismuth-214		1.40	0.100	+/-0.0983	0.200	pCi/g						
Cadmium-109	UI	3.38	1.20	+/-0.485		pCi/g						
Cerium-139	U	0.00113	0.0484	+/-0.0145	0.050	pCi/g						
Cesium-134	U	0.0593	0.0858	+/-0.0261	0.100	pCi/g						
Cesium-137		0.212	0.0629	+/-0.0327	0.100	pCi/g						
Cobalt-60	U	0.0262	0.0718	+/-0.0204	0.100	pCi/g						
Europium-152	U	-0.00384	0.150	+/-0.0506	0.200	pCi/g						
Lanthanum-140	U	-0.0321	0.132	+/-0.042		pCi/g						
Lead-212		1.54	0.0926	+/-0.0775	0.100	pCi/g						
Lead-214		1.46	0.111	+/-0.0924	0.100	pCi/g						
Mercury-203	U	0.0236	0.069	+/-0.0195	0.100	pCi/g						
Potassium-40		21.3	0.397	+/-1.07	1.00	pCi/g						
Radium-223	U	-0.168	1.11	+/-0.332		pCi/g						
Radium-224	UI	4.29	1.05	+/-0.670		pCi/g						
Radium-226		1.40	0.100	+/-0.0983		pCi/g						
Radium-228		1.72	0.184	+/-0.157	0.500	pCi/g						
Ruthenium-106	U	0.130	0.539	+/-0.154	0.800	pCi/g						

GEL LABORATORIES LLC
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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7288 Project: LANL01004
Sample ID: 243492001 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Sodium-22	U	-0.0137	0.0651	+/-0.0205	0.080	pCi/g						
Strontium-85	U	0.0451	0.062	+/-0.0194		pCi/g						
Thallium-208		0.447	0.0525	+/-0.0449	0.080	pCi/g						
Thorium-227	U	0.173	0.605	+/-0.171		pCi/g						
Thorium-231	U	-0.168	1.11	+/-0.332		pCi/g						
Thorium-234	UI	2.26	2.11	+/-1.07	2.00	pCi/g						
Tin-113	U	-0.0476	0.0674	+/-0.0219	0.100	pCi/g						
Uranium-235	U	0.130	0.347	+/-0.101	0.500	pCi/g						
Yttrium-88	U	0.0056	0.0555	+/-0.0163	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	92.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	84.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.6	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7288 Project: LANL01004
Sample ID: 243492001 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7290
Sample ID: 243492002
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 3.11%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00182	0.0207	+/-0.00228	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00244	0.0198	+/-0.00244	0.050	pCi/g		JXD2	01/04/10	1546	937598	3
Plutonium-239/240	U	0.00488	0.0223	+/-0.003	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.802	0.154	+/-0.0862	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0554	0.0957	+/-0.0189	0.100	pCi/g						
Uranium-238		0.856	0.0895	+/-0.0904	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.034	0.110	+/-0.033	0.200	pCi/g		MXR1	01/04/10	1400	936923	5
Bismuth-211	UI	3.38	0.413	+/-0.283		pCi/g						
Bismuth-214		1.30	0.138	+/-0.112	0.200	pCi/g						
Cadmium-109	UI	3.65	1.09	+/-0.456		pCi/g						
Cerium-139	U	-0.00196	0.055	+/-0.0165	0.050	pCi/g						
Cesium-134	UI	0.130	0.120	+/-0.0321	0.100	pCi/g						
Cesium-137	U	-0.0461	0.0751	+/-0.0244	0.100	pCi/g						
Cobalt-60	U	-0.0095	0.0829	+/-0.0254	0.100	pCi/g						
Europium-152	U	-0.0199	0.189	+/-0.0591	0.200	pCi/g						
Lanthanum-140	U	-0.11	0.176	+/-0.0615		pCi/g						
Lead-212		1.70	0.102	+/-0.0965	0.100	pCi/g						
Lead-214		1.17	0.144	+/-0.103	0.100	pCi/g						
Mercury-203	U	0.00884	0.0803	+/-0.0233	0.100	pCi/g						
Potassium-40		33.7	0.770	+/-1.46	1.00	pCi/g						
Radium-223	U	0.0507	1.31	+/-0.387		pCi/g						
Radium-224	UI	2.07	1.16	+/-0.643		pCi/g						
Radium-226		1.30	0.138	+/-0.112		pCi/g						
Radium-228		1.67	0.292	+/-0.220	0.500	pCi/g						
Ruthenium-106	U	-0.369	0.634	+/-0.204	0.800	pCi/g						
Sodium-22	U	0.00	0.0997	+/-0.00	0.080	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7290 Project: LANL01004
Sample ID: 243492002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0843	0.0908	+/-0.0279		pCi/g						
Thallium-208		0.587	0.0711	+/-0.0545	0.080	pCi/g						
Thorium-227	U	-0.29	0.671	+/-0.203		pCi/g						
Thorium-231	U	0.0507	1.31	+/-0.387		pCi/g						
Thorium-234		1.90	1.09	+/-0.624	2.00	pCi/g						
Tin-113	U	-0.0357	0.0867	+/-0.0273	0.100	pCi/g						
Uranium-235	U	0.0277	0.400	+/-0.120	0.500	pCi/g						
Yttrium-88	U	-0.00378	0.0639	+/-0.0196	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	86.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.3	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	71.0	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7290 Project: LANL01004
Sample ID: 243492002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7289
Sample ID: 243492003
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 9.89%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.0042	0.0205	+/-0.00283	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00	0.0191	+/-0.00166	0.050	pCi/g		JXD2	01/04/10	1547	937598	3
Plutonium-239/240	U	0.00705	0.0215	+/-0.0029	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.913	0.133	+/-0.0907	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0585	0.0828	+/-0.0181	0.100	pCi/g						
Uranium-238		0.788	0.0774	+/-0.0812	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0453	0.109	+/-0.0328	0.200	pCi/g		MXR1	01/05/10	1415	936923	5
Bismuth-211	UI	3.76	0.406	+/-0.275		pCi/g						
Bismuth-214		1.36	0.151	+/-0.119	0.200	pCi/g						
Cadmium-109	UI	3.27	0.947	+/-0.367		pCi/g						
Cerium-139	U	-0.00524	0.0546	+/-0.0166	0.050	pCi/g						
Cesium-134	U	0.0896	0.114	+/-0.0309	0.100	pCi/g						
Cesium-137	U	0.0249	0.0838	+/-0.0246	0.100	pCi/g						
Cobalt-60	U	0.0451	0.0958	+/-0.0269	0.100	pCi/g						
Europium-152	U	0.0502	0.195	+/-0.065	0.200	pCi/g						
Lanthanum-140	U	0.0551	0.215	+/-0.0625		pCi/g						
Lead-212		1.54	0.0944	+/-0.0902	0.100	pCi/g						
Lead-214		1.31	0.142	+/-0.102	0.100	pCi/g						
Mercury-203	U	0.0444	0.0821	+/-0.0231	0.100	pCi/g						
Potassium-40		21.8	0.634	+/-1.05	1.00	pCi/g						
Radium-223	U	-1.0	1.19	+/-0.392		pCi/g						
Radium-224	UI	3.87	1.07	+/-0.618		pCi/g						
Radium-226		1.36	0.151	+/-0.119		pCi/g						
Radium-228		1.42	0.310	+/-0.206	0.500	pCi/g						
Ruthenium-106	U	0.00638	0.686	+/-0.206	0.800	pCi/g						
Sodium-22	U	0.000827	0.0845	+/-0.0253	0.080	pCi/g						

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Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7289 Project: LANL01004
Sample ID: 243492003 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	UI	0.0971	0.0835	+/-0.0246		pCi/g						
Thallium-208		0.562	0.0774	+/-0.0564	0.080	pCi/g						
Thorium-227	U	-0.35	0.658	+/-0.203		pCi/g						
Thorium-231	U	-1.0	1.19	+/-0.392		pCi/g						
Thorium-234	UI	1.18	1.04	+/-0.511	2.00	pCi/g						
Tin-113	U	-0.0455	0.0781	+/-0.0253	0.100	pCi/g						
Uranium-235	U	0.248	0.358	+/-0.232	0.500	pCi/g						
Yttrium-88	U	0.0107	0.0675	+/-0.0194	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.7	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	81.1	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	83.5	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7289 Project: LANL01004
Sample ID: 243492003 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID:	RE12-10-7291	Project:	LANL01004
Sample ID:	243492004	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	8.16%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	-0.00181	0.0211	+/-0.00176	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00359	0.0194	+/-0.00397	0.050	pCi/g		JXD2	01/04/10	1547	937598	3
Plutonium-239/240	U	0.00359	0.0219	+/-0.00317	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		1.17	0.150	+/-0.114	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0597	0.093	+/-0.0194	0.100	pCi/g						
Uranium-238		1.14	0.0869	+/-0.111	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.167	0.511	+/-0.162	0.200	pCi/g		MXR1	01/04/10	1401	936923	5
Bismuth-211	UI	4.25	0.395	+/-0.307		pCi/g						
Bismuth-214		1.28	0.124	+/-0.0956	0.200	pCi/g						
Cadmium-109	U	1.81	2.18	+/-0.696		pCi/g						
Cerium-139	U	-0.0155	0.061	+/-0.0186	0.050	pCi/g						
Cesium-134	U	0.0606	0.098	+/-0.0269	0.100	pCi/g						
Cesium-137	U	0.0546	0.0841	+/-0.0238	0.100	pCi/g						
Cobalt-60	U	0.000578	0.0788	+/-0.0243	0.100	pCi/g						
Europium-152	U	-0.0396	0.200	+/-0.0797	0.200	pCi/g						
Lanthanum-140	U	0.0273	0.178	+/-0.0517		pCi/g						
Lead-212		1.72	0.108	+/-0.0988	0.100	pCi/g						
Lead-214		1.48	0.138	+/-0.113	0.100	pCi/g						
Mercury-203	U	0.0402	0.0913	+/-0.0292	0.100	pCi/g						
Potassium-40		20.5	0.686	+/-1.21	1.00	pCi/g						
Radium-223	U	-0.547	1.36	+/-0.483		pCi/g						
Radium-224	Ul	5.10	1.23	+/-0.826		pCi/g						
Radium-226		1.28	0.124	+/-0.0956		pCi/g						
Radium-228		1.54	0.224	+/-0.164	0.500	pCi/g						
Ruthenium-106	U	0.0591	0.633	+/-0.191	0.800	pCi/g						
Sodium-22	U	0.0006	0.0903	+/-0.0278	0.080	pCi/g						

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7291 Project: LANL01004
Sample ID: 243492004 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0602	0.0815	+/-0.0258		pCi/g						
Thallium-208		0.637	0.0684	+/-0.0466	0.080	pCi/g						
Thorium-227	U	-0.241	0.809	+/-0.241		pCi/g						
Thorium-231	U	-0.547	1.36	+/-0.483		pCi/g						
Thorium-234	U	2.34	3.85	+/-1.60	2.00	pCi/g						
Tin-113	U	-0.00819	0.0871	+/-0.0261	0.100	pCi/g						
Uranium-235	U	0.361	0.454	+/-0.134	0.500	pCi/g						
Yttrium-88	U	0.013	0.0642	+/-0.0183	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	85.6	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	78.2	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	73.8	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7291
Sample ID: 243492004

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID:	RE12-10-7292	Project:	LANL01004
Sample ID:	243492005	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	5.97%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.00053	0.020	+/-0.00342	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	-0.00124	0.0202	+/-0.00216	0.050	pCi/g		JXD2	01/04/10	1123	937598	3
Plutonium-239/240	U	0.00373	0.0227	+/-0.00216	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.694	0.128	+/-0.073	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0357	0.0794	+/-0.0137	0.100	pCi/g						
Uranium-238		0.755	0.0742	+/-0.0777	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0936	0.231	+/-0.0735	0.200	pCi/g		MXR1	01/04/10	1401	936923	5
Bismuth-211	UI	4.28	0.285	+/-0.315		pCi/g						
Bismuth-214		1.30	0.102	+/-0.0999	0.200	pCi/g						
Cadmium-109	UI	3.79	1.04	+/-0.449		pCi/g						
Cerium-139	U	0.00264	0.0453	+/-0.0131	0.050	pCi/g						
Cesium-134	UI	0.0919	0.0857	+/-0.0404	0.100	pCi/g						
Cesium-137	U	0.00388	0.0555	+/-0.0167	0.100	pCi/g						
Cobalt-60	U	0.0196	0.067	+/-0.0196	0.100	pCi/g						
Europium-152	U	0.0466	0.147	+/-0.0459	0.200	pCi/g						
Lanthanum-140	U	-0.0599	0.122	+/-0.0417		pCi/g						
Lead-212		1.69	0.0885	+/-0.114	0.100	pCi/g						
Lead-214		1.49	0.0995	+/-0.116	0.100	pCi/g						
Mercury-203	U	-0.0142	0.0623	+/-0.0218	0.100	pCi/g						
Potassium-40		31.2	0.481	+/-1.64	1.00	pCi/g						
Radium-223	U	-0.254	1.00	+/-0.359		pCi/g						
Radium-224	UI	4.96	1.01	+/-0.659		pCi/g						
Radium-226		1.30	0.102	+/-0.0999		pCi/g						
Radium-228		1.82	0.191	+/-0.185	0.500	pCi/g						
Ruthenium-106	U	-0.15	0.469	+/-0.148	0.800	pCi/g						
Sodium-22	U	-0.0167	0.0707	+/-0.0226	0.080	pCi/g						

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7292 Project: LANL01004
Sample ID: 243492005 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.0512	0.0579	+/-0.0172		pCi/g						
Thallium-208		0.543	0.0516	+/-0.0488	0.080	pCi/g						
Thorium-227	U	-0.0971	0.588	+/-0.180		pCi/g						
Thorium-231	U	-0.254	1.00	+/-0.359		pCi/g						
Thorium-234	U	1.68	1.74	+/-0.918	2.00	pCi/g						
Tin-113	U	-0.00146	0.0652	+/-0.019	0.100	pCi/g						
Uranium-235	U	0.0778	0.340	+/-0.0987	0.500	pCi/g						
Yttrium-88	U	0.0154	0.0535	+/-0.0148	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	90.2	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	73.6	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	85.4	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7292 Project: LANL01004
Sample ID: 243492005 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7293
Sample ID: 243492006
Matrix: R
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client
Moisture: 2.52%

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	-0.00181	0.0198	+/-0.00442	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00	0.0172	+/-0.00106	0.050	pCi/g		JXD2	01/04/10	1124	937598	3
Plutonium-239/240	U	0.00	0.0194	+/-0.0015	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.768	0.0913	+/-0.0714	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.040	0.0567	+/-0.0134	0.100	pCi/g						
Uranium-238		0.836	0.0529	+/-0.0763	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.00333	0.109	+/-0.0357	0.200	pCi/g		MXR1	01/04/10	1402	936923	5
Bismuth-211	UI	3.88	0.358	+/-0.276		pCi/g						
Bismuth-214		1.31	0.134	+/-0.121	0.200	pCi/g						
Cadmium-109	UI	3.23	0.973	+/-0.483		pCi/g						
Cerium-139	U	0.00274	0.0508	+/-0.0147	0.050	pCi/g						
Cesium-134	U	0.0853	0.120	+/-0.041	0.100	pCi/g						
Cesium-137	U	-0.0242	0.0795	+/-0.0256	0.100	pCi/g						
Cobalt-60	U	-0.0105	0.0816	+/-0.0255	0.100	pCi/g						
Europium-152	U	0.00779	0.169	+/-0.0483	0.200	pCi/g						
Lanthanum-140	U	0.0164	0.201	+/-0.0591		pCi/g						
Lead-212		1.80	0.0953	+/-0.0993	0.100	pCi/g						
Lead-214		1.35	0.117	+/-0.102	0.100	pCi/g						
Mercury-203	U	-0.0328	0.0696	+/-0.0222	0.100	pCi/g						
Potassium-40		34.3	0.653	+/-1.53	1.00	pCi/g						
Radium-223	U	-0.273	1.07	+/-0.359		pCi/g						
Radium-224	UI	5.29	1.09	+/-0.835		pCi/g						
Radium-226		1.31	0.134	+/-0.121		pCi/g						
Radium-228		1.79	0.244	+/-0.217	0.500	pCi/g						
Ruthenium-106	U	0.142	0.655	+/-0.192	0.800	pCi/g						
Sodium-22	U	0.0254	0.0994	+/-0.0292	0.080	pCi/g						

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Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7293 Project: LANL01004
Sample ID: 243492006 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	U	0.032	0.0691	+/-0.0216		pCi/g						
Thallium-208		0.601	0.0705	+/-0.057	0.080	pCi/g						
Thorium-227	U	0.253	0.653	+/-0.190		pCi/g						
Thorium-231	U	-0.273	1.07	+/-0.359		pCi/g						
Thorium-234		1.93	1.07	+/-0.562	2.00	pCi/g						
Tin-113	U	-0.00902	0.0836	+/-0.0246	0.100	pCi/g						
Uranium-235	U	-0.0115	0.347	+/-0.102	0.500	pCi/g						
Yttrium-88	U	0.0565	0.0853	+/-0.0203	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	89.1	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	87.4	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	81.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7293
Sample ID: 243492006

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID:	RE12-10-7296	Project:	LANL01004
Sample ID:	243492007	Client ID:	LANL010
Matrix:	R		
Collect Date:	18-DEC-09		
Receive Date:	23-DEC-09		
Collector:	Client		
Moisture:	7.99%		

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids												
"As Received"												
Rad Alpha Spec Analysis												
AM241 "Dry Weight Corrected"												
Americium-241	U	0.0103	0.0293	+/-0.00914	0.050	pCi/g		JXD2	01/05/10	1509	937596	2
ISOPU "Dry Weight Corrected"												
Plutonium-238	U	0.00733	0.0198	+/-0.00302	0.050	pCi/g		JXD2	01/04/10	1124	937598	3
Plutonium-239/240	U	0.00733	0.0223	+/-0.00347	0.050	pCi/g						
ISOU "Dry Weight Corrected"												
Uranium-233/234		0.937	0.109	+/-0.0873	0.100	pCi/g		JXD2	01/05/10	2020	937600	4
Uranium-235/236	U	0.0564	0.0676	+/-0.0161	0.100	pCi/g						
Uranium-238		1.17	0.0631	+/-0.104	0.100	pCi/g						
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Americium-241	U	0.0898	0.294	+/-0.0917	0.200	pCi/g		MXR1	01/04/10	1402	936923	5
Bismuth-211	UI	4.29	0.242	+/-0.236		pCi/g						
Bismuth-214		1.18	0.0916	+/-0.0818	0.200	pCi/g						
Cadmium-109	UI	3.85	1.25	+/-0.462		pCi/g						
Cerium-139	U	-0.00545	0.0426	+/-0.0124	0.050	pCi/g						
Cesium-134	UI	0.102	0.0715	+/-0.0226	0.100	pCi/g						
Cesium-137	UI	0.063	0.0605	+/-0.0163	0.100	pCi/g						
Cobalt-60	U	-0.022	0.0454	+/-0.0151	0.100	pCi/g						
Europium-152	U	-0.0159	0.127	+/-0.0487	0.200	pCi/g						
Lanthanum-140	U	-0.024	0.114	+/-0.0359		pCi/g						
Lead-212		1.60	0.0783	+/-0.0751	0.100	pCi/g						
Lead-214		1.49	0.0843	+/-0.0907	0.100	pCi/g						
Mercury-203	U	-0.00448	0.0581	+/-0.0176	0.100	pCi/g						
Potassium-40		24.7	0.457	+/-1.14	1.00	pCi/g						
Radium-223	U	0.171	0.908	+/-0.311		pCi/g						
Radium-224	UI	3.79	0.890	+/-0.494		pCi/g						
Radium-226		1.18	0.0916	+/-0.0818		pCi/g						
Radium-228		1.54	0.171	+/-0.158	0.500	pCi/g						
Ruthenium-106	U	0.0893	0.435	+/-0.131	0.800	pCi/g						
Sodium-22	U	-0.00299	0.0543	+/-0.0167	0.080	pCi/g						

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7296 Project: LANL01004
Sample ID: 243492007 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
GAMMA SPEC "Dry Weight Corrected"												
Strontium-85	UI	0.128	0.0664	+/-0.0192		pCi/g						
Thallium-208		0.510	0.0436	+/-0.0383	0.080	pCi/g						
Thorium-227	U	-0.201	0.519	+/-0.160		pCi/g						
Thorium-231	U	0.171	0.908	+/-0.311		pCi/g						
Thorium-234	U	1.17	2.30	+/-1.08	2.00	pCi/g						
Tin-113	U	0.00161	0.0622	+/-0.0182	0.100	pCi/g						
Uranium-235	U	0.142	0.314	+/-0.0953	0.500	pCi/g						
Yttrium-88	U	0.0181	0.0453	+/-0.0125	0.100	pCi/g						

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	DOE EML HASL-300, Am-05-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	AM241 "Dry Weight Corrected"	66.4	(50%-105%)
Plutonium-242 Tracer	ISOPU "Dry Weight Corrected"	76.9	(50%-105%)
Uranium-232 Tracer	ISOU "Dry Weight Corrected"	69.1	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
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C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E Organics--Concentration of the target analyte exceeds the instrument calibration range
F Estimated Value

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Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 8, 2010

Client Sample ID: RE12-10-7296 Project: LANL01004
Sample ID: 243492007 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d 5-day BOD--The 2:1 depletion requirement was not met for this sample
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez

Workorder: 243492

Report Date: January 8, 2010

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 937596										
QC1202006344 243492007 DUP										
Americium-241	U	0.0103	U	0.00063	pCi/g	0.435		(0-1)	JXD2	01/05/1014:30
	TPU:	+/-0.00914		+/-0.00193						
	Yield:	66.4		82.3						
QC1202006345 LCS										
Americium-241	33.2			32.2	pCi/g		97.2	(75%-125%)		
	TPU:			+/-2.23						
	Yield:			96.1						
QC1202006343 MB										
Americium-241			U	0.00543	pCi/g					
	TPU:			+/-0.00867						
	Yield:			91.1						
Batch 937598										
QC1202006347 243492007 DUP										
Plutonium-238	U	0.00733	U	0.00	pCi/g	0.643		(0-1)	JXD2	01/04/1011:23
	TPU:	+/-0.00302		+/-0.00268						
	Yield:	76.9		71.1						
Plutonium-239/240	U	0.00733	U	0.00402	pCi/g	0.285		(0-1)		
	TPU:	+/-0.00347		+/-0.00233						
	Yield:	76.9		71.1						
QC1202006348 LCS										
Plutonium-238				6.74	pCi/g			(75%-125%)		01/04/1010:37
	TPU:			+/-0.468						
	Yield:			95.2						
Plutonium-239/240	41.8			33.8	pCi/g		81	(75%-125%)		
	TPU:			+/-2.01						
	Yield:			95.2						
QC1202006346 MB										
Plutonium-238			U	-0.00141	pCi/g					01/04/1011:23
	TPU:			+/-0.00244						
	Yield:			85.5						
Plutonium-239/240			U	0.00	pCi/g					
	TPU:			+/-0.00199						
	Yield:			85.5						
Batch 937600										
QC1202006350 243492007 DUP										
Uranium-233/234		0.937		1.07	pCi/g	0.374		(0-1)	JXD2	01/05/1020:21
	TPU:	+/-0.0873		+/-0.0956						
	Yield:	69.1		72.3						
Uranium-235/236	U	0.0564	U	0.0523	pCi/g	0.0659		(0-1)		
	TPU:	+/-0.0161		+/-0.015						
	Yield:	69.1		72.3						
Uranium-238		1.17		1.05	pCi/g	0.314		(0-1)		
	TPU:	+/-0.104		+/-0.0936						

QC Summary

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 937600										
	Yield:	69.1		72.3						
QC1202006351 LCS										
Uranium-233/234				5.81	pCi/g			(75%-125%)		01/05/1020:21
	TPU:			+/-0.509						
	Yield:			96.0						
Uranium-235/236				0.400	pCi/g			(75%-125%)		
	TPU:			+/-0.0852						
	Yield:			96.0						
Uranium-238	5.75			5.32	pCi/g		92.6	(75%-125%)		
	TPU:			+/-0.472						
	Yield:			96.0						
QC1202006349 MB										
Uranium-233/234			U	0.0126	pCi/g					01/05/1020:21
	TPU:			+/-0.00401						
	Yield:			97.8						
Uranium-235/236			U	0.00151	pCi/g					
	TPU:			+/-0.00151						
	Yield:			97.8						
Uranium-238			U	0.00366	pCi/g					
	TPU:			+/-0.00274						
	Yield:			97.8						
Rad Gamma Spec										
Batch 936923										
QC1202004733 243457001 DUP										
Americium-241	U	0.0848	U	0.146	pCi/g	0.157		(0-1)	MXR1	01/04/1016:16
	TPU:	+/-0.0416		+/-0.155						
Bismuth-211	UI	4.87	UI	4.61	pCi/g	0.207		(0-1)		
	TPU:	+/-0.338		+/-0.291						
Bismuth-214		1.51		1.48	pCi/g	0.0672		(0-1)		
	TPU:	+/-0.113		+/-0.103						
Cadmium-109	UI	4.67	UI	2.88	pCi/g	0.800		(0-1)		
	TPU:	+/-0.519		+/-0.603						
Cerium-139	U	0.0176	U	-0.0119	pCi/g	0.411		(0-1)		
	TPU:	+/-0.0184		+/-0.0174						
Cesium-134	UI	0.124	UI	0.123	pCi/g	0.00732		(0-1)		
	TPU:	+/-0.0429		+/-0.0323						
Cesium-137		0.347		0.251	pCi/g	0.562		(0-1)		
	TPU:	+/-0.0412		+/-0.0441						
Cobalt-60	U	0.000846	U	-0.00901	pCi/g	0.112		(0-1)		
	TPU:	+/-0.0225		+/-0.0215						
Europium-152	U	-0.00947	U	-0.113	pCi/g	0.315		(0-1)		
	TPU:	+/-0.0797		+/-0.0846						
Lanthanum-140	U	0.0692	U	0.100	pCi/g	0.126		(0-1)		
	TPU:	+/-0.0722		+/-0.0521						
Lead-212		1.94		1.91	pCi/g	0.0578		(0-1)		
	TPU:	+/-0.124		+/-0.101						
Lead-214		1.70		1.61	pCi/g	0.191		(0-1)		
	TPU:	+/-0.126		+/-0.110						
Mercury-203	U	0.0649	U	-0.00456	pCi/g	0.634		(0-1)		
	TPU:	+/-0.030		+/-0.0248						

QC Summary

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 936923										
Potassium-40		22.3		22.0	pCi/g	0.0552		(0-1)		
	TPU:	+/-1.15		+/-1.11						
Radium-223	U	-0.35	U	-0.746	pCi/g	0.224		(0-1)		
	TPU:	+/-0.485		+/-0.401						
Radium-224	UI	6.28	UI	4.90	pCi/g	0.394		(0-1)		
	TPU:	+/-0.944		+/-0.813						
Radium-226		1.51		1.48	pCi/g	0.0672		(0-1)		
	TPU:	+/-0.113		+/-0.103						
Radium-228		1.88		1.84	pCi/g	0.0542		(0-1)		
	TPU:	+/-0.195		+/-0.193						
Ruthenium-106	U	0.599	U	-0.122	pCi/g	0.877		(0-1)		
	TPU:	+/-0.233		+/-0.178						
Sodium-22	U	0.0404	U	0.0164	pCi/g	0.229		(0-1)		
	TPU:	+/-0.0282		+/-0.0242						
Strontium-85	UI	0.148	UI	0.0997	pCi/g	0.457		(0-1)		
	TPU:	+/-0.0286		+/-0.0241						
Thallium-208		0.587		0.606	pCi/g	0.0835		(0-1)		
	TPU:	+/-0.0585		+/-0.0512						
Thorium-227	U	0.185	U	-0.139	pCi/g	0.352		(0-1)		
	TPU:	+/-0.246		+/-0.214						
Thorium-231	U	-0.35	U	-0.746	pCi/g	0.224		(0-1)		
	TPU:	+/-0.485		+/-0.401						
Thorium-234		1.79	U	1.78	pCi/g	0.0028		(0-1)		
	TPU:	+/-0.538		+/-1.43						
Tin-113	U	-0.0293	U	-0.0246	pCi/g	0.0404		(0-1)		
	TPU:	+/-0.0318		+/-0.0258						
Uranium-235	U	0.0353	U	0.0805	pCi/g	0.086		(0-1)		
	TPU:	+/-0.136		+/-0.127						
Yttrium-88	U	0.0227	U	0.0111	pCi/g	0.150		(0-1)		
	TPU:	+/-0.0209		+/-0.0176						
QC1202004734 LCS										
Americium-241	15.9			14.0	pCi/g		87.7	(75%-125%)		01/05/1007:39
	TPU:			+/-0.644						
Bismuth-211				2.12	pCi/g					
	TPU:			+/-0.296						
Bismuth-214				0.916	pCi/g					
	TPU:			+/-0.127						
Cadmium-109				55.3	pCi/g					
	TPU:			+/-2.75						
Cerium-139			U	-0.0453	pCi/g					
	TPU:			+/-0.132						
Cesium-134			U	0.110	pCi/g					
	TPU:			+/-0.0703						
Cesium-137	5.57			5.82	pCi/g		104	(75%-125%)		
	TPU:			+/-0.246						
Cobalt-60	6.49			7.04	pCi/g		108	(75%-125%)		
	TPU:			+/-0.287						
Europium-152			U	0.0329	pCi/g					
	TPU:			+/-0.115						
Lanthanum-140				2.12E+06	pCi/g					
	TPU:			+/-2.93E+06						

QC Summary

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 936923										
Lead-212				0.927	pCi/g					
	TPU:			+/-0.104						
Lead-214				0.739	pCi/g					
	TPU:			+/-0.105						
Mercury-203			U	13.6	pCi/g					
	TPU:			+/-4.90						
Potassium-40			U	0.607	pCi/g					
	TPU:			+/-0.338						
Radium-223			U	-0.601	pCi/g					
	TPU:			+/-0.634						
Radium-224				6.23	pCi/g					
	TPU:			+/-0.818						
Radium-226				0.916	pCi/g					
	TPU:			+/-0.127						
Radium-228				0.874	pCi/g					
	TPU:			+/-0.277						
Ruthenium-106			U	0.737	pCi/g					
	TPU:			+/-0.657						
Sodium-22			U	-0.0416	pCi/g					
	TPU:			+/-0.0371						
Strontium-85			U	0.829	pCi/g					
	TPU:			+/-1.52						
Thallium-208				0.378	pCi/g					
	TPU:			+/-0.0614						
Thorium-227			U	-0.0769	pCi/g					
	TPU:			+/-0.345						
Thorium-231			U	-0.601	pCi/g					
	TPU:			+/-0.634						
Thorium-234			U	-0.982	pCi/g					
	TPU:			+/-0.564						
Tin-113			U	0.491	pCi/g					
	TPU:			+/-0.349						
Uranium-235			U	-0.0116	pCi/g					
	TPU:			+/-0.167						
Yttrium-88			U	0.167	pCi/g					
	TPU:			+/-0.248						
QC1202004732 MB										
Americium-241			U	0.0401	pCi/g					01/04/1014:05
	TPU:			+/-0.0345						
Bismuth-211			U	-0.0418	pCi/g					
	TPU:			+/-0.0678						
Bismuth-214			U	7.60E-05	pCi/g					
	TPU:			+/-0.0238						
Cadmium-109			U	-0.155	pCi/g					
	TPU:			+/-0.180						
Cerium-139			U	-0.0115	pCi/g					
	TPU:			+/-0.00803						
Cesium-134			U	0.00855	pCi/g					
	TPU:			+/-0.0127						
Cesium-137			U	-0.00525	pCi/g					
	TPU:			+/-0.00923						

QC Summary

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 936923										
Cobalt-60			U	-0.0105	pCi/g					
	TPU:			+/-0.0107						
Europium-152			U	-0.000323	pCi/g					
	TPU:			+/-0.0274						
Lanthanum-140			U	-0.000214	pCi/g					
	TPU:			+/-0.0181						
Lead-212			U	-0.0117	pCi/g					
	TPU:			+/-0.0187						
Lead-214			U	-0.00432	pCi/g					
	TPU:			+/-0.0235						
Mercury-203			U	0.0135	pCi/g					
	TPU:			+/-0.0109						
Potassium-40			U	-0.143	pCi/g					
	TPU:			+/-0.134						
Radium-223			U	-0.338	pCi/g					
	TPU:			+/-0.195						
Radium-224			U	0.0767	pCi/g					
	TPU:			+/-0.192						
Radium-226			U	7.60E-05	pCi/g					
	TPU:			+/-0.0238						
Radium-228			U	-0.0253	pCi/g					
	TPU:			+/-0.0421						
Ruthenium-106			U	0.0807	pCi/g					
	TPU:			+/-0.0836						
Sodium-22			U	-0.0043	pCi/g					
	TPU:			+/-0.00922						
Strontium-85			UI	0.102	pCi/g					
	TPU:			+/-0.0134						
Thallium-208			U	0.0169	pCi/g					
	TPU:			+/-0.0183						
Thorium-227			U	-0.0485	pCi/g					
	TPU:			+/-0.115						
Thorium-231			U	-0.338	pCi/g					
	TPU:			+/-0.195						
Thorium-234			U	0.885	pCi/g					
	TPU:			+/-0.530						
Tin-113			U	0.012	pCi/g					
	TPU:			+/-0.0118						
Uranium-235			U	-0.064	pCi/g					
	TPU:			+/-0.0619						
Yttrium-88			U	0.0169	pCi/g					
	TPU:			+/-0.00997						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

QC Summary

Workorder: 243492

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time

A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
E	Organics--Concentration of the target analyte exceeds the instrument calibration range
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N	Organics--Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
P	Organics--The concentrations between the primary and confirmation columns/detectors is >40% different. For HPLC, difference is also <70%
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
d	5-day BOD--The 2:1 depletion requirement was not met for this sample
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev 9

Batch# 937596 Product: Am Date: 1/6/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10" MDA/ MDC, error is 150% or less of sample activity. If greater 10" MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5" MDA/ MDC, then RPD is 100% or less. If greater 5" MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed. If applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Denise Green 1/6/10

Secondary Review Performed By: [signature] 1/6/10

1/19

✓P

Am/Cm Que Sheet

30-DEC-09

Batch #: 937596 Analyst: JXD2 First Client Due Date: 19-JAN-10 Internal Due Date08-JAN-10 Comments:

Tracer(s): Am243/Cm244 Tracer Code: 445-96-2-35 Expiration Date: 05/11/10 Vol: 0.1

LCS Isotope(s): ~~Am241/Cm244~~ Am243/Cm244 12/7/09 LCS Code(s): — Expiration Date: — Vol(s): —

Spike Isotope(s): Am241/Cm244 Spike Code(s): — Expiration Date: — Vol(s): —

Prep Date: 12/30/09 Initials: JXD Pipet ID: 2571058 Balance ID: 504 10272 Witness: KW 12/30/09

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/(Dry) Aliquot (g/1/1)	Am/Cm Det #
243385001-1	RE12-10-7580	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	1	1	1.251	29
243385002-1	RE12-10-7590	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	2	2	1.252	30
243385003-1	RE12-10-7592	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	3	3	1.255	31
243385004-1	RE12-10-7591	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	4	4	1.254	33
243385005-1	RE12-10-7581	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	5	5	1.278	35
243385006-1	RE12-10-7586	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	6	6	1.261	36
243385007-1	RE12-10-7587	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	7	7	1.255	37
243385008-1	RE12-10-7585	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	8	8	1.268	38
243385009-1	RE12-10-7582	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	9	9	1.263	39
243385010-1	RE12-10-7584	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	10	10	1.254	40
243385011-1	RE12-10-7583	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	11	11	1.251	41
243492001-1	RE12-10-7288	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	12	12	1.252	42
243492002-1	RE12-10-7290	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	13	13	1.250	43
243492003-1	RE12-10-7289	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	14	14	1.255	44
243492004-1	RE12-10-7291	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	15	15	1.261	45
243492005-1	RE12-10-7292	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	16	16	1.254	46
243492006-1	RE12-10-7293	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	17	17	1.260	47
• 243492007-1	RE12-10-7296	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	18	18	1.259	48
1202006343-1	MB for batch 937596	MB		.05 pCi/g	SOIL	QC ACCOUNT		19	19	1	110
1202006344-1	RE12-10-7296(243492007DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	18-DEC-09	20	20	1.270	111
1202006345-1	LCS for batch 937596	LCS		.05 pCi/g	SOIL	QC ACCOUNT		21	21	0.113	112

* SRM 0244-B Exp. 04/20/20

Choose SOP Used: GL-RAD-A-011 GL-RAD-A-036

Solid Sample Dissolution by: LEACH or DIGESTION (Circle One)

Data Reviewed By: 1/6/10

1/6/10

Blank Correction Report

Batch ID 937596

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202006344	DUP	Americium-241	1.27 g	0.00063	0.00193	0.0206	.004275591	pCi/g	YES
1202006345	LCS	Americium-241	0.113 g	32.2	2.23	0.223	.048053097	pCi/g	NO
1202006343	MB	Americium-241	1.00 g	0.00543	0.00867	0.0262	.00543	pCi/g	YES
243385001	RE12-10-7580	Americium-241	1.25 g	0.00594	0.00693	0.022	.004344	pCi/g	YES
243385002	RE12-10-7590	Americium-241	1.25 g	0.00965	0.00714	0.0195	.004344	pCi/g	YES
243385003	RE12-10-7592	Americium-241	1.26 g	0.00196	0.00238	0.0214	.004309524	pCi/g	YES
243385004	RE12-10-7591	Americium-241	1.25 g	0.00337	0.00279	0.0221	.004344	pCi/g	YES
243385005	RE12-10-7581	Americium-241	1.28 g	-0.00179	0.00408	0.0235	.004242188	pCi/g	YES
243385006	RE12-10-7586	Americium-241	1.26 g	0.00442	0.00424	0.0212	.004309524	pCi/g	YES
243385007	RE12-10-7587	Americium-241	1.26 g	0.00173	0.00643	0.0201	.004309524	pCi/g	YES
243385008	RE12-10-7585	Americium-241	1.27 g	0.00714	0.00537	0.0217	.004275591	pCi/g	YES
243385009	RE12-10-7582	Americium-241	1.26 g	0.00569	0.00581	0.0182	.004309524	pCi/g	YES
243385010	RE12-10-7584	Americium-241	1.25 g	0.0148	0.00428	0.0202	.004344	pCi/g	YES
243385011	RE12-10-7583	Americium-241	1.25 g	0.0032	0.00368	0.0214	.004344	pCi/g	YES
243492001	RE12-10-7288	Americium-241	1.25 g	-0.00415	0.00337	0.0197	.004344	pCi/g	YES
243492002	RE12-10-7290	Americium-241	1.25 g	0.00182	0.00228	0.0207	.004344	pCi/g	YES
243492003	RE12-10-7289	Americium-241	1.26 g	0.0042	0.00283	0.0205	.004309524	pCi/g	YES
243492004	RE12-10-7291	Americium-241	1.26 g	-0.00181	0.00176	0.0211	.004309524	pCi/g	YES
243492005	RE12-10-7292	Americium-241	1.25 g	0.00053	0.00342	0.020	.004344	pCi/g	YES
243492006	RE12-10-7293	Americium-241	1.26 g	-0.00181	0.00442	0.0198	.004309524	pCi/g	YES
243492007	RE12-10-7296	Americium-241	1.26 g	0.0103	0.00914	0.0293	.004309524	pCi/g	YES

1/6/10

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

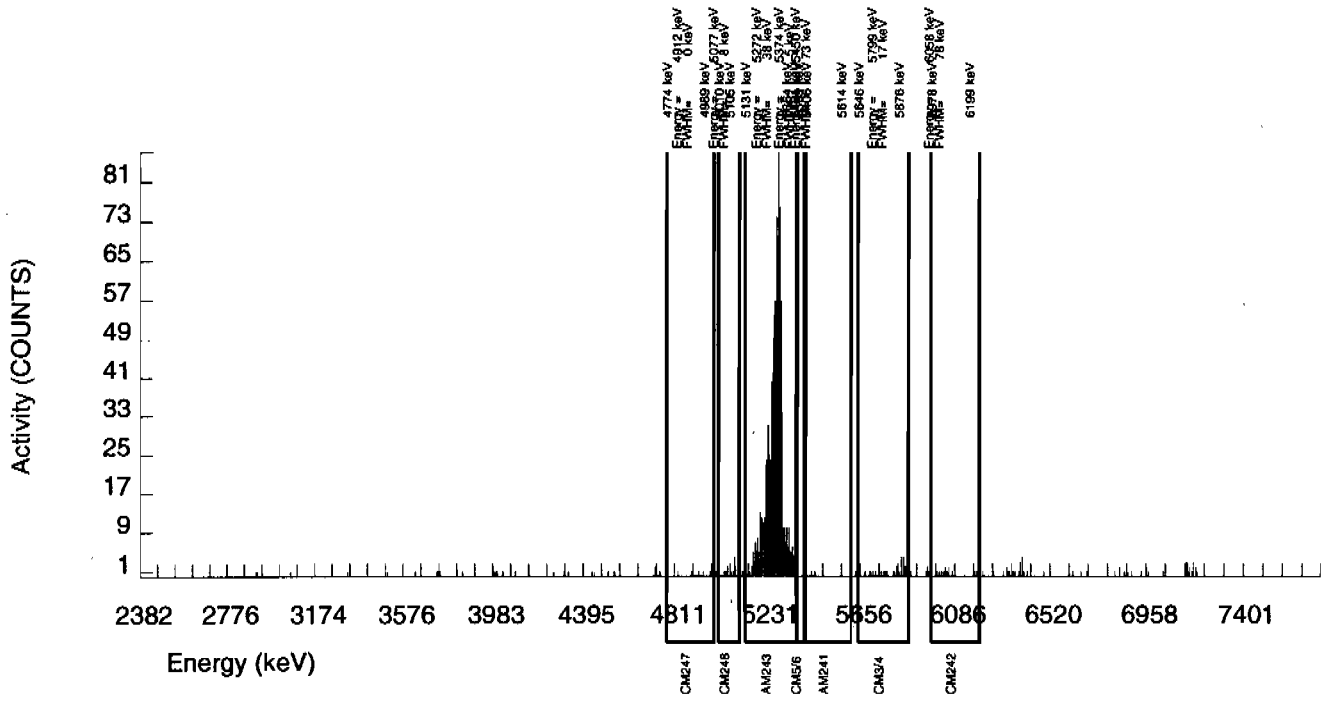
BATCH NUMBER: 937596 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492001_AM SAMPLE QTY: 1.252 G
DETECTOR NUMBER :78793 AVERAGE %EFFICIENCY :33.4897 % YIELD : 92.550	COUNT DATE: 5-JAN-2010 15:09:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.69932 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B042.CNF;1096 BKG DATE : 3-JAN-2010 EFF FILE : W042.CNF;292 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	33.000	10.000	23.000	5.2338	100.0000	1.16E-02	8.73E-03	1.41E-02	3.14E-02	8.70E-03
CM-5/6	5386.000	1.000	1.000	0.000	19.8463	86.09000	1.35E-03	1.35E-03	6.23E-02	1.28E-01	1.35E-03
AM-241	5479.150	4.000	-3.570	6.000	3.0704	99.94000	-4.15E-03	3.37E-03	8.30E-03	1.97E-02	3.37E-03
CM-242	6102.000	15.000	5.000	10.000	4.3186	100.0000	6.29E-03	6.30E-03	1.17E-02	2.65E-02	6.29E-03
AM243	5270.000	904.000	902.000	2.000	1.4142	99.78000	1.05E+00	7.16E-02	3.83E-03	1.08E-02	3.50E-02
CM-247	4946.000	7.000	5.000	2.000	15.3366	79.30000	7.32E-03	4.41E-03	5.22E-02	1.08E-01	4.39E-03
CM-248	5078.600	17.000	16.000	1.000	22.1555	91.00000	2.04E-02	5.55E-03	6.57E-02	1.35E-01	5.41E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

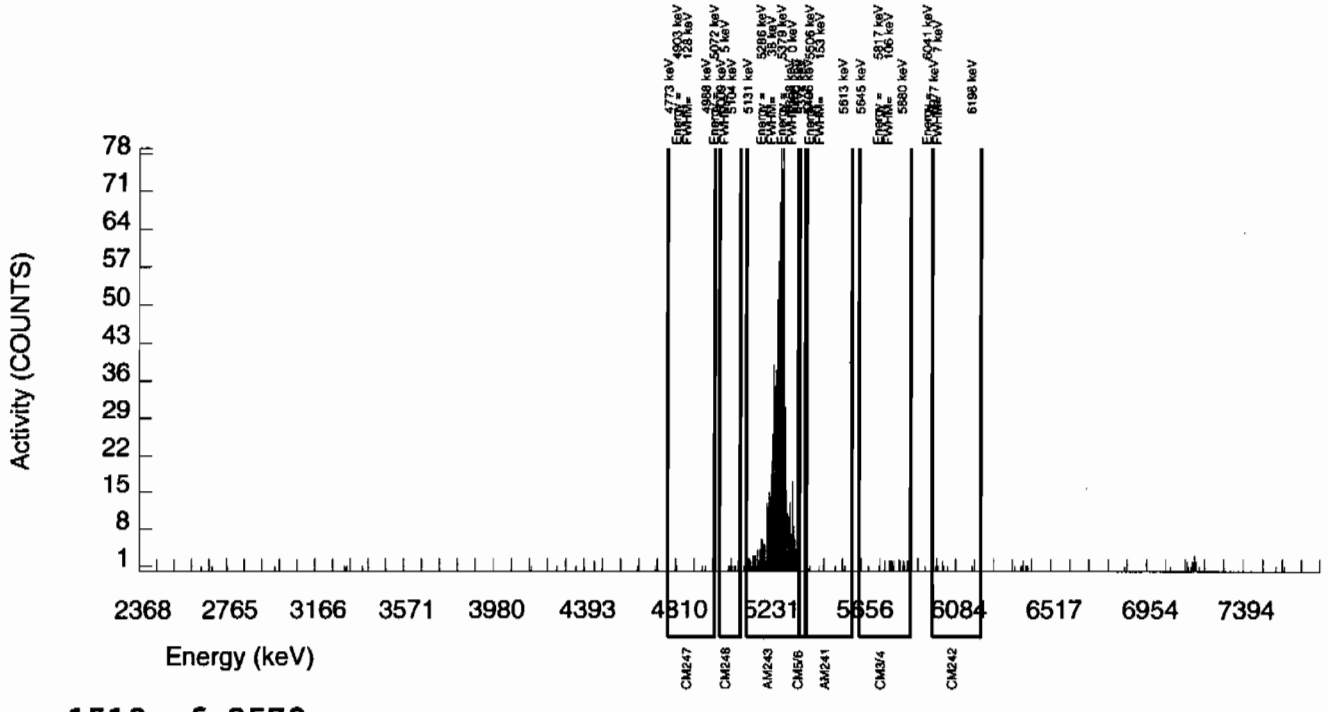
BATCH NUMBER: 937596 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492002_AM SAMPLE QTY: 1.250 G
DETECTOR NUMBER :76543 AVERAGE %EFFICIENCY :34.3031 % YIELD : 86.449	COUNT DATE: 5-JAN-2010 15:09:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.52137 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B043.CNF;1094 BKG DATE : 3-JAN-2010 EFF FILE : W043.CNF;284 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	24.000	1.000	23.000	5.2338	100.0000	1.22E-03	8.35E-03	1.48E-02	3.29E-02	8.35E-03
CM-5/6	5386.000	10.000	10.000	0.000	19.8463	86.09000	1.41E-02	4.54E-03	6.52E-02	1.34E-01	4.46E-03
AM-241	5479.150	4.000	1.498	1.000	3.0704	99.94000	1.82E-03	2.28E-03	8.69E-03	2.07E-02	2.27E-03
CM-242	6102.000	8.000	7.000	1.000	4.3186	100.0000	9.22E-03	3.99E-03	1.22E-02	2.77E-02	3.95E-03
AM243	5270.000	866.000	863.000	3.000	1.7321	99.78000	1.05E+00	7.25E-02	4.91E-03	1.31E-02	3.59E-02
CM-247	4946.000	3.000	2.000	1.000	15.3366	79.30000	3.06E-03	3.07E-03	5.47E-02	1.14E-01	3.06E-03
CM-248	5078.600	8.000	6.000	2.000	22.1555	91.00000	8.01E-03	4.25E-03	6.88E-02	1.41E-01	4.22E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937596
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243492003_AM
SAMPLE QTY: 1.255 G

DETECTOR NUMBER :79459
AVERAGE %EFFICIENCY :34.8103
% YIELD : 85.683

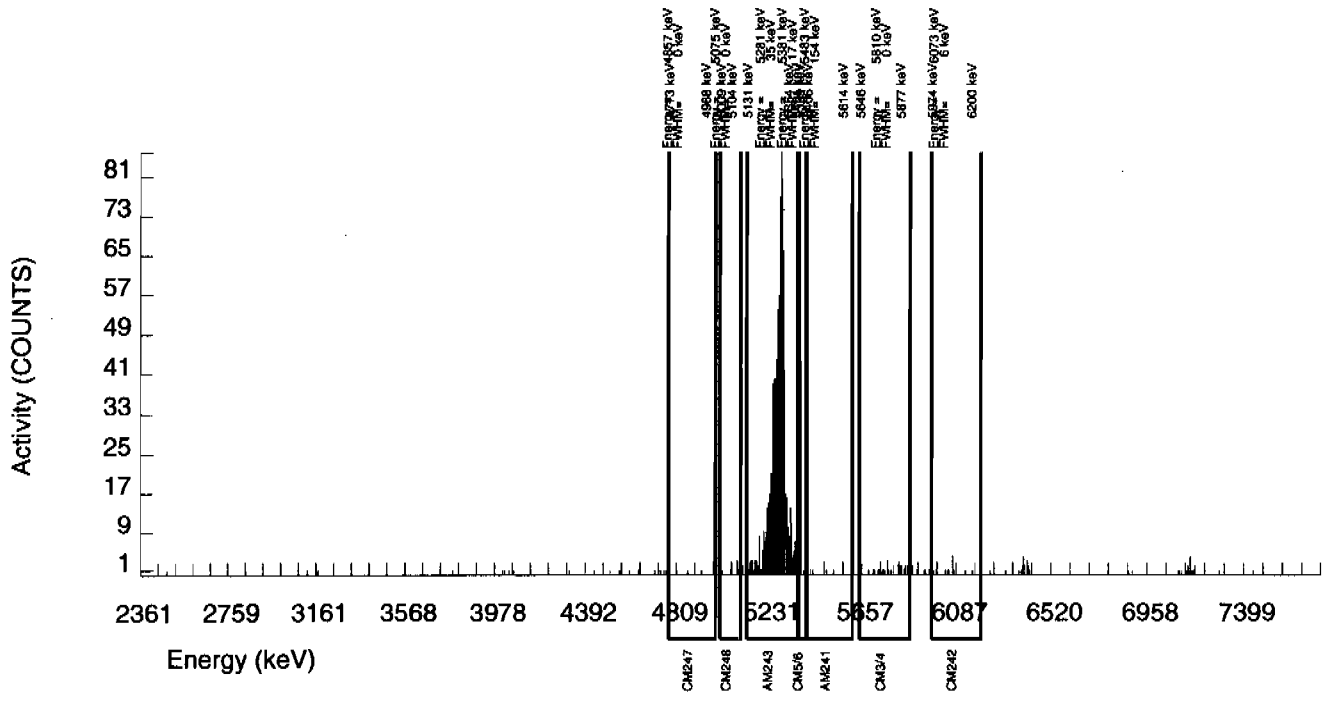
COUNT DATE: 5-JAN-2010 15:09:34
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B044.CNF;1104
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91660 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 2.49903 dpm	EFF FILE : W044.CNF;305
			CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	30.000	8.000	22.000	5.2338	100.0000	9.65E-03	8.71E-03	1.47E-02	3.26E-02	8.69E-03
CM-5/6	5386.000	8.000	8.000	0.000	19.8463	86.09000	1.12E-02	4.01E-03	6.45E-02	1.33E-01	3.95E-03
AM-241	5479.150	6.000	3.489	1.000	3.0704	99.94000	4.20E-03	2.83E-03	8.60E-03	2.05E-02	2.82E-03
CM-242	6102.000	14.000	10.000	4.000	4.3186	100.0000	1.30E-02	5.59E-03	1.21E-02	2.74E-02	5.53E-03
AM243	5270.000	869.000	868.000	1.000	1.0000	99.78000	1.05E+00	7.21E-02	2.81E-03	8.88E-03	3.56E-02
CM-247	4946.000	3.000	-1.000	4.000	15.3366	79.30000	-1.52E-03	4.02E-03	5.41E-02	1.12E-01	4.01E-03
CM-248	5078.600	11.000	11.000	0.000	22.1555	91.00000	1.45E-02	4.47E-03	6.82E-02	1.40E-01	4.39E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 06-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

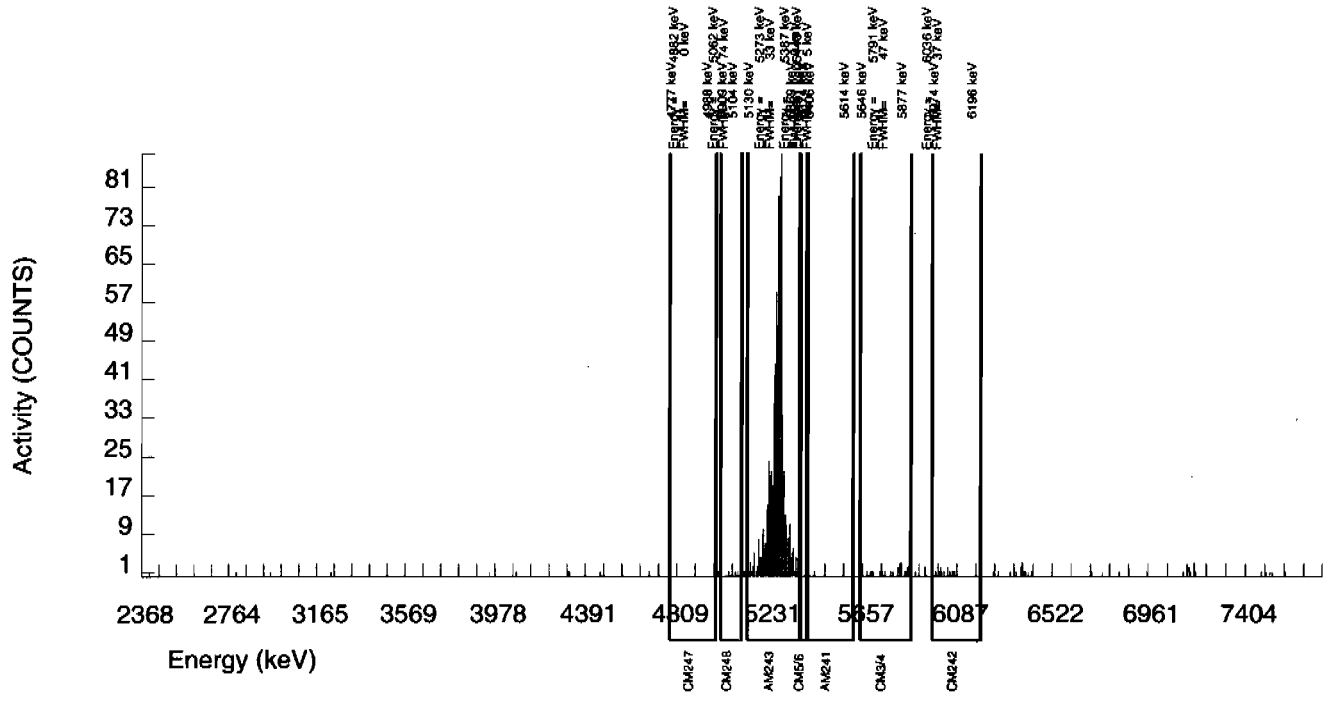
BATCH NUMBER: 937596 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492004_AM SAMPLE QTY: 1.261 G
DETECTOR NUMBER :78783 AVERAGE %EFFICIENCY :33.6899 % YIELD : 85.574	COUNT DATE: 5-JAN-2010 15:09:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.49586 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B045.CNF;1093 BKG DATE : 3-JAN-2010 EFF FILE : W045.CNF;296 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	22.000	-2.000	24.000	5.2338	100.0000	-2.48E-03	8.42E-03	1.51E-02	3.35E-02	8.42E-03
CM-5/6	5386.000	1.000	1.000	0.000	19.8463	86.09000	1.44E-03	1.44E-03	6.65E-02	1.37E-01	1.44E-03
AM-241	5479.150	1.000	-1.460	1.000	3.0704	99.94000	-1.81E-03	1.76E-03	8.86E-03	2.11E-02	1.75E-03
CM-242	6102.000	13.000	12.000	1.000	4.3186	100.0000	1.61E-02	5.12E-03	1.24E-02	2.83E-02	5.03E-03
AM243	5270.000	840.000	839.000	1.000	1.0000	99.78000	1.04E+00	7.24E-02	2.89E-03	9.14E-03	3.60E-02
CM-247	4946.000	0.000	-1.000	1.000	15.3366	79.30000	-1.56E-03	2.21E-03	5.57E-02	1.16E-01	2.21E-03
CM-248	5078.600	4.000	4.000	0.000	22.1555	91.00000	5.45E-03	2.74E-03	7.02E-02	1.44E-01	2.72E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

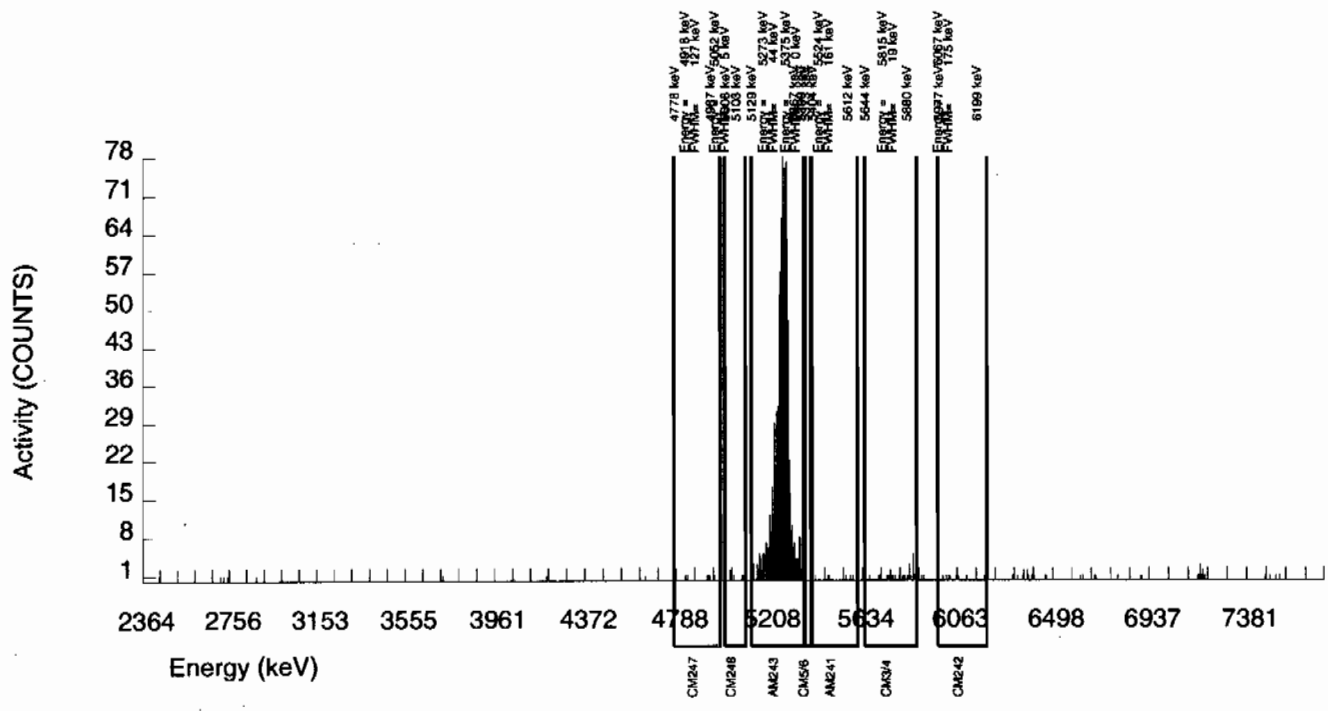
BATCH NUMBER: 937596 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492005_AM SAMPLE QTY: 1.254 G
DETECTOR NUMBER :76544 AVERAGE %EFFICIENCY :33.8926 % YIELD : 90.233	COUNT DATE: 5-JAN-2010 15:09:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.63174 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B046.CNF;1104 BKG DATE : 3-JAN-2010 EFF FILE : W046.CNF;287 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	29.000	11.000	18.000	5.2338	100.0000	1.29E-02	8.11E-03	1.43E-02	3.18E-02	8.07E-03
CM-5/6	5386.000	2.000	2.000	0.000	19.8463	86.09000	2.73E-03	1.94E-03	6.30E-02	1.30E-01	1.93E-03
AM-241	5479.150	6.000	0.451	4.000	3.0704	99.94000	5.30E-04	3.42E-03	8.39E-03	2.00E-02	3.42E-03
CM-242	6102.000	8.000	3.000	5.000	4.3186	100.0000	3.82E-03	4.60E-03	1.18E-02	2.68E-02	4.59E-03
AM243	5270.000	893.000	890.000	3.000	1.7321	99.78000	1.05E+00	7.18E-02	4.74E-03	1.27E-02	3.52E-02
CM-247	4946.000	7.000	6.000	1.000	15.3366	79.30000	8.89E-03	4.22E-03	5.28E-02	1.10E-01	4.19E-03
CM-248	5078.600	7.000	7.000	0.000	22.1555	91.00000	9.04E-03	3.46E-03	6.65E-02	1.37E-01	3.41E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

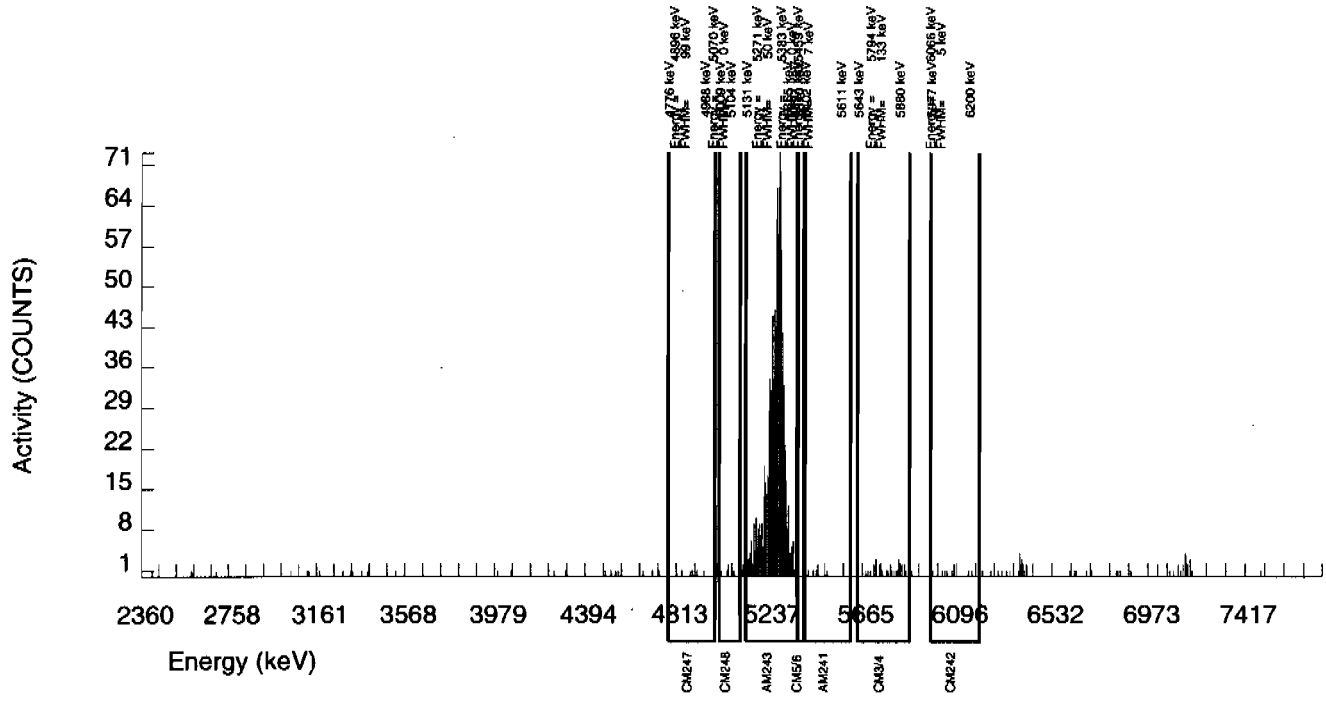
BATCH NUMBER: 937596 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492006_AM SAMPLE QTY: 1.260 G
DETECTOR NUMBER :46-089B1 AVERAGE %EFFICIENCY :34.5024 % YIELD : 89.136	COUNT DATE: 5-JAN-2010 15:09:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.59975 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B047.CNF;1099 BKG DATE : 3-JAN-2010 EFF FILE : W047.CNF;301 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	33.000	13.000	20.000	5.2338	100.0000	1.51E-02	8.53E-03	1.42E-02	3.15E-02	8.48E-03
CM-5/6	5386.000	5.000	5.000	0.000	19.8463	86.09000	6.75E-03	3.05E-03	6.23E-02	1.28E-01	3.02E-03
AM-241	5479.150	8.000	-1.558	8.000	3.0704	99.94000	-1.81E-03	4.42E-03	8.31E-03	1.98E-02	4.42E-03
CM-242	6102.000	11.000	10.000	1.000	4.3186	100.0000	1.26E-02	4.43E-03	1.17E-02	2.65E-02	4.37E-03
AM243	5270.000	900.000	895.000	5.000	2.2361	99.78000	1.04E+00	7.14E-02	6.06E-03	1.53E-02	3.50E-02
CM-247	4946.000	5.000	2.000	3.000	15.3366	79.30000	2.93E-03	4.15E-03	5.23E-02	1.09E-01	4.15E-03
CM-248	5078.600	8.000	7.000	1.000	22.1555	91.00000	8.94E-03	3.87E-03	6.58E-02	1.35E-01	3.83E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

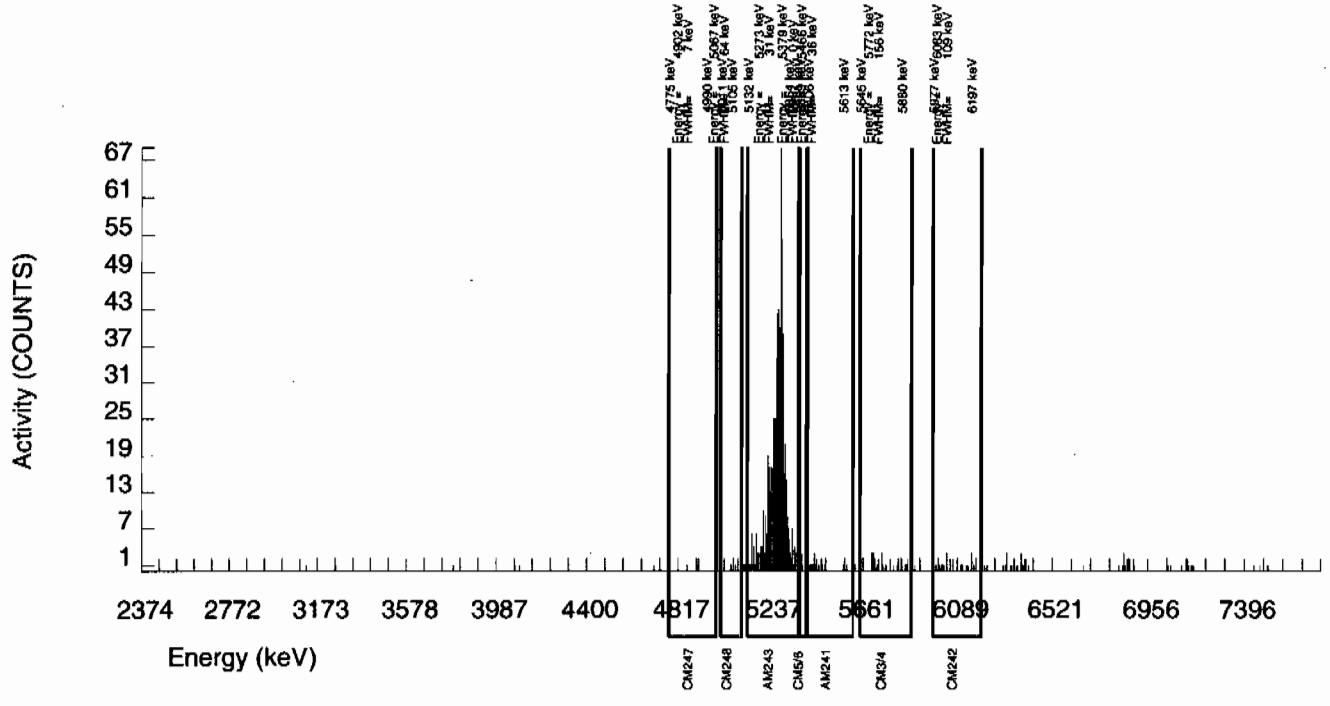
BATCH NUMBER: 937596 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492007_AM SAMPLE QTY: 1.259 G
DETECTOR NUMBER :42483 AVERAGE %EFFICIENCY :31.2622 % YIELD : 66.389	COUNT DATE: 5-JAN-2010 15:09:34 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 1.93631 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B048.CNF;1100 BKG DATE : 3-JAN-2010 EFF FILE : W048.CNF;314 CAL DATE : 4-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	34.000	14.000	20.000	5.2338	100.0000	2.42E-02	1.28E-02	2.10E-02	4.67E-02	1.27E-02
CM-5/6	5386.000	11.000	9.000	2.000	19.8463	86.09000	1.80E-02	7.31E-03	9.25E-02	1.90E-01	7.22E-03
AM-241	5479.150	18.000	5.949	11.000	3.0704	99.94000	1.03E-02	9.14E-03	1.23E-02	2.93E-02	9.12E-03
CM-242	6102.000	20.000	19.000	1.000	4.3186	100.0000	3.55E-02	8.86E-03	1.73E-02	3.93E-02	8.56E-03
AM243	5270.000	609.000	604.000	5.000	2.2361	99.78000	1.04E+00	7.95E-02	8.99E-03	2.27E-02	4.28E-02
CM-247	4946.000	4.000	2.000	2.000	15.3366	79.30000	4.35E-03	5.33E-03	7.76E-02	1.61E-01	5.32E-03
CM-248	5078.600	6.000	6.000	0.000	22.1555	91.00000	1.14E-02	4.70E-03	9.76E-02	2.00E-01	4.64E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

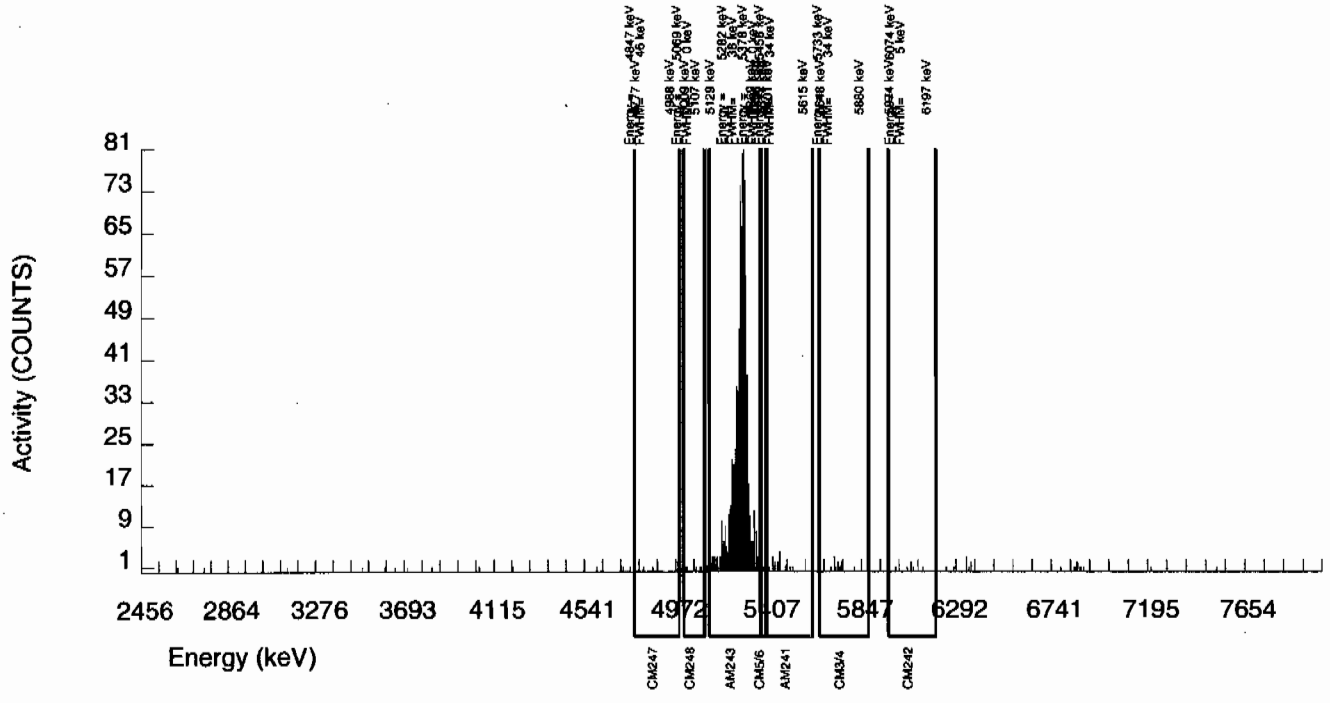
BATCH NUMBER: 937596 SAMPLE DATE : 30-DEC-2009 00:00:00	SAMPLE ID : S1202006343_AM SAMPLE QTY: 1.000 G
DETECTOR NUMBER :67602 AVERAGE %EFFICIENCY :32.0568 % YIELD : 91.113	COUNT DATE: 5-JAN-2010 14:30:18 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91659 dpm RESULTS : 2.65739 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B110.CNF;670 BKG DATE : 3-JAN-2010 EFF FILE : W110.CNF;209 CAL DATE : 10-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	14.000	3.000	11.000	5.2338	100.0000	4.63E-03	7.72E-03	1.88E-02	4.17E-02	7.72E-03
CM-5/6	5386.000	6.000	4.000	2.000	19.8463	86.09000	7.17E-03	5.09E-03	8.27E-02	1.70E-01	5.07E-03
AM-241	5479.150	19.000	3.521	14.000	3.0704	99.94000	5.43E-03	8.67E-03	1.10E-02	2.62E-02	8.66E-03
CM-242	6102.000	7.000	4.000	3.000	4.3186	100.0000	6.35E-03	5.04E-03	1.55E-02	3.52E-02	5.02E-03
AM243	5270.000	856.000	850.000	6.000	2.4495	99.78000	1.31E+00	9.12E-02	8.81E-03	2.18E-02	4.54E-02
CM-247	4946.000	2.000	1.000	1.000	15.3366	79.30000	1.94E-03	3.37E-03	6.94E-02	1.44E-01	3.37E-03
CM-248	5078.600	8.000	7.000	1.000	22.1555	91.00000	1.19E-02	5.13E-03	8.74E-02	1.79E-01	5.08E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937596
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S1202006344_AM
SAMPLE QTY: 1.270 G

DETECTOR NUMBER :79462
AVERAGE %EFFICIENCY :35.5462
% YIELD : 82.266

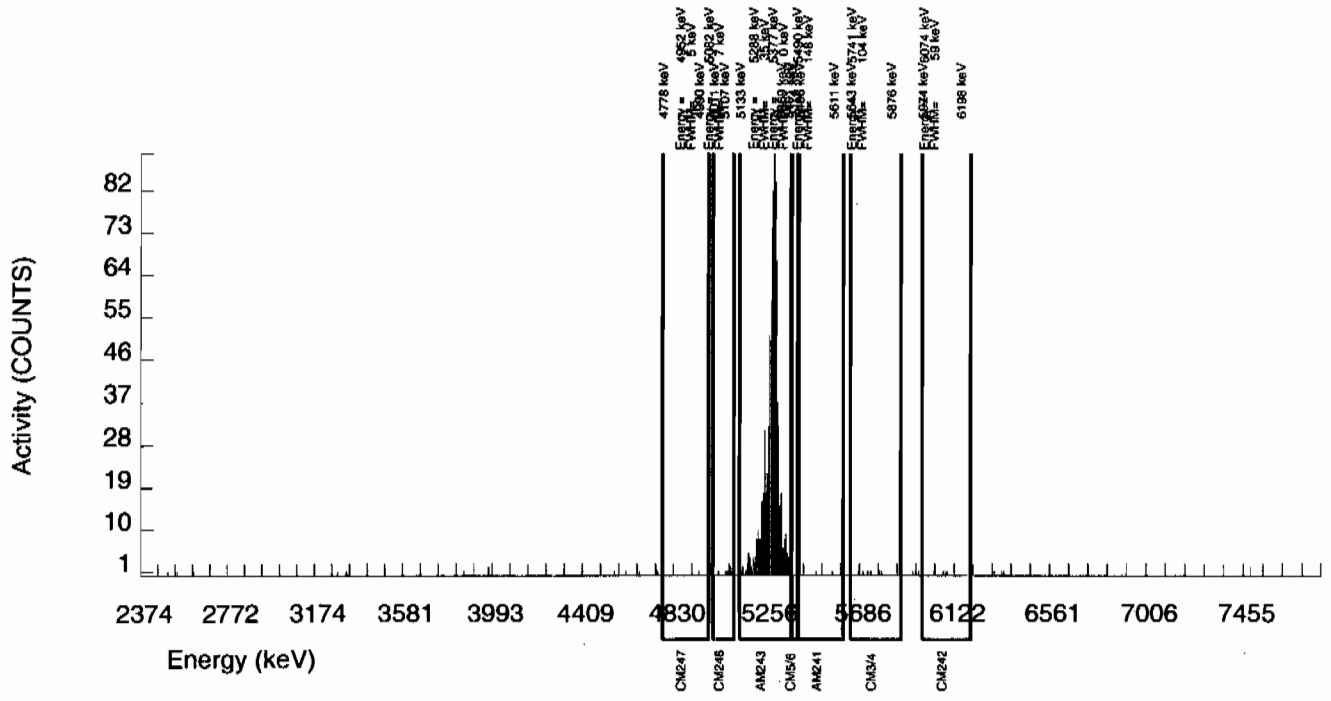
COUNT DATE: 5-JAN-2010 14:30:18
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B111.CNF;665
PCI/G : 3.316E+01	PCI/G : 3.316E+01	NOMINAL : 2.91660 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 2.39936 dpm	EFF FILE : W111.CNF;205
			CAL DATE : 10-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	7.000	7.000	0.000	5.2338	100.0000	8.51E-03	3.26E-03	1.48E-02	3.28E-02	3.22E-03
CM-5/6	5386.000	7.000	7.000	0.000	19.8463	86.09000	9.86E-03	3.77E-03	6.50E-02	1.34E-01	3.73E-03
AM-241	5479.150	3.000	0.519	1.000	3.0704	99.94000	6.30E-04	1.93E-03	8.67E-03	2.06E-02	1.93E-03
CM-242	6102.000	4.000	2.000	2.000	4.3186	100.0000	2.63E-03	3.22E-03	1.22E-02	2.77E-02	3.22E-03
AM243	5270.000	855.000	851.000	4.000	2.0000	99.78000	1.03E+00	7.17E-02	5.66E-03	1.46E-02	3.56E-02
CM-247	4946.000	1.000	-2.000	3.000	15.3366	79.30000	-3.06E-03	3.06E-03	5.46E-02	1.13E-01	3.06E-03
CM-248	5078.600	7.000	5.000	2.000	22.1555	91.00000	6.66E-03	4.02E-03	6.87E-02	1.41E-01	4.00E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

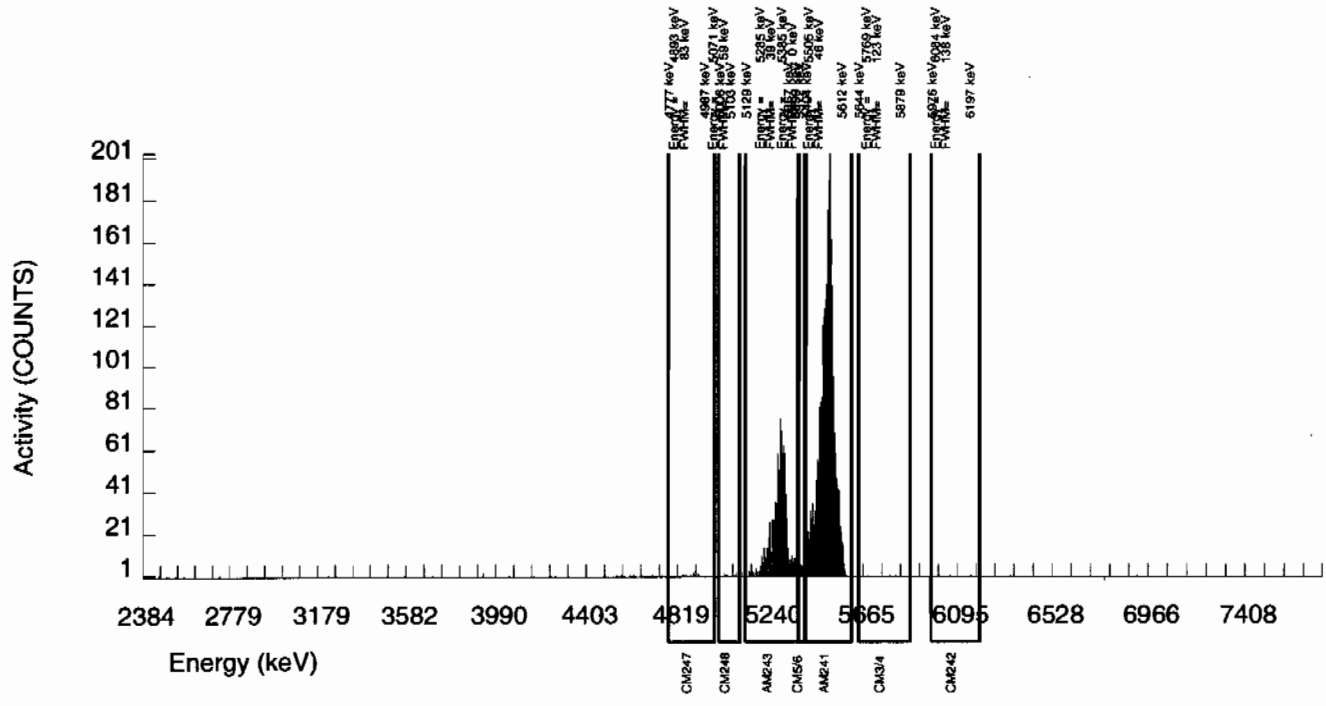
BATCH NUMBER: 937596 SAMPLE DATE : 30-DEC-2009 00:00:00	SAMPLE ID : S1202006345_AM SAMPLE QTY: 0.113 G
DETECTOR NUMBER :78261 AVERAGE %EFFICIENCY :31.5612 % YIELD : 96.137	COUNT DATE: 5-JAN-2010 14:30:18 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 0244-B ISOTOPE : AM-241 PCI/G : 3.316E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91659 dpm RESULTS : 2.80391 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B112.CNF;673 BKG DATE : 3-JAN-2010 EFF FILE : W112.CNF;216 CAL DATE : 10-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
CM-3/4	5795.020	3.000	2.000	1.000	5.2338	100.0000	2.63E-02	2.64E-02	1.60E-01	3.56E-01	2.63E-02
CM-5/6	5386.000	57.000	57.000	0.000	19.8463	86.09000	8.70E-01	1.29E-01	7.05E-01	1.45E+00	1.15E-01
AM-241	5479.150	2454.000	2452.463	0.000	3.0704	99.94000	3.22E+01	2.23E+00	9.39E-02	2.23E-01	6.51E-01
CM-242	6102.000	3.000	2.000	1.000	4.3186	100.0000	2.71E-02	2.71E-02	1.32E-01	3.00E-01	2.71E-02
AM243	5270.000	888.000	883.000	5.000	2.2361	99.78000	1.16E+01	8.65E-01	6.85E-02	1.73E-01	3.93E-01
CM-247	4946.000	15.000	9.000	6.000	15.3366	79.30000	1.49E-01	7.66E-02	5.91E-01	1.23E+00	7.59E-02
CM-248	5078.600	15.000	15.000	0.000	22.1555	91.00000	2.17E-01	5.77E-02	7.44E-01	1.53E+00	5.59E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of AM243 calculated as sqrt(BKG AREA)
NOTE: Corrections made to AM-241 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev 9

Batch# 937598 Product: PU Date: 1/5/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			MA
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			MA
Smears Taken for Radioactive batches.			MA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			MA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			MA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			MA
Batch non-conformances second reviewed and disposition verified to be completed.			MA
Aliquot Correction completed if required.			MA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analyses.)	✓		

GEL Laboratories, LLC

revised 8/1/06

Primary Review Performed By: Denise Green 1/5/10

Secondary Review Performed By: Joel McCormick 1/5/10

1/19

PJ

Plutonium Que Sheet

30-DEC-09

Batch #: 937598 Analyst: JXD2 First Client Due Date:19-JAN-10 Internal Due Date:08-JAN-10

Tracer Isotope(s): (Pu-242)/Pu-238 Tracer Code: 1374-A Expiration Date: 12/08/10 Vol: 0.1

LCS Isotope(s): Pu-239/Pu-238 LCS Code: — Expiration Date: — Vol: —

Spike Isotope(s): Pu-239/Pu-238 Spike Code: — Expiration Date: — Vol: —

Prep Date: 12/30/09 Initials: JXD Pipet ID: 2576058 Balance ID: 50410272 Witness: MC 12/30/9

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/(Dry) Aliquot (g) l / f)	Pu Det #
243385001-1	RE12-10-7580	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	1	1	1.251	83
243385002-1	RE12-10-7590	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	2	2	1.252	84
243385003-1	RE12-10-7592	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	3	3	1.255	85
243385004-1	RE12-10-7591	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	4	4	1.254	86
243385005-1	RE12-10-7581	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	5	5	1.278	87
243385006-1	RE12-10-7586	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	6	6	1.261	88
243385007-1	RE12-10-7587	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	7	7	1.255	89
243385008-1	RE12-10-7585	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	8	8	1.268	90
243385009-1	RE12-10-7582	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	9	9	1.263	91
243385010-1	RE12-10-7584	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	10	10	1.254	92
243385011-1	RE12-10-7583	SAMPLE		.05 pCi/g	SOIL	LANL010	17-DEC-09	11	11	1.251	93
243492001-1	RE12-10-7288	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	12	12	1.252	94
243492002-1	RE12-10-7290	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	13	13	1.250	246
243492003-1	RE12-10-7289	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	14	14	1.255	252
243492004-1	RE12-10-7291	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	15	15	1.261	253
243492005-1	RE12-10-7292	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	16	16	1.254	216
243492006-1	RE12-10-7293	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	17	17	1.260	236
243492007-1	RE12-10-7296	SAMPLE		.05 pCi/g	SOIL	LANL010	18-DEC-09	18	18	1.259	242
1202006346-1	MB for batch 937598	MB		.05 pCi/g	SOIL	QC ACCOUNT		19	19	1	218
1202006347-1	RE12-10-7296(243492007DUP)	DUP		.05 pCi/g	SOIL	QC ACCOUNT	18-DEC-09	20	20	1.270	221
1202006348-1	LCS for batch 937598	LCS		.05 pCi/g	SOIL	QC ACCOUNT		21	21	0.113	234

* SRM 0244-B exp. 04/30/20 0.113 g

Choose SOP Used: (GL-RAD-A-011) GL-RAD-A-036, GL-RAD-A-045, GL-RAD-A-043

Solid Sample Dissolution by: (LEACH) or DIGESTION Circle One

Data Reviewed By: 1/5/10

1/5/10

Blank Correction Report

Batch ID 937598

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202006347	DUP	Plutonium-238	1.27 g	0.00	0.00268	0.0218	-.00111024	pCi/g	NO
		Plutonium-239/240	1.27 g	0.00402	0.00233	0.0245	0	pCi/g	NO
1202006348	LCS	Plutonium-238	0.113 g	6.74	0.468	0.178	-.01247788	pCi/g	NO
		Plutonium-239/240	0.113 g	33.8	2.01	0.200	0	pCi/g	NO
1202006346	MB	Plutonium-238	1.00 g	-0.00141	0.00244	0.0229	-.00141	pCi/g	NO
		Plutonium-239/240	1.00 g	0.00	0.00199	0.0257	0	pCi/g	NO
243385001	RE12-10-7580	Plutonium-238	1.25 g	0.0134	0.00662	0.0218	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0175	0.00561	0.0246	0	pCi/g	NO
243385002	RE12-10-7590	Plutonium-238	1.25 g	0.0042	0.00243	0.0227	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00979	0.00373	0.0256	0	pCi/g	NO
243385003	RE12-10-7592	Plutonium-238	1.26 g	0.00274	0.00275	0.0223	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00274	0.00275	0.0251	0	pCi/g	NO
243385004	RE12-10-7591	Plutonium-238	1.25 g	0.00141	0.00423	0.0229	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00705	0.00425	0.0258	0	pCi/g	NO
243385005	RE12-10-7581	Plutonium-238	1.28 g	0.00	0.00426	0.0219	-.00110156	pCi/g	NO
		Plutonium-239/240	1.28 g	0.00269	0.00426	0.0246	0	pCi/g	NO
243385006	RE12-10-7586	Plutonium-238	1.26 g	0.0189	0.00795	0.0279	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	0.0103	0.0049	0.0315	0	pCi/g	NO
243385007	RE12-10-7587	Plutonium-238	1.26 g	0.00148	0.00149	0.0241	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	-3.54E-10	0.00297	0.0271	0	pCi/g	YES
243385008	RE12-10-7585	Plutonium-238	1.27 g	0.00367	0.00213	0.0199	-.00111024	pCi/g	NO
		Plutonium-239/240	1.27 g	0.00734	0.00302	0.0224	0	pCi/g	NO
243385009	RE12-10-7582	Plutonium-238	1.26 g	-0.00133	0.00188	0.0215	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	-3.16E-10	0.00265	0.0243	0	pCi/g	YES
243385010	RE12-10-7584	Plutonium-238	1.25 g	-0.00139	0.00197	0.0225	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0167	0.00489	0.0254	0	pCi/g	NO
243385011	RE12-10-7583	Plutonium-238	1.25 g	0.00413	0.00239	0.0223	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	-1.64E-10	0.00195	0.0252	0	pCi/g	YES
243492001	RE12-10-7288	Plutonium-238	1.25 g	0.00279	0.00198	0.0227	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.0209	0.00587	0.0255	0	pCi/g	NO
243492002	RE12-10-7290	Plutonium-238	1.25 g	0.00244	0.00244	0.0198	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00488	0.003	0.0223	0	pCi/g	NO
243492003	RE12-10-7289	Plutonium-238	1.26 g	0.00	0.00166	0.0191	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00705	0.0029	0.0215	0	pCi/g	NO
243492004	RE12-10-7291	Plutonium-238	1.26 g	0.00359	0.00397	0.0194	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00359	0.00317	0.0219	0	pCi/g	NO
243492005	RE12-10-7292	Plutonium-238	1.25 g	-0.00124	0.00216	0.0202	-.001128	pCi/g	NO
		Plutonium-239/240	1.25 g	0.00373	0.00216	0.0227	0	pCi/g	NO
243492006	RE12-10-7293	Plutonium-238	1.26 g	0.00	0.00106	0.0172	-.00111905	pCi/g	NO

1/5/10

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
243492006	RE12-10-7293	Plutonium-239/240	1.26 g	0.00	0.0015	0.0194	0	pCi/g	NO
243492007	RE12-10-7296	Plutonium-238	1.26 g	0.00733	0.00302	0.0198	-.00111905	pCi/g	NO
		Plutonium-239/240	1.26 g	0.00733	0.00347	0.0223	0	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

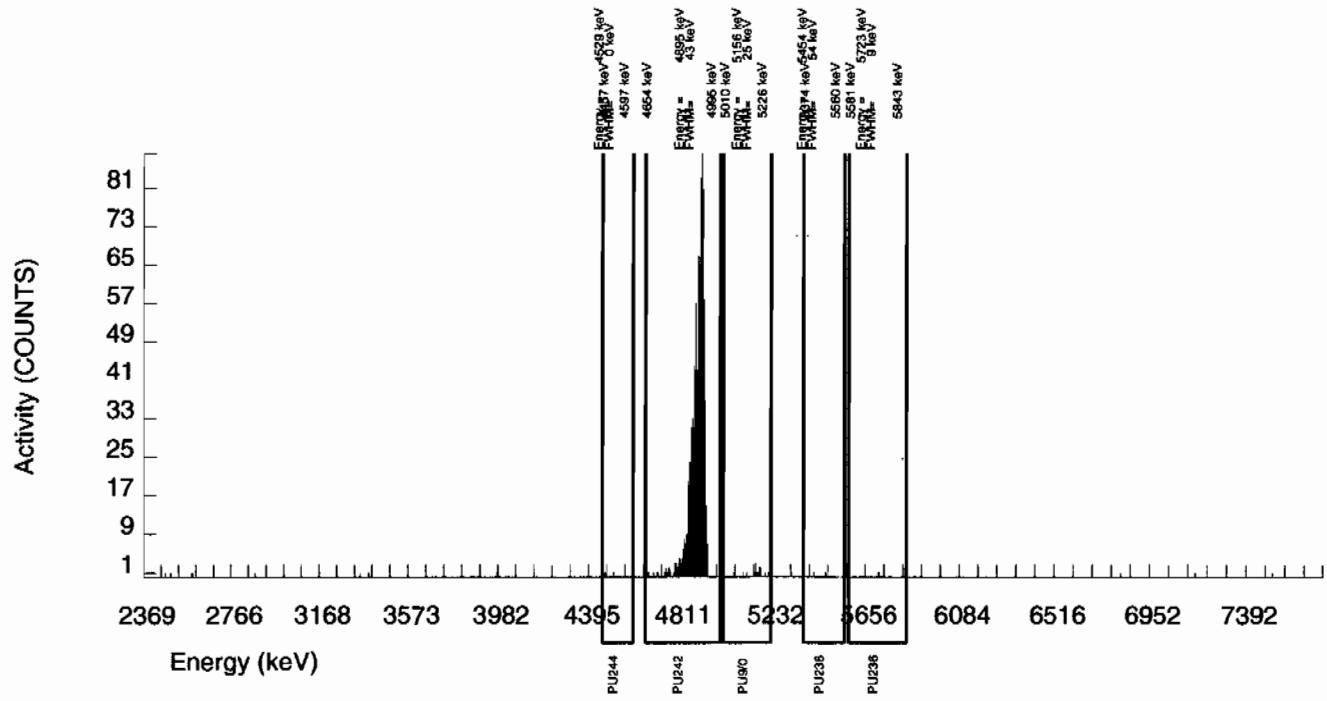
BATCH NUMBER: 937598 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492001_PU SAMPLE QTY: 1.252 G
DETECTOR NUMBER :78267 AVERAGE %EFFICIENCY :30.5804 % YIELD : 84.325	COUNT DATE: 4-JAN-2010 18:14:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.85477 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B094.CNF;701 BKG DATE : 3-JAN-2010 EFF FILE : W094.CNF;189 CAL DATE : 10-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	16.000	15.000	1.000	3.3488	99.90000	2.09E-02	5.87E-03	1.09E-02	2.55E-02	5.76E-03
PU-236	5749.000	2.000	1.000	1.000	2.0294	100.0000	1.41E-03	2.45E-03	6.59E-03	1.70E-02	2.45E-03
PU-238	5499.000	2.000	2.000	0.000	2.9082	99.90000	2.79E-03	1.98E-03	9.45E-03	2.27E-02	1.98E-03
PU242	4890.000	875.000	873.000	2.000	1.4142	100.0000	1.22E+00	7.79E-02	4.59E-03	1.30E-02	4.13E-02
PU-244	4589.000	3.000	2.000	1.000	6.8218	99.90000	2.79E-03	2.80E-03	2.22E-02	4.81E-02	2.79E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937598
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243492002_PU
SAMPLE QTY: 1.250 G

DETECTOR NUMBER :78912
AVERAGE %EFFICIENCY :37.7449
% YIELD : 78.336

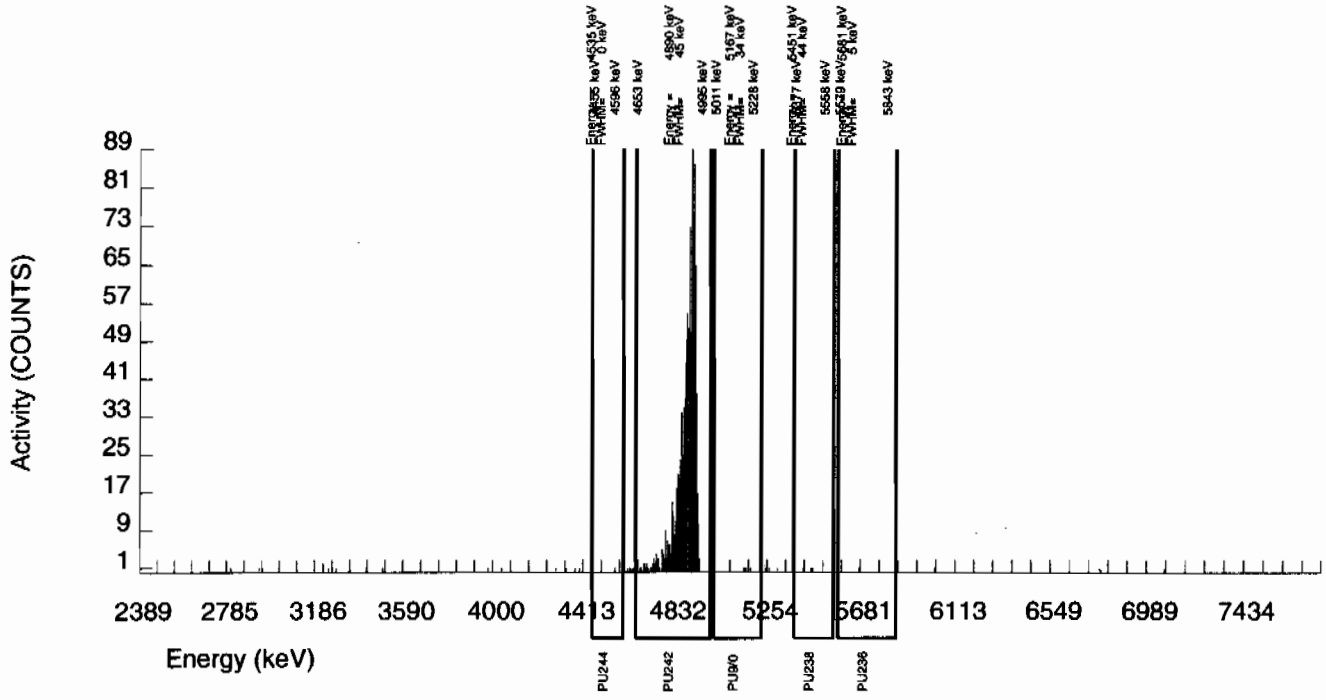
COUNT DATE: 4-JAN-2010 15:46:48
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B246.CNF;66
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 2.65201 dpm	EFF FILE : W246.CNF;26
			CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	4.000	1.000	3.3488	99.90000	4.88E-03	3.00E-03	9.50E-03	2.23E-02	2.99E-03
PU-236	5749.000	1.000	0.000	1.000	2.0294	100.0000	0.00E+00	1.75E-03	5.75E-03	1.48E-02	1.74E-03
PU-238	5499.000	3.000	2.000	1.000	2.9082	99.90000	2.44E-03	2.44E-03	8.25E-03	1.98E-02	2.44E-03
PU242	4890.000	1003.000	1001.000	2.000	1.4142	100.0000	1.22E+00	7.29E-02	4.01E-03	1.13E-02	3.86E-02
PU-244	4589.000	3.000	3.000	0.000	6.8218	99.90000	3.66E-03	2.12E-03	1.94E-02	4.20E-02	2.11E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

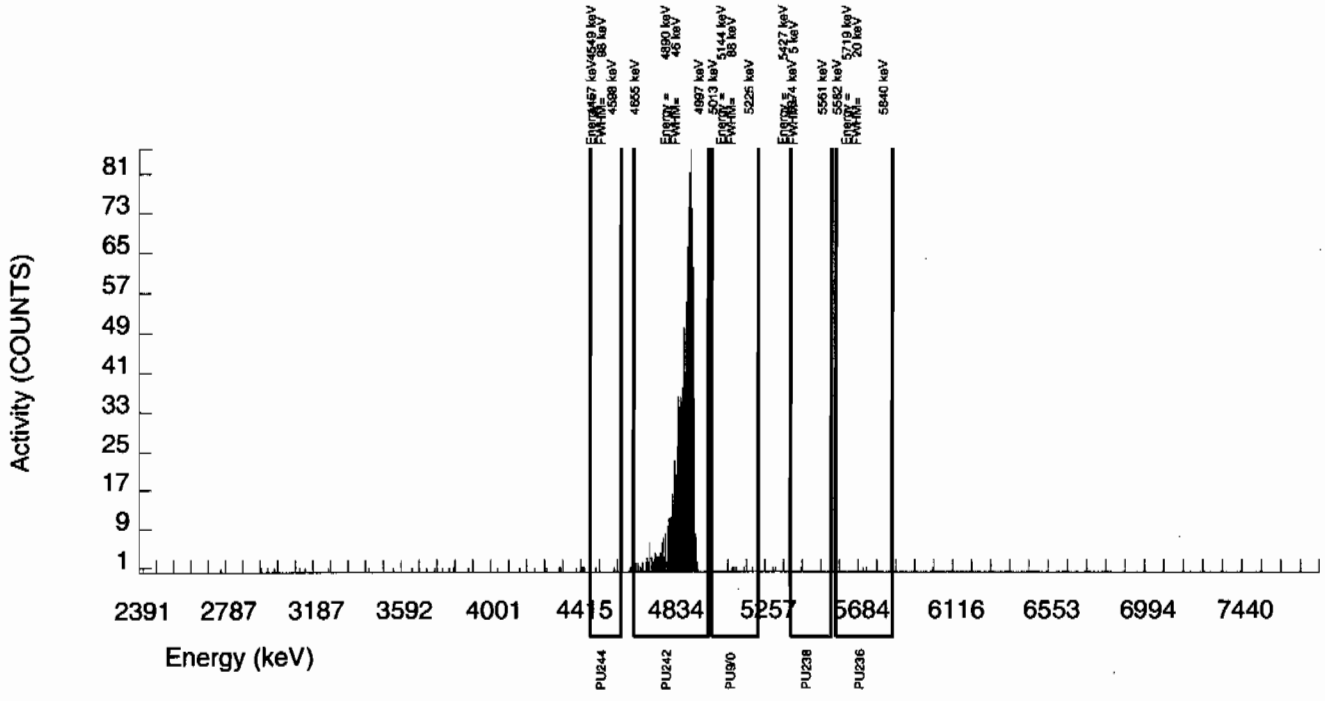
BATCH NUMBER: 937598 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492003_PU SAMPLE QTY: 1.255 G
DETECTOR NUMBER :79445 AVERAGE %EFFICIENCY :37.6905 % YIELD : 81.114	COUNT DATE: 4-JAN-2010 15:47:02 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.74605 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B252.CNF;66 BKG DATE : 3-JAN-2010 EFF FILE : W252.CNF;25 CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	6.000	6.000	0.000	3.3488	99.90000	7.05E-03	2.90E-03	9.16E-03	2.15E-02	2.88E-03
PU-236	5749.000	2.000	2.000	0.000	2.0294	100.0000	2.38E-03	1.68E-03	5.54E-03	1.43E-02	1.68E-03
PU-238	5499.000	1.000	0.000	1.000	2.9082	99.90000	0.00E+00	1.66E-03	7.95E-03	1.91E-02	1.66E-03
PU242	4890.000	1035.000	1035.000	0.000	0.0000	100.0000	1.22E+00	7.19E-02	0.00E+00	3.18E-03	3.78E-02
PU-244	4589.000	3.000	2.000	1.000	6.8218	99.90000	2.35E-03	2.35E-03	1.87E-02	4.05E-02	2.35E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937598
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243492004_PU
SAMPLE QTY: 1.261 G

DETECTOR NUMBER :79446
AVERAGE %EFFICIENCY :38.2668
% YIELD : 78.194

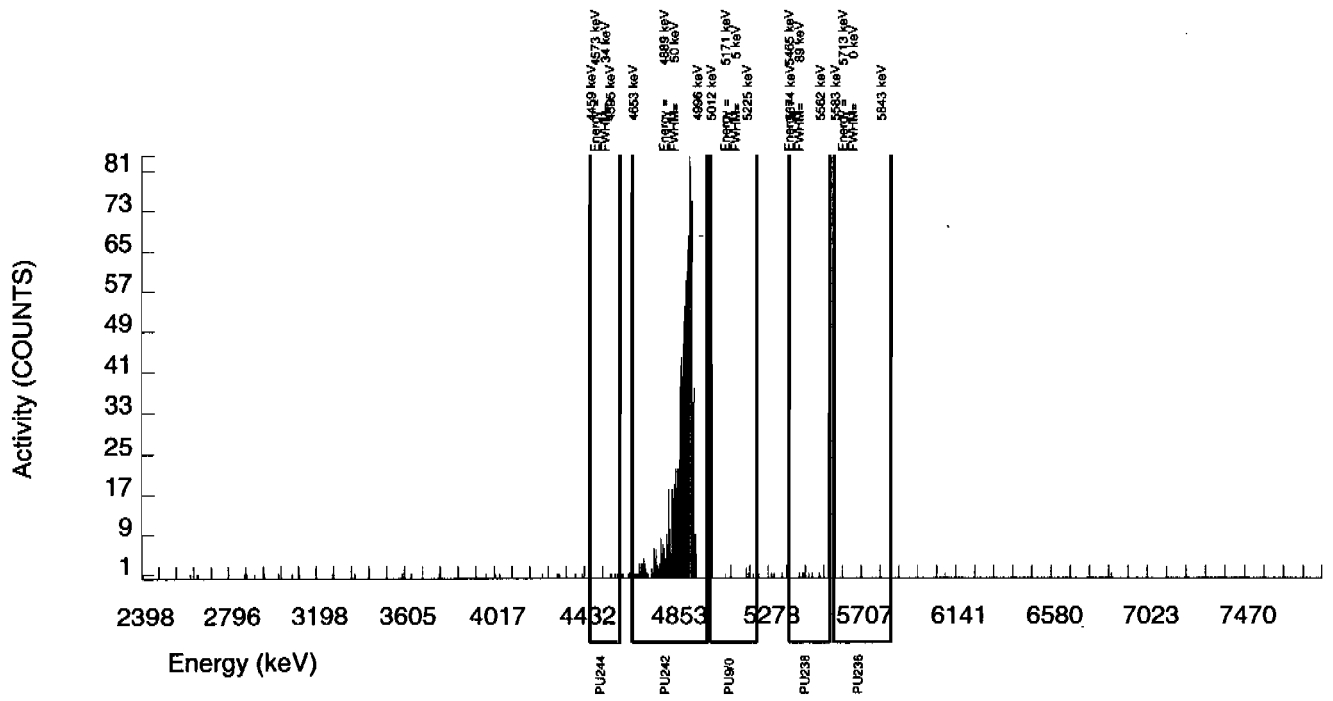
COUNT DATE: 4-JAN-2010 15:47:05
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B253.CNF;68
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 2.64720 dpm	EFF FILE : W253.CNF;24
			CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	5.000	3.000	2.000	3.3488	99.90000	3.59E-03	3.17E-03	9.31E-03	2.19E-02	3.16E-03
PU-236	5749.000	0.000	-1.000	1.000	2.0294	100.0000	-1.21E-03	1.71E-03	5.64E-03	1.45E-02	1.71E-03
PU-238	5499.000	7.000	3.000	4.000	2.9082	99.90000	3.59E-03	3.97E-03	8.08E-03	1.94E-02	3.96E-03
PU242	4890.000	1015.000	1013.000	2.000	1.4142	100.0000	1.21E+00	7.20E-02	3.93E-03	1.11E-02	3.81E-02
PU-244	4589.000	4.000	4.000	0.000	6.8218	99.90000	4.78E-03	2.40E-03	1.90E-02	4.12E-02	2.39E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

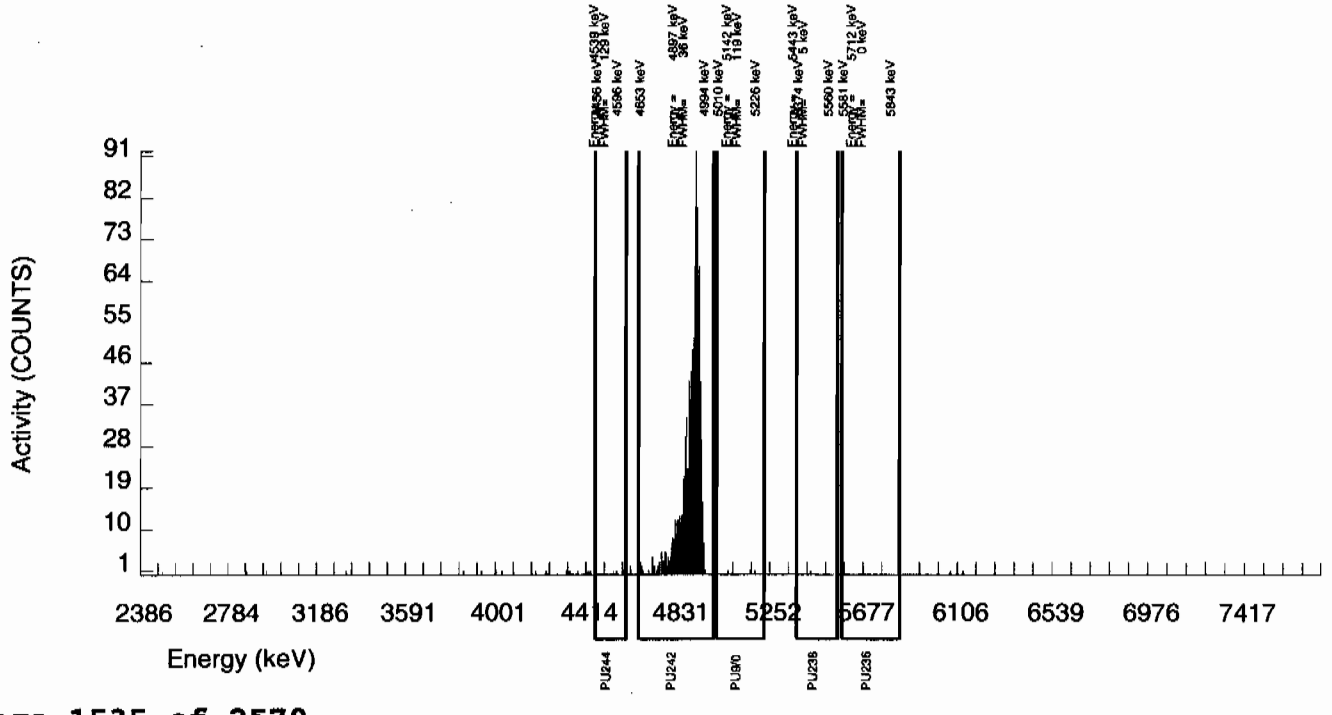
BATCH NUMBER: 937598 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492005_PU SAMPLE QTY: 1.254 G
DETECTOR NUMBER :79195 AVERAGE %EFFICIENCY :39.3107 % YIELD : 73.563	COUNT DATE: 4-JAN-2010 11:23:14 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.49042 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B216.CNF;66 BKG DATE : 3-JAN-2010 EFF FILE : W216.CNF;24 CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3.000	3.000	0.000	3.3488	99.90000	3.73E-03	2.16E-03	9.69E-03	2.27E-02	2.15E-03
PU-236	5749.000	0.000	0.000	0.000	2.0294	100.0000	0.00E+00	1.26E-03	5.86E-03	1.51E-02	1.26E-03
PU-238	5499.000	1.000	-1.000	2.000	2.9082	99.90000	-1.24E-03	2.16E-03	8.41E-03	2.02E-02	2.15E-03
PU242	4890.000	980.000	979.000	1.000	1.0000	100.0000	1.22E+00	7.31E-02	2.89E-03	9.15E-03	3.89E-02
PU-244	4589.000	4.000	4.000	0.000	6.8218	99.90000	4.97E-03	2.50E-03	1.97E-02	4.28E-02	2.49E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

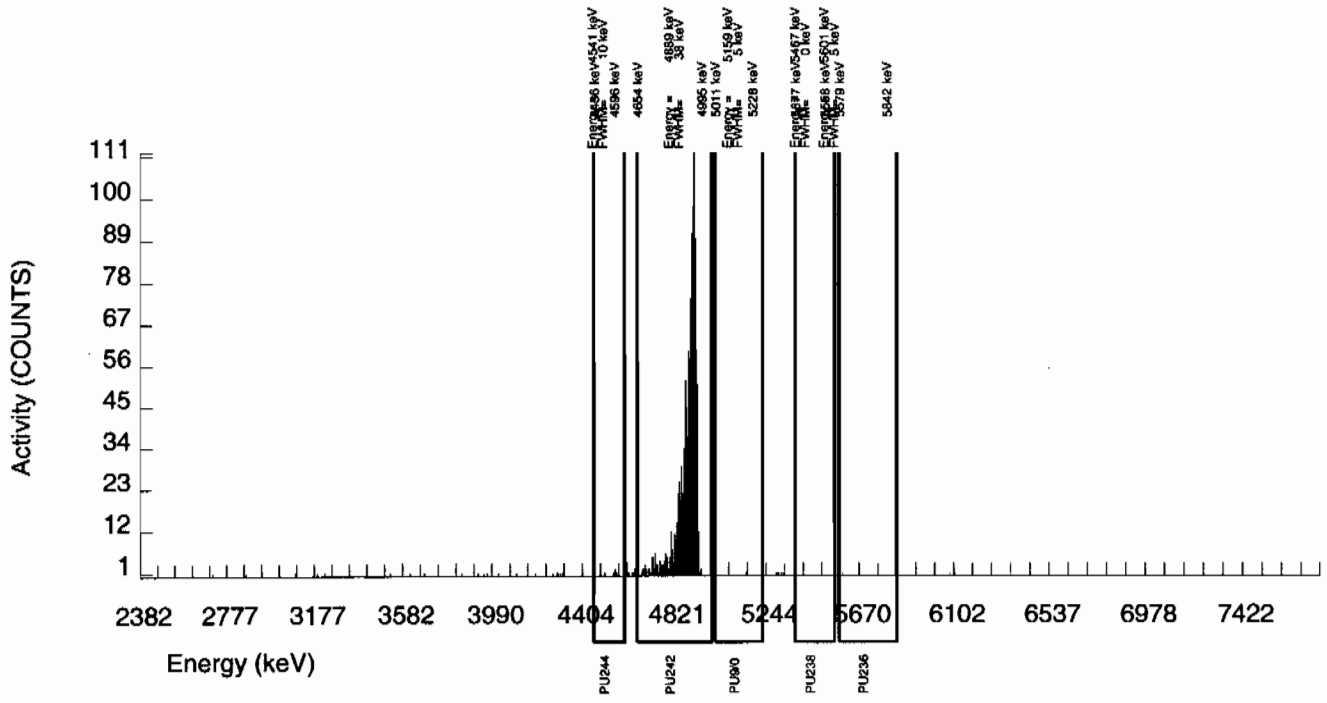
BATCH NUMBER: 937598 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492006_PU SAMPLE QTY: 1.260 G
DETECTOR NUMBER :79429 AVERAGE %EFFICIENCY :38.5832 % YIELD : 87.352	COUNT DATE: 4-JAN-2010 11:24:10 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.95724 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B236.CNF;66 BKG DATE : 3-JAN-2010 EFF FILE : W236.CNF;24 CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1.000	0.000	1.000	3.3488	99.90000	0.00E+00	1.50E-03	8.27E-03	1.94E-02	1.50E-03
PU-236	5749.000	1.000	1.000	0.000	2.0294	100.0000	1.07E-03	1.07E-03	5.01E-03	1.29E-02	1.07E-03
PU-238	5499.000	0.000	0.000	0.000	2.9082	99.90000	0.00E+00	1.06E-03	7.18E-03	1.72E-02	1.06E-03
PU242	4890.000	1142.000	1141.000	1.000	1.0000	100.0000	1.21E+00	6.98E-02	2.47E-03	7.81E-03	3.59E-02
PU-244	4589.000	7.000	7.000	0.000	6.8218	99.90000	7.43E-03	2.83E-03	1.69E-02	3.66E-02	2.81E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937598
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243492007_PU
SAMPLE QTY: 1.259 G

DETECTOR NUMBER :79435
AVERAGE %EFFICIENCY :38.1437
% YIELD : 76.897

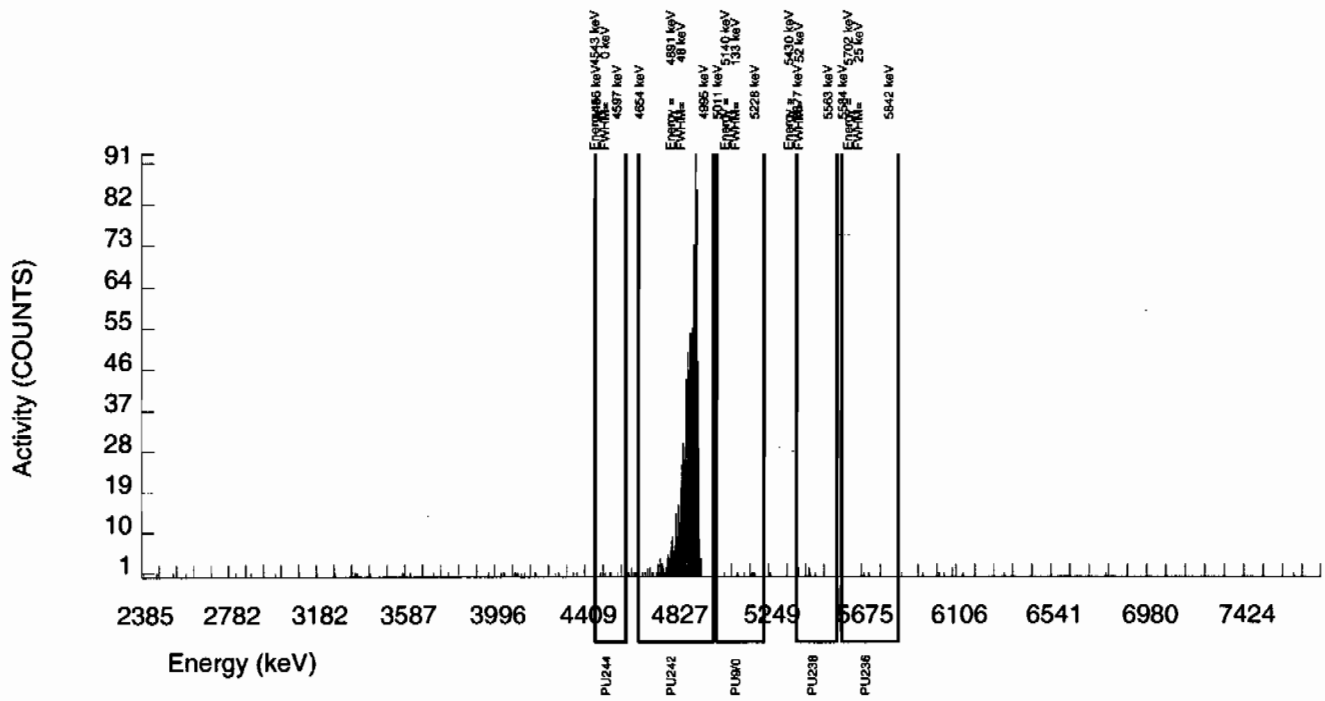
COUNT DATE: 4-JAN-2010 11:24:28
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B	ID : 0244-B	ID : 1374-A	LIB FILE : ENV_ALPHA_PU.N
ISOTOPE : PU-9/0	ISOTOPE : PU-9/0	ISOTOPE : PU242	BKG FILE : B242.CNF;66
PCI/G : 4.178E+01	PCI/G : 4.178E+01	NOMINAL : 3.38543 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 2.60331 dpm	EFF FILE : W242.CNF;24
			CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	7.000	6.000	1.000	3.3488	99.90000	7.33E-03	3.47E-03	9.51E-03	2.23E-02	3.45E-03
PU-236	5749.000	2.000	1.000	1.000	2.0294	100.0000	1.23E-03	2.14E-03	5.76E-03	1.48E-02	2.14E-03
PU-238	5499.000	6.000	6.000	0.000	2.9082	99.90000	7.33E-03	3.02E-03	8.26E-03	1.98E-02	2.99E-03
PU242	4890.000	993.000	993.000	0.000	0.0000	100.0000	1.21E+00	7.25E-02	0.00E+00	3.31E-03	3.84E-02
PU-244	4589.000	7.000	7.000	0.000	6.8218	99.90000	8.55E-03	3.26E-03	1.94E-02	4.21E-02	3.23E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

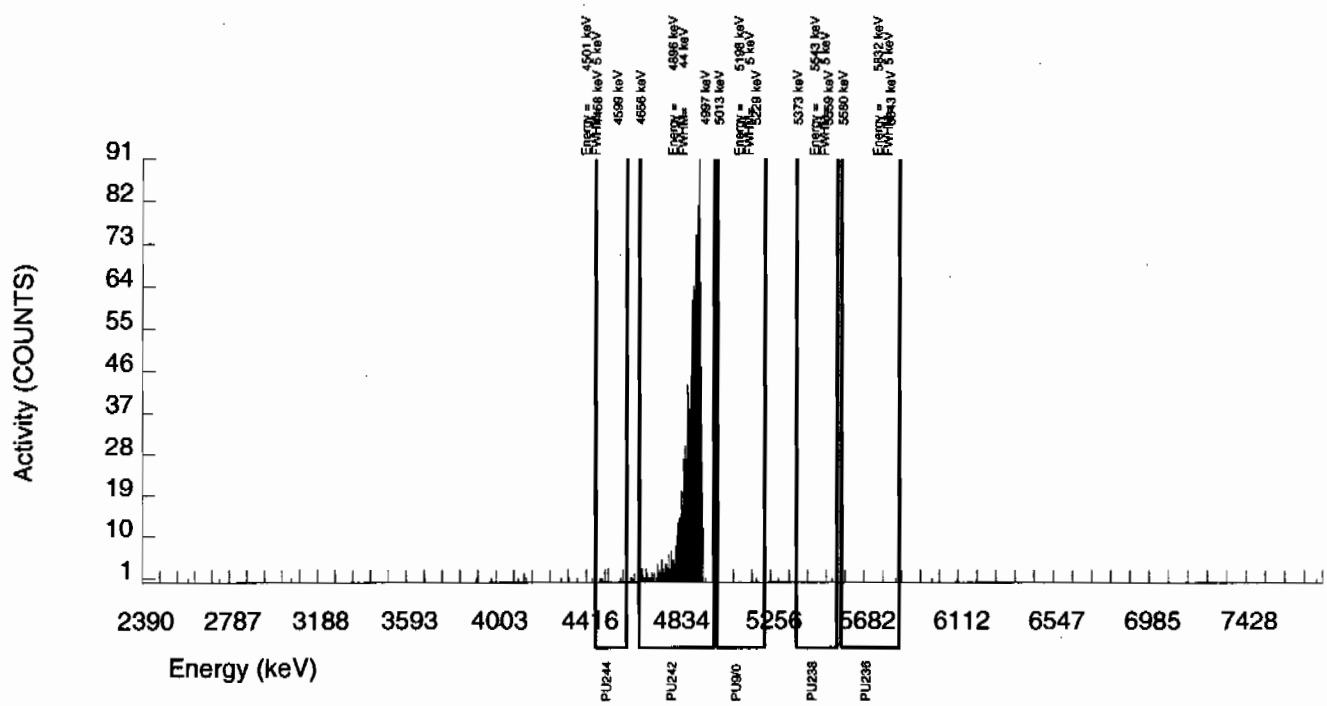
BATCH NUMBER: 937598 SAMPLE DATE : 30-DEC-2009 00:00:00	SAMPLE ID : S1202006346_PU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :79411 AVERAGE %EFFICIENCY :37.5005 % YIELD : 85.463	COUNT DATE: 4-JAN-2010 11:23:20 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.89330 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B218.CNF;66 BKG DATE : 3-JAN-2010 EFF FILE : W218.CNF;24 CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	1.000	0.000	1.000	3.3488	99.90000	0.00E+00	1.99E-03	1.10E-02	2.57E-02	1.99E-03
PU-236	5749.000	1.000	0.000	1.000	2.0294	100.0000	0.00E+00	2.00E-03	6.64E-03	1.71E-02	2.00E-03
PU-238	5499.000	1.000	-1.000	2.000	2.9082	99.90000	-1.41E-03	2.44E-03	9.52E-03	2.28E-02	2.44E-03
PU242	4890.000	1089.000	1085.000	4.000	2.0000	100.0000	1.52E+00	8.92E-02	6.54E-03	1.69E-02	4.65E-02
PU-244	4589.000	9.000	9.000	0.000	6.8218	99.90000	1.27E-02	4.27E-03	2.23E-02	4.85E-02	4.22E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

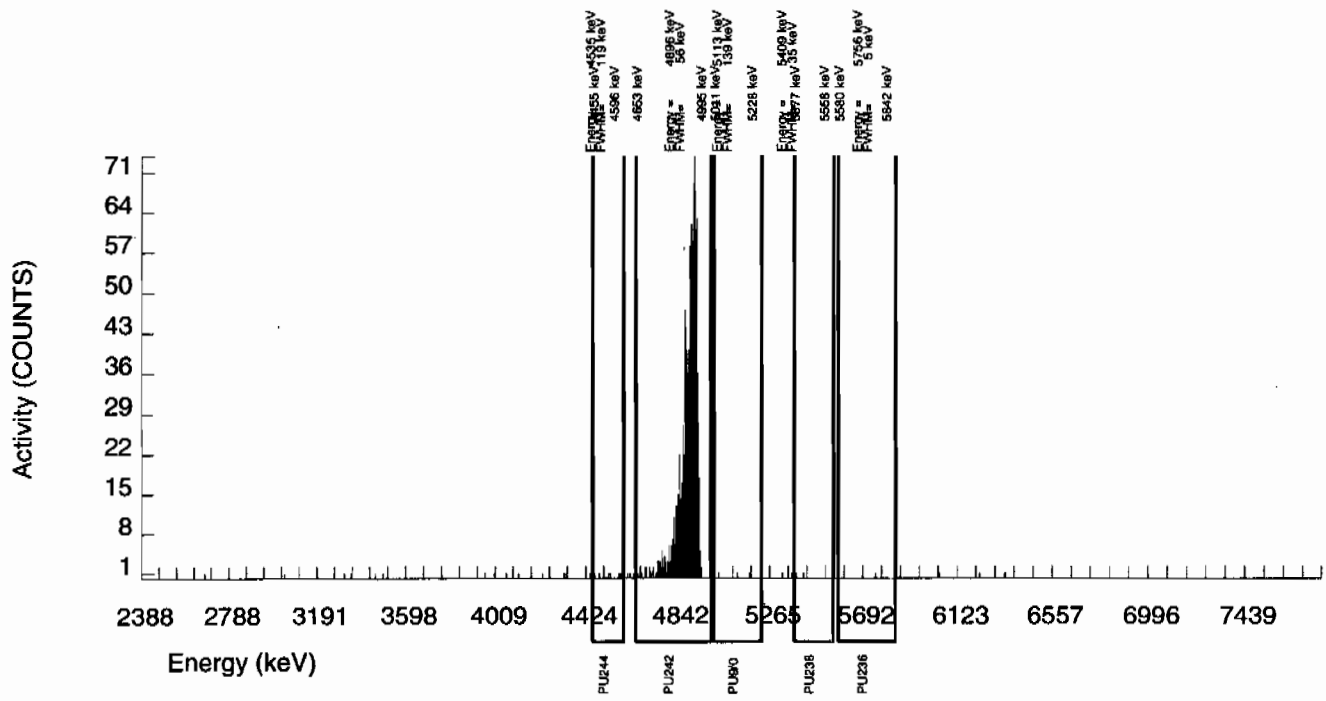
BATCH NUMBER: 937598 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S1202006347_PU SAMPLE QTY: 1.270 G
DETECTOR NUMBER :79414 AVERAGE %EFFICIENCY :37.2887 % YIELD : 71.056	COUNT DATE: 4-JAN-2010 11:23:29 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.40555 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B221.CNF;66 BKG DATE : 3-JAN-2010 EFF FILE : W221.CNF;24 CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3.000	3.000	0.000	3.3488	99.90000	4.02E-03	2.33E-03	1.04E-02	2.45E-02	2.32E-03
PU-236	5749.000	1.000	1.000	0.000	2.0294	100.0000	1.35E-03	1.36E-03	6.32E-03	1.63E-02	1.35E-03
PU-238	5499.000	2.000	0.000	2.000	2.9082	99.90000	0.00E+00	2.68E-03	9.07E-03	2.18E-02	2.68E-03
PU242	4890.000	898.000	897.000	1.000	1.0000	100.0000	1.20E+00	7.40E-02	3.11E-03	9.86E-03	4.01E-02
PU-244	4589.000	6.000	5.000	1.000	6.8218	99.90000	6.70E-03	3.56E-03	2.13E-02	4.62E-02	3.55E-03

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

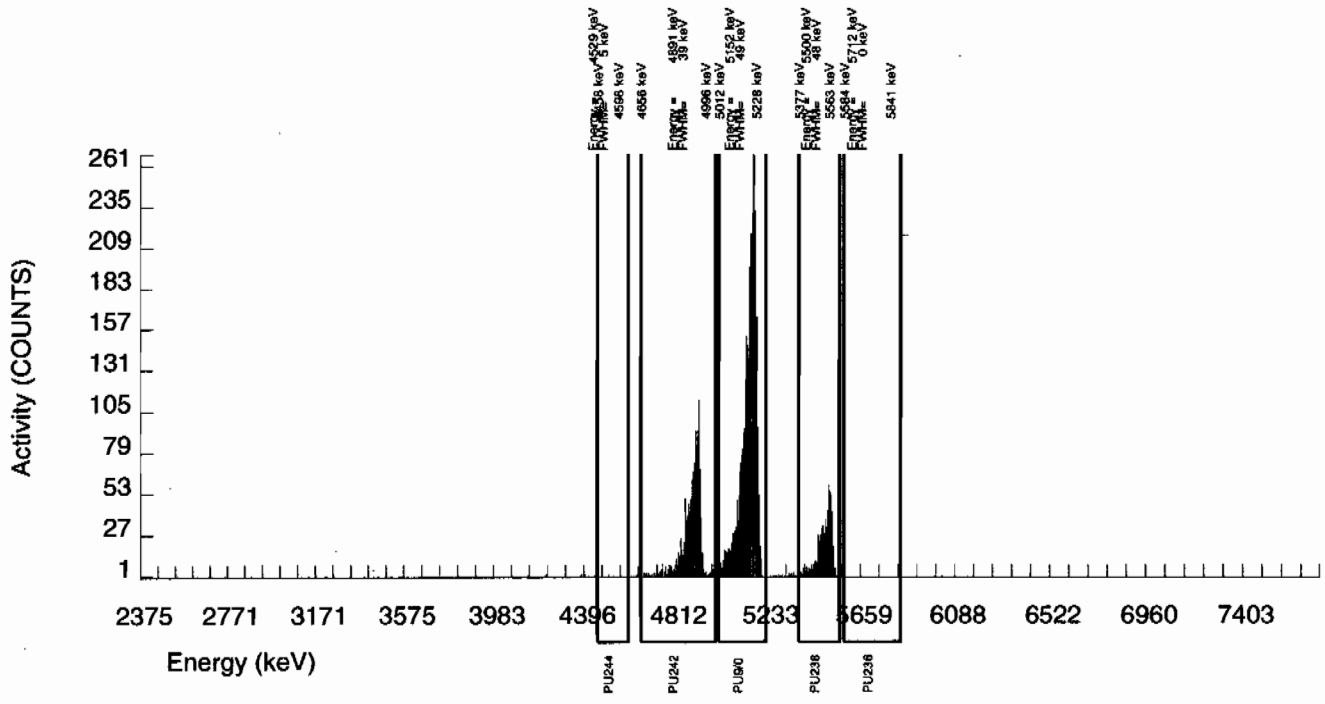
BATCH NUMBER: 937598 SAMPLE DATE : 30-DEC-2009 00:00:00	SAMPLE ID : S1202006348_PU SAMPLE QTY: 0.113 G
DETECTOR NUMBER :79427 AVERAGE %EFFICIENCY :38.3332 % YIELD : 95.242	COUNT DATE: 4-JAN-2010 10:37:35 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 0244-B ISOTOPE : PU-9/0 PCI/G : 4.178E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.22436 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B234.CNF;66 BKG DATE : 3-JAN-2010 EFF FILE : W234.CNF;24 CAL DATE : 28-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
PU-9/0	5155.000	3097.000	3097.000	0.000	3.3488	99.90000	3.38E+01	2.01E+00	8.51E-02	2.00E-01	6.08E-01
PU-236	5749.000	0.000	0.000	0.000	2.0294	100.0000	0.00E+00	1.10E-02	5.15E-02	1.33E-01	1.10E-02
PU-238	5499.000	617.000	617.000	0.000	2.9082	99.90000	6.74E+00	4.68E-01	7.39E-02	1.78E-01	2.72E-01
PU242	4890.000	1238.000	1236.000	2.000	1.4142	100.0000	1.35E+01	8.54E-01	3.59E-02	1.01E-01	3.84E-01
PU-244	4589.000	6.000	6.000	0.000	6.8218	99.90000	6.56E-02	2.70E-02	1.73E-01	3.77E-01	2.68E-02

NOTE: Sg calculated via blank population (updated 1-DEC-2009)
NOTE: Sg of PU242 calculated as sqrt(BKG AREA)



Radiochemistry Batch Checklist, Rev 9

Batch# 937600 Product: U Date: 1/8/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)	✓		
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument blq check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			N/A
Batch non-conformances second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.			N/A
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: Daniel Green 1/8/10

Secondary Review Performed By: JoLM — 1/8/10

1/19

P ✓

Uranium Que Sheet

30-DEC-09

Batch #: 937600 Analyst: JXD2 First Client Due Date:19-JAN-10 Internal Due Date:08-JAN-10

Tracer Isotope: U-232/U-236 Tracer Code: 1283-H Expiration Date: 12/09/10 Vol: 0.1

LCS Isotope: U-238 LCS Code: — Expiration Date: — Vol: —

Spike Isotope: U-238 Spike Code: — Expiration Date: — Vol: —

Prep Date: 12/30/09 Initials: JM Pipet ID: 2976058 Balance ID: 50410272 Witness: Me 12/30/9

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g/l/f)	U Det #
243385001-1	RE12-10-7580	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	1	1	0.525	125
243385002-1	RE12-10-7590	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	2	2	0.515	161 ~~126~~ DG 1/8/10
243385003-1	RE12-10-7592	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	3	3	0.502	127
243385004-1	RE12-10-7591	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	4	4	0.509	128
243385005-1	RE12-10-7581	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	5	5	0.501	129
243385006-1	RE12-10-7586	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	6	6	0.510	130
243385007-1	RE12-10-7587	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	7	7	0.520	133
243385008-1	RE12-10-7585	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	8	8	0.511	134
243385009-1	RE12-10-7582	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	9	9	0.509	153
243385010-1	RE12-10-7584	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	10	10	0.506	162 ~~154~~ DG 1/8/10
243385011-1	RE12-10-7583	SAMPLE		.1 pCi/g	SOIL	LANL010	17-DEC-09	11	11	0.504	155
243492001-1	RE12-10-7288	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	12	12	0.512	156
243492002-1	RE12-10-7290	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	13	13	0.514	157
243492003-1	RE12-10-7289	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	14	14	0.505	158
243492004-1	RE12-10-7291	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	15	15	0.501	159
243492005-1	RE12-10-7292	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	16	16	0.518	160
243492006-1	RE12-10-7293	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	17	17	0.515	161
• 243492007-1	RE12-10-7296	SAMPLE		.1 pCi/g	SOIL	LANL010	18-DEC-09	18	18	0.502	162
1202006349-1	MB for batch 937600	MB		.1 pCi/g	SOIL	QC ACCOUNT		19	19	1	163
1202006350-1	RE12-10-7296(243492007DUP)	DUP		.1 pCi/g	SOIL	QC ACCOUNT	18-DEC-09	20	20	0.507	164
1202006351-1	LCS for batch 937600	LCS		.1 pCi/g	SOIL	QC ACCOUNT		21	21	0.103	165

* SRM 0244-A 10/31/20 exp. 0.103g

Choose SOP used: GL-RAD-A-011 Solid Sample Dissolution by: LEACH or DIGESTION (Circle One) Data Reviewed By: [signature] 1/8/10

Blank Correction Report

Batch ID 937600

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202006350	DUP	Uranium-233/234	0.507 g	1.07	0.0956	0.101	.024852071	pCi/g	NO
		Uranium-235/236	0.507 g	0.0523	0.015	0.0627	.002978304	pCi/g	NO
		Uranium-238	0.507 g	1.05	0.0936	0.0585	.007218935	pCi/g	NO
1202006351	LCS	Uranium-233/234	0.103 g	5.81	0.509	0.371	.122330097	pCi/g	NO
		Uranium-235/236	0.103 g	0.400	0.0852	0.231	.014660194	pCi/g	NO
		Uranium-238	0.103 g	5.32	0.472	0.215	.035533981	pCi/g	NO
1202006349	MB	Uranium-233/234	1.00 g	0.0126	0.00401	0.0378	.0126	pCi/g	YES
		Uranium-235/236	1.00 g	0.00151	0.00151	0.0235	.00151	pCi/g	YES
		Uranium-238	1.00 g	0.00366	0.00274	0.0219	.00366	pCi/g	YES
243385001	RE12-10-7580	Uranium-233/234	0.525 g	1.43	0.130	0.134	.024	pCi/g	NO
		Uranium-235/236	0.525 g	0.0751	0.0208	0.0834	.002876190	pCi/g	NO
		Uranium-238	0.525 g	1.76	0.154	0.078	.006871429	pCi/g	NO
243385002	RE12-10-7590	Uranium-233/234	0.515 g	1.10	0.0938	0.0859	.024466019	pCi/g	NO
		Uranium-235/236	0.515 g	0.0685	0.0167	0.0533	.002932039	pCi/g	NO
		Uranium-238	0.515 g	1.17	0.0987	0.0498	.007106796	pCi/g	NO
243385003	RE12-10-7592	Uranium-233/234	0.502 g	0.730	0.0777	0.138	.025099602	pCi/g	NO
		Uranium-235/236	0.502 g	0.0605	0.0187	0.0855	.003007968	pCi/g	NO
		Uranium-238	0.502 g	0.725	0.077	0.0799	.007290837	pCi/g	NO
243385004	RE12-10-7591	Uranium-233/234	0.509 g	0.864	0.0896	0.145	.024754420	pCi/g	NO
		Uranium-235/236	0.509 g	0.0348	0.0144	0.0903	.002966601	pCi/g	NO
		Uranium-238	0.509 g	0.925	0.0942	0.0844	.007190570	pCi/g	NO
243385005	RE12-10-7581	Uranium-233/234	0.501 g	0.847	0.0879	0.144	.025149701	pCi/g	NO
		Uranium-235/236	0.501 g	0.0345	0.0143	0.0894	.003013972	pCi/g	NO
		Uranium-238	0.501 g	0.865	0.0892	0.0836	.007305389	pCi/g	NO
243385006	RE12-10-7586	Uranium-233/234	0.510 g	1.50	0.134	0.130	.024705882	pCi/g	NO
		Uranium-235/236	0.510 g	0.0776	0.0208	0.0806	.002960784	pCi/g	NO
		Uranium-238	0.510 g	1.65	0.144	0.0753	.007176471	pCi/g	NO
243385007	RE12-10-7587	Uranium-233/234	0.520 g	0.643	0.0728	0.150	.024230769	pCi/g	NO
		Uranium-235/236	0.520 g	0.0298	0.0135	0.0929	.002903846	pCi/g	NO
		Uranium-238	0.520 g	0.797	0.0852	0.0868	.007038462	pCi/g	NO
243385008	RE12-10-7585	Uranium-233/234	0.511 g	0.710	0.0766	0.141	.024657534	pCi/g	NO
		Uranium-235/236	0.511 g	0.045	0.0181	0.0875	.002954990	pCi/g	NO
		Uranium-238	0.511 g	0.837	0.0869	0.0817	.007162427	pCi/g	NO
243385009	RE12-10-7582	Uranium-233/234	0.509 g	1.22	0.117	0.143	.024754420	pCi/g	NO
		Uranium-235/236	0.509 g	0.057	0.0217	0.0888	.002966601	pCi/g	NO
		Uranium-238	0.509 g	1.11	0.108	0.0829	.007190570	pCi/g	NO
243385010	RE12-10-7584	Uranium-233/234	0.506 g	1.51	0.125	0.0952	.024901186	pCi/g	NO
		Uranium-235/236	0.506 g	0.0874	0.0192	0.0591	.002984190	pCi/g	NO
		Uranium-238	0.506 g	1.67	0.136	0.0552	.007233202	pCi/g	NO
243385011	RE12-10-7583	Uranium-233/234	0.504 g	1.08	0.104	0.137	.025	pCi/g	NO
		Uranium-235/236	0.504 g	0.0819	0.022	0.085	.002996032	pCi/g	NO

1/18/10

Blank Correction Report

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
243385011	RE12-10-7583	Uranium-238	0.504 g	1.19	0.113	0.0794	.007261905	pCi/g	NO
243492001	RE12-10-7288	Uranium-233/234	0.512 g	1.22	0.118	0.153	.024609375	pCi/g	NO
		Uranium-235/236	0.512 g	0.0426	0.0185	0.0947	.002949219	pCi/g	NO
		Uranium-238	0.512 g	1.59	0.146	0.0885	.007148438	pCi/g	NO
243492002	RE12-10-7290	Uranium-233/234	0.514 g	0.802	0.0862	0.154	.024513619	pCi/g	NO
		Uranium-235/236	0.514 g	0.0554	0.0189	0.0957	.002937743	pCi/g	NO
		Uranium-238	0.514 g	0.856	0.0904	0.0895	.007120623	pCi/g	NO
243492003	RE12-10-7289	Uranium-233/234	0.505 g	0.913	0.0907	0.133	.024950495	pCi/g	NO
		Uranium-235/236	0.505 g	0.0585	0.0181	0.0828	.002990099	pCi/g	NO
		Uranium-238	0.505 g	0.788	0.0812	0.0774	.007247525	pCi/g	NO
243492004	RE12-10-7291	Uranium-233/234	0.501 g	1.17	0.114	0.150	.025149701	pCi/g	NO
		Uranium-235/236	0.501 g	0.0597	0.0194	0.093	.003013972	pCi/g	NO
		Uranium-238	0.501 g	1.14	0.111	0.0869	.007305389	pCi/g	NO
243492005	RE12-10-7292	Uranium-233/234	0.518 g	0.694	0.073	0.128	.024324324	pCi/g	NO
		Uranium-235/236	0.518 g	0.0357	0.0137	0.0794	.002915058	pCi/g	NO
		Uranium-238	0.518 g	0.755	0.0777	0.0742	.007065637	pCi/g	NO
243492006	RE12-10-7293	Uranium-233/234	0.515 g	0.768	0.0714	0.0913	.024466019	pCi/g	NO
		Uranium-235/236	0.515 g	0.040	0.0134	0.0567	.002932039	pCi/g	NO
		Uranium-238	0.515 g	0.836	0.0763	0.0529	.007106796	pCi/g	NO
243492007	RE12-10-7296	Uranium-233/234	0.502 g	0.937	0.0873	0.109	.025099602	pCi/g	NO
		Uranium-235/236	0.502 g	0.0564	0.0161	0.0676	.003007968	pCi/g	NO
		Uranium-238	0.502 g	1.17	0.104	0.0631	.007290837	pCi/g	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

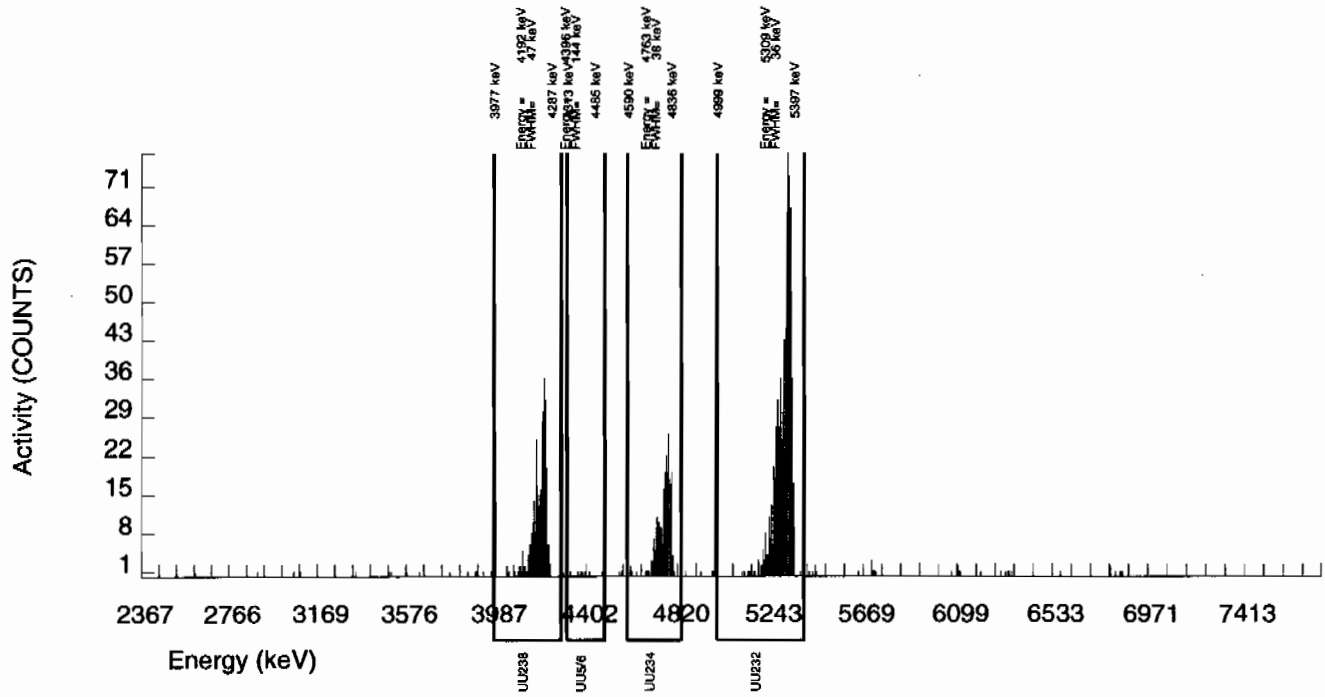
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492001_UU SAMPLE QTY: 0.512 G
DETECTOR NUMBER :75554 AVERAGE %EFFICIENCY :24.9638 % YIELD : 71.607	COUNT DATE: 5-JAN-2010 20:20:43 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.23038 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B156.CNF;385 BKG DATE : 3-JAN-2010 EFF FILE : W156.CNF;117 CAL DATE : 15-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	250.000	247.185	2.000	6.0782	100.0000	1.22E+00	1.18E-01	6.96E-02	1.53E-01	7.80E-02
U232	5302.100	809.000	806.000	3.000	1.7321	100.0000	3.97E+00	3.22E-01	1.98E-02	5.30E-02	1.40E-01
U-235	4391.000	8.000	7.000	1.000	2.7628	80.90000	4.26E-02	1.85E-02	3.91E-02	9.47E-02	1.83E-02
U-238	4184.730	324.000	324.000	0.000	3.2810	100.0000	1.59E+00	1.46E-01	3.76E-02	8.85E-02	8.86E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

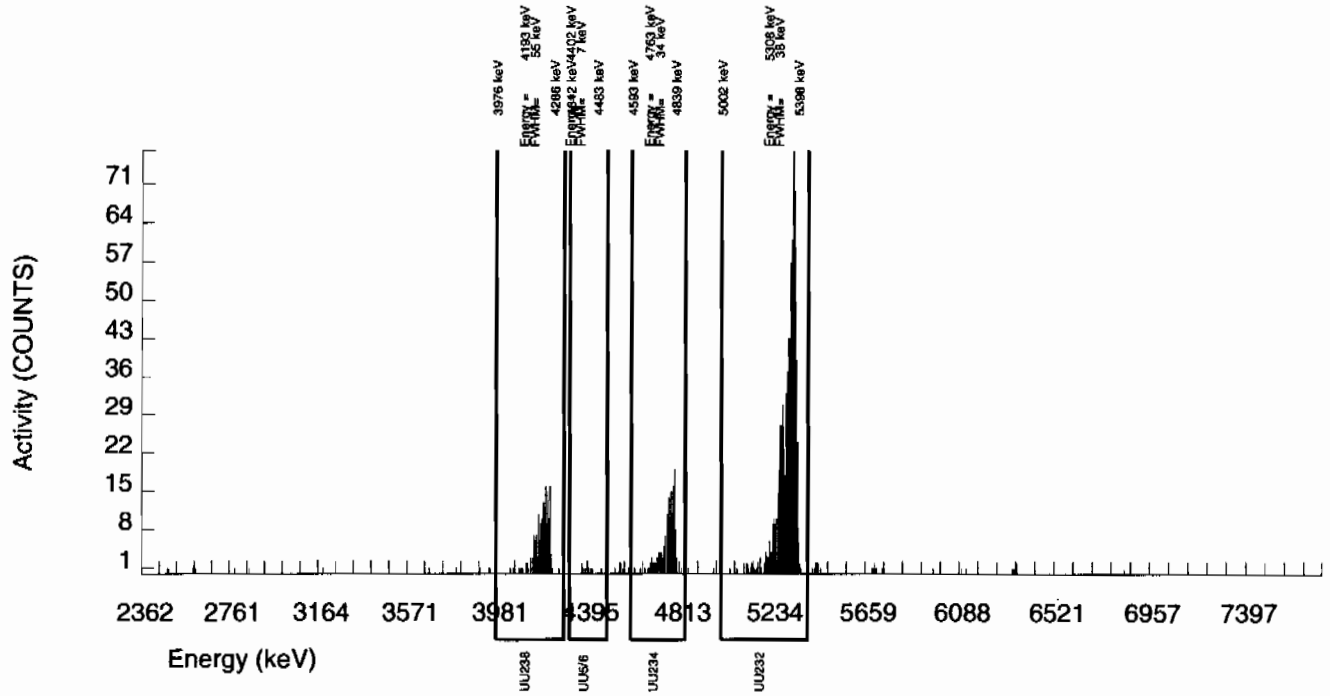
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492002_UU SAMPLE QTY: 0.514 G
DETECTOR NUMBER :75555 AVERAGE %EFFICIENCY :24.7997 % YIELD : 71.008	COUNT DATE: 5-JAN-2010 20:20:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.20334 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B157.CNF;385 BKG DATE : 3-JAN-2010 EFF FILE : W157.CNF;107 CAL DATE : 15-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	162.000	161.197	0.000	6.0782	100.0000	8.02E-01	8.62E-02	7.04E-02	1.54E-01	6.32E-02
U232	5302.100	801.000	794.000	7.000	2.6458	100.0000	3.95E+00	3.22E-01	3.06E-02	7.47E-02	1.42E-01
U-235	4391.000	9.000	9.000	0.000	2.7628	80.90000	5.54E-02	1.89E-02	3.95E-02	9.57E-02	1.85E-02
U-238	4184.730	172.000	172.000	0.000	3.2810	100.0000	8.56E-01	9.04E-02	3.80E-02	8.95E-02	6.53E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937600
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243492003_UU
SAMPLE QTY: 0.505 G

DETECTOR NUMBER :33451
AVERAGE %EFFICIENCY :24.8144
% YIELD : 83.479

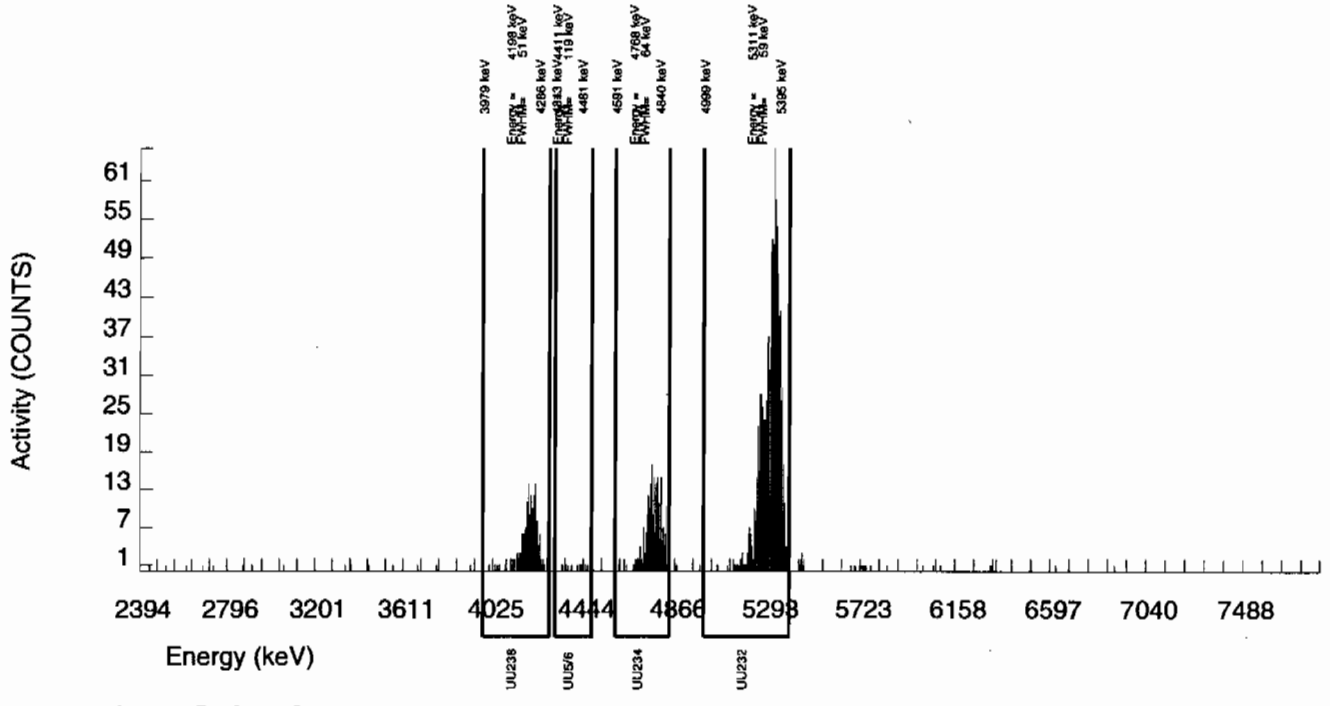
COUNT DATE: 5-JAN-2010 20:20:48
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B158.CNF;386
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.51126 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 3.76593 dpm	EFF FILE : W158.CNF;110
			CAL DATE : 15-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	213.000	212.056	0.000	6.0782	100.0000	9.13E-01	9.07E-02	6.09E-02	1.33E-01	6.27E-02
U232	5302.100	937.000	934.000	3.000	1.7321	100.0000	4.02E+00	3.17E-01	1.74E-02	4.64E-02	1.32E-01
U-235	4391.000	11.000	11.000	0.000	2.7628	80.90000	5.85E-02	1.81E-02	3.42E-02	8.28E-02	1.77E-02
U-238	4184.730	183.000	183.000	0.000	3.2810	100.0000	7.88E-01	8.12E-02	3.29E-02	7.74E-02	5.83E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

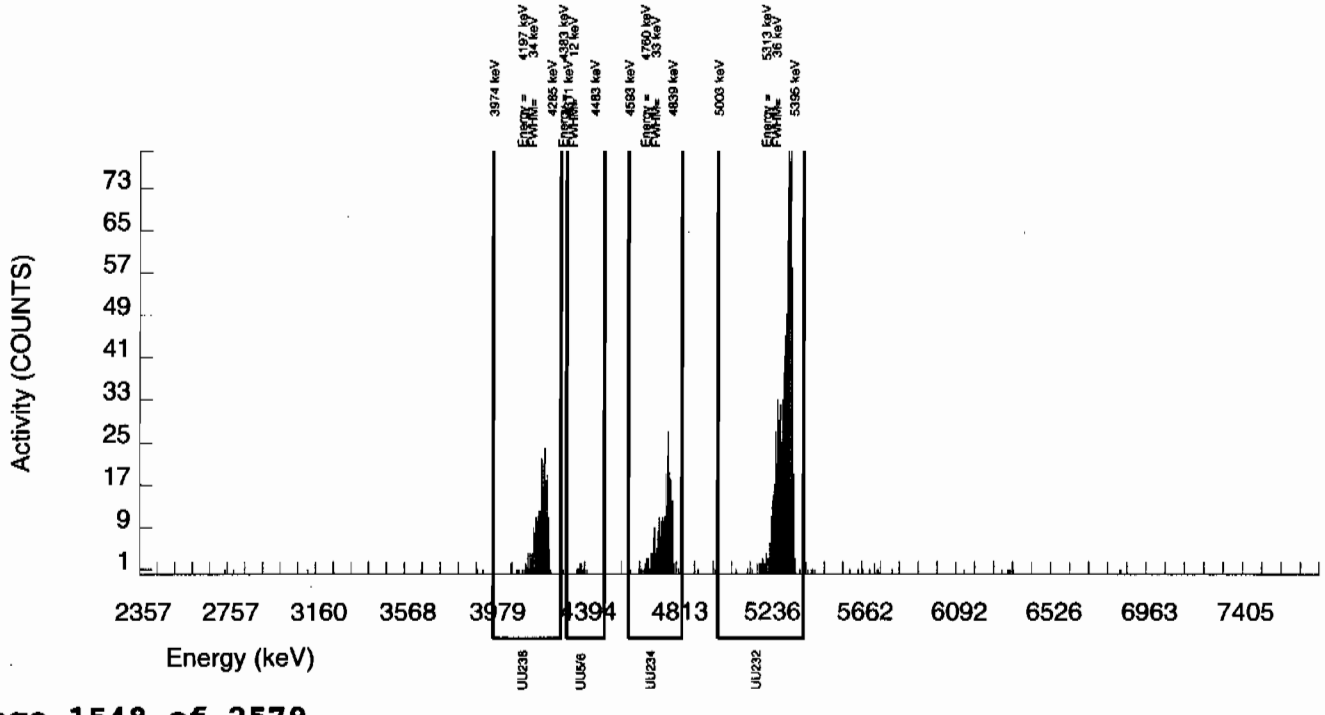
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492004_UU SAMPLE QTY: 0.501 G
DETECTOR NUMBER :76225 AVERAGE %EFFICIENCY :25.2089 % YIELD : 73.814	COUNT DATE: 5-JAN-2010 20:20:50 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.32994 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B159.CNF;359 BKG DATE : 3-JAN-2010 EFF FILE : W159.CNF;102 CAL DATE : 15-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	246.000	243.152	2.000	6.0782	100.0000	1.17E+00	1.14E-01	6.83E-02	1.50E-01	7.60E-02
U232	5302.100	841.000	839.000	2.000	1.4142	100.0000	4.06E+00	3.26E-01	1.59E-02	4.49E-02	1.40E-01
U-235	4391.000	10.000	10.000	0.000	2.7628	80.90000	5.97E-02	1.94E-02	3.84E-02	9.30E-02	1.89E-02
U-238	4184.730	237.000	235.000	2.000	3.2810	100.0000	1.14E+00	1.11E-01	3.69E-02	8.69E-02	7.47E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

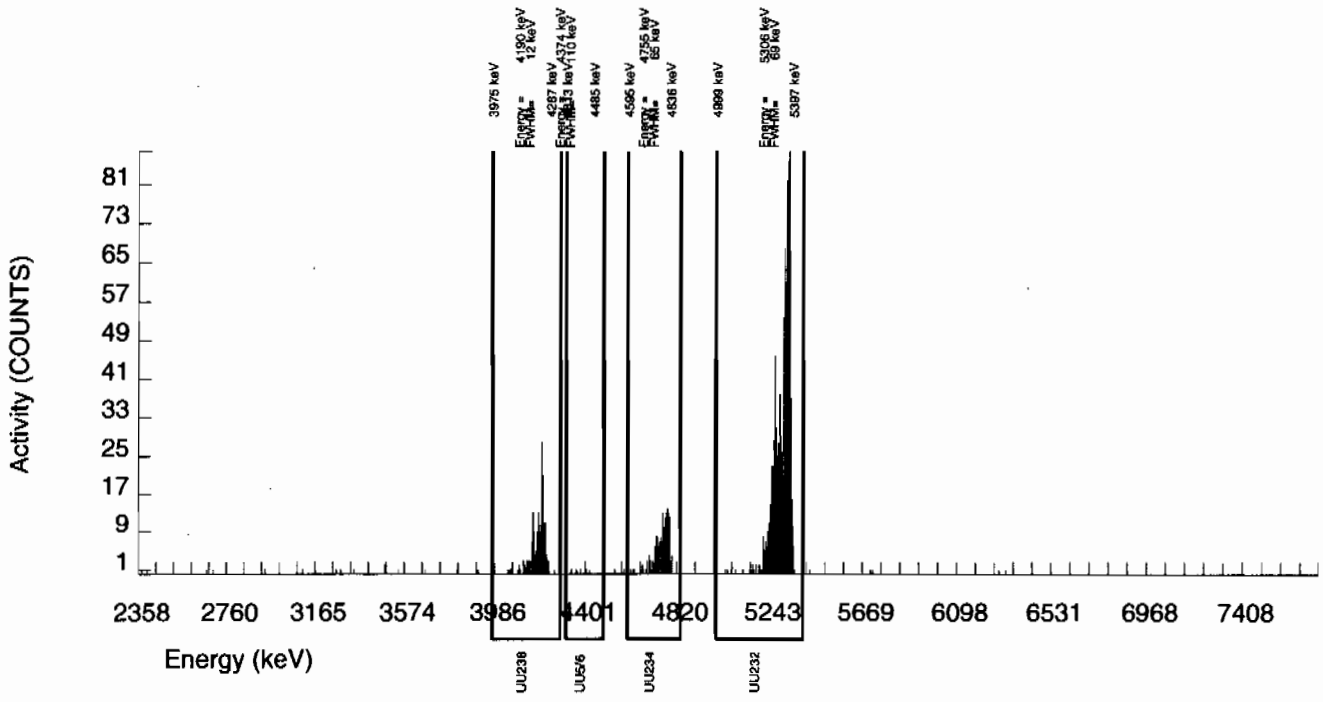
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492005_UU SAMPLE QTY: 0.518 G
DETECTOR NUMBER :79994 AVERAGE %EFFICIENCY :24.6839 % YIELD : 85.357	COUNT DATE: 5-JAN-2010 20:20:53 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.85069 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B160.CNF;361 BKG DATE : 3-JAN-2010 EFF FILE : W160.CNF;114 CAL DATE : 15-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	169.000	168.040	0.000	6.0782	100.0000	6.94E-01	7.30E-02	5.84E-02	1.28E-01	5.35E-02
U232	5302.100	950.000	950.000	0.000	0.0000	100.0000	3.92E+00	3.08E-01	0.00E+00	1.12E-02	1.27E-01
U-235	4391.000	7.000	7.000	0.000	2.7628	80.90000	3.57E-02	1.37E-02	3.28E-02	7.94E-02	1.35E-02
U-238	4184.730	183.000	183.000	0.000	3.2810	100.0000	7.55E-01	7.77E-02	3.15E-02	7.42E-02	5.58E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

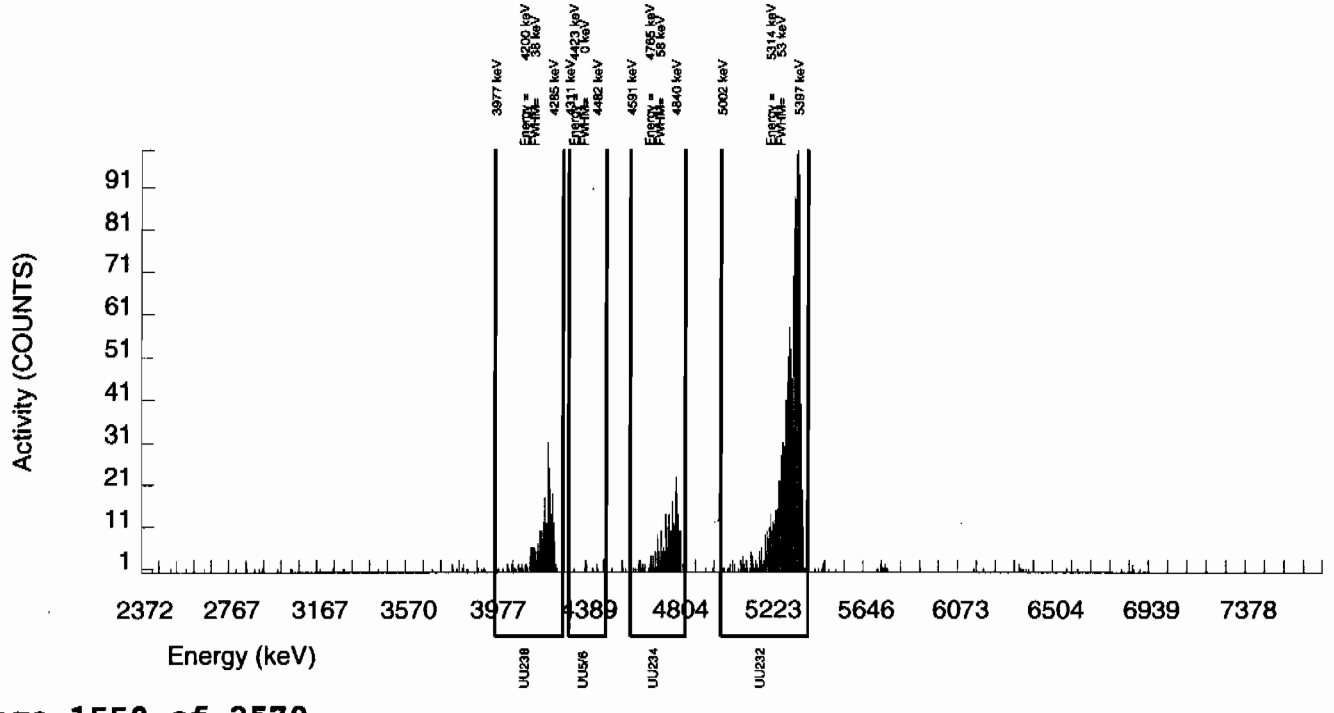
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492006_UU SAMPLE QTY: 0.515 G
DETECTOR NUMBER :SAMPLE AVERAGE %EFFICIENCY :36.6119 % YIELD : 81.113	COUNT DATE: 5-JAN-2010 20:20:55 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.65921 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B161.CNF;158 BKG DATE : 3-JAN-2010 EFF FILE : W161.CNF;56 CAL DATE : 23-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	262.000	260.646	0.000	6.0782	100.0000	7.68E-01	7.14E-02	4.16E-02	9.13E-02	4.76E-02
U232	5302.100	1346.000	1339.000	7.000	2.6458	100.0000	3.95E+00	2.94E-01	1.81E-02	4.42E-02	1.08E-01
U-235	4391.000	12.000	11.000	1.000	2.7628	80.90000	4.00E-02	1.34E-02	2.34E-02	5.67E-02	1.31E-02
U-238	4184.730	284.000	284.000	0.000	3.2810	100.0000	8.36E-01	7.63E-02	2.25E-02	5.29E-02	4.96E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

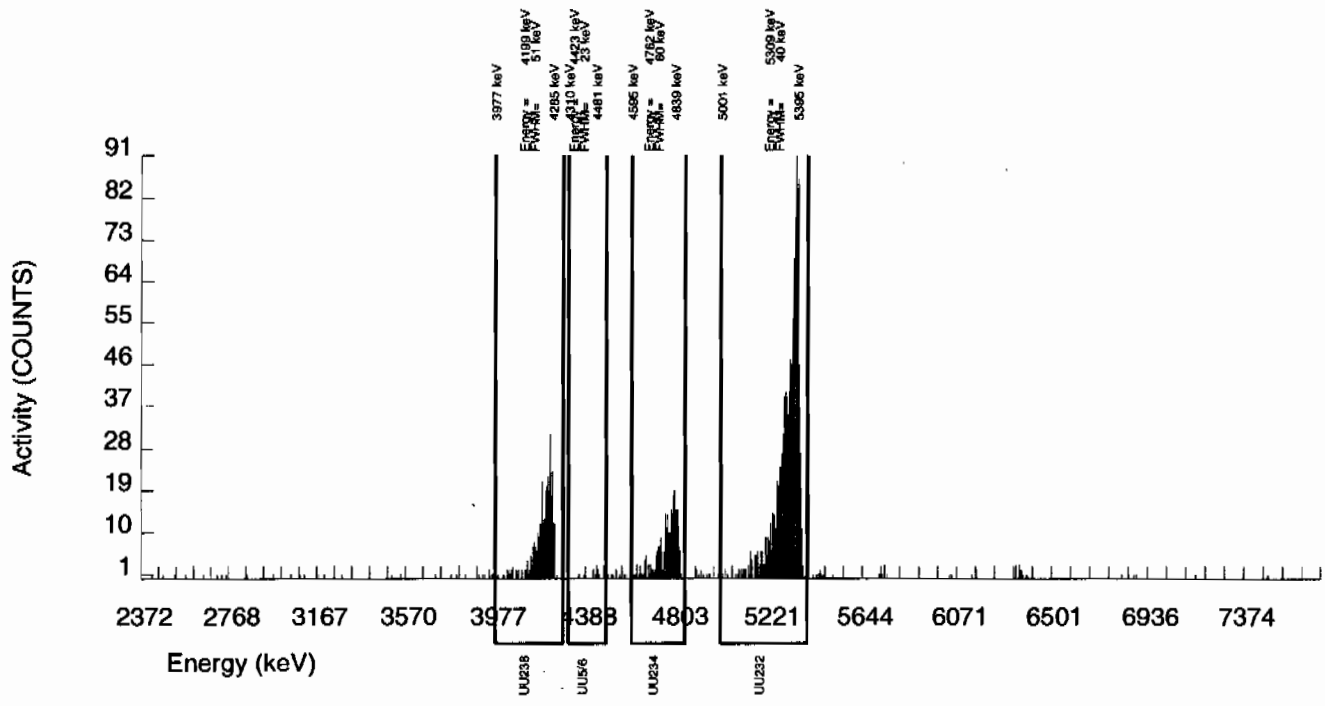
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243492007_UU SAMPLE QTY: 0.502 G
DETECTOR NUMBER :70323 AVERAGE %EFFICIENCY :36.9748 % YIELD : 69.100	COUNT DATE: 5-JAN-2010 20:20:57 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.11728 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B162.CNF;158 BKG DATE : 3-JAN-2010 EFF FILE : W162.CNF;63 CAL DATE : 22-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	268.000	266.835	0.000	6.0782	100.0000	9.37E-01	8.73E-02	4.97E-02	1.09E-01	5.74E-02
U232	5302.100	1157.000	1152.000	5.000	2.2361	100.0000	4.05E+00	3.08E-01	1.83E-02	4.61E-02	1.20E-01
U-235	4391.000	13.000	13.000	0.000	2.7628	80.90000	5.64E-02	1.61E-02	2.79E-02	6.76E-02	1.57E-02
U-238	4184.730	334.000	334.000	0.000	3.2810	100.0000	1.17E+00	1.04E-01	2.68E-02	6.31E-02	6.42E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

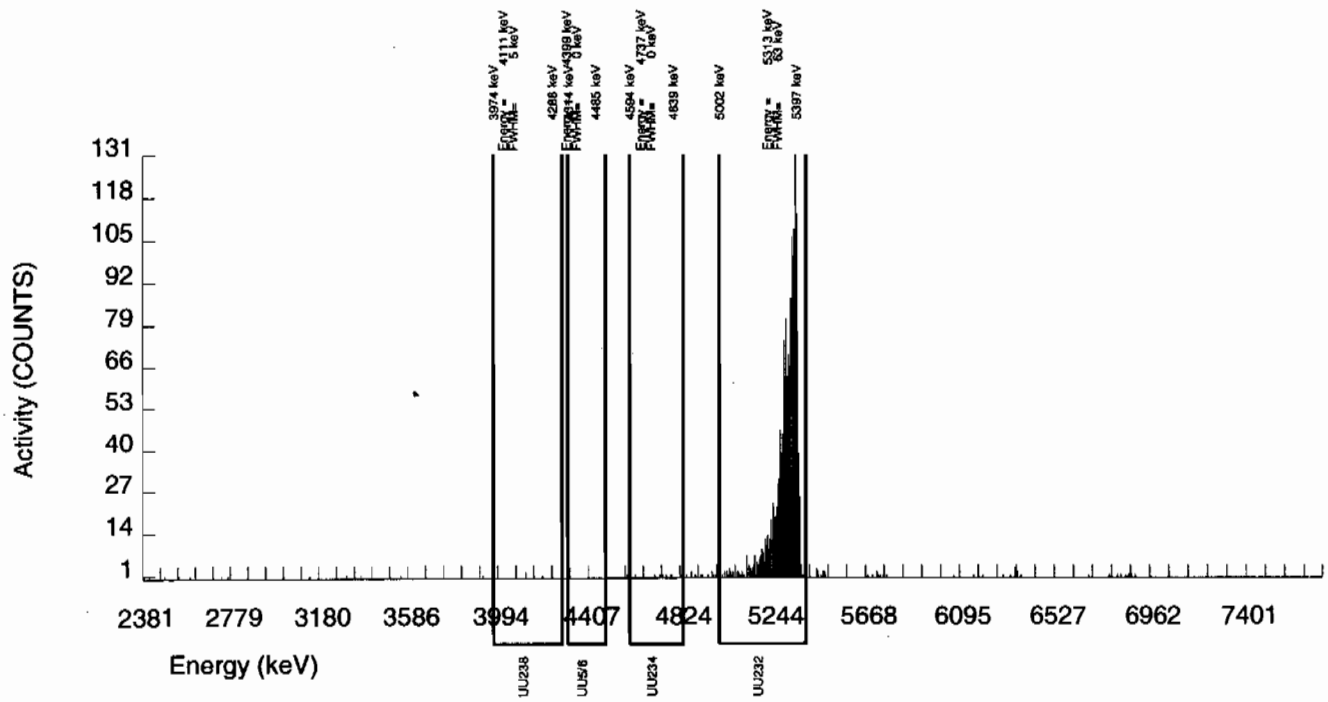
BATCH NUMBER: 937600 SAMPLE DATE : 30-DEC-2009 00:00:00	SAMPLE ID : S1202006349_UU SAMPLE QTY: 1.000 G
DETECTOR NUMBER :70324 AVERAGE %EFFICIENCY :37.7750 % YIELD : 97.755	COUNT DATE: 5-JAN-2010 20:21:00 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50977 dpm RESULTS : 4.40855 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B163.CNF;159 BKG DATE : 3-JAN-2010 EFF FILE : W163.CNF;52 CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	12.000	10.317	0.000	6.0782	100.0000	1.26E-02	4.01E-03	1.72E-02	3.78E-02	3.92E-03
U232	5302.100	1674.000	1665.000	9.000	3.0000	100.0000	2.03E+00	1.47E-01	8.51E-03	2.03E-02	5.01E-02
U-235	4391.000	1.000	1.000	0.000	2.7628	80.90000	1.51E-03	1.51E-03	9.69E-03	2.35E-02	1.51E-03
U-238	4184.730	4.000	3.000	1.000	3.2810	100.0000	3.66E-03	2.74E-03	9.31E-03	2.19E-02	2.73E-03

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

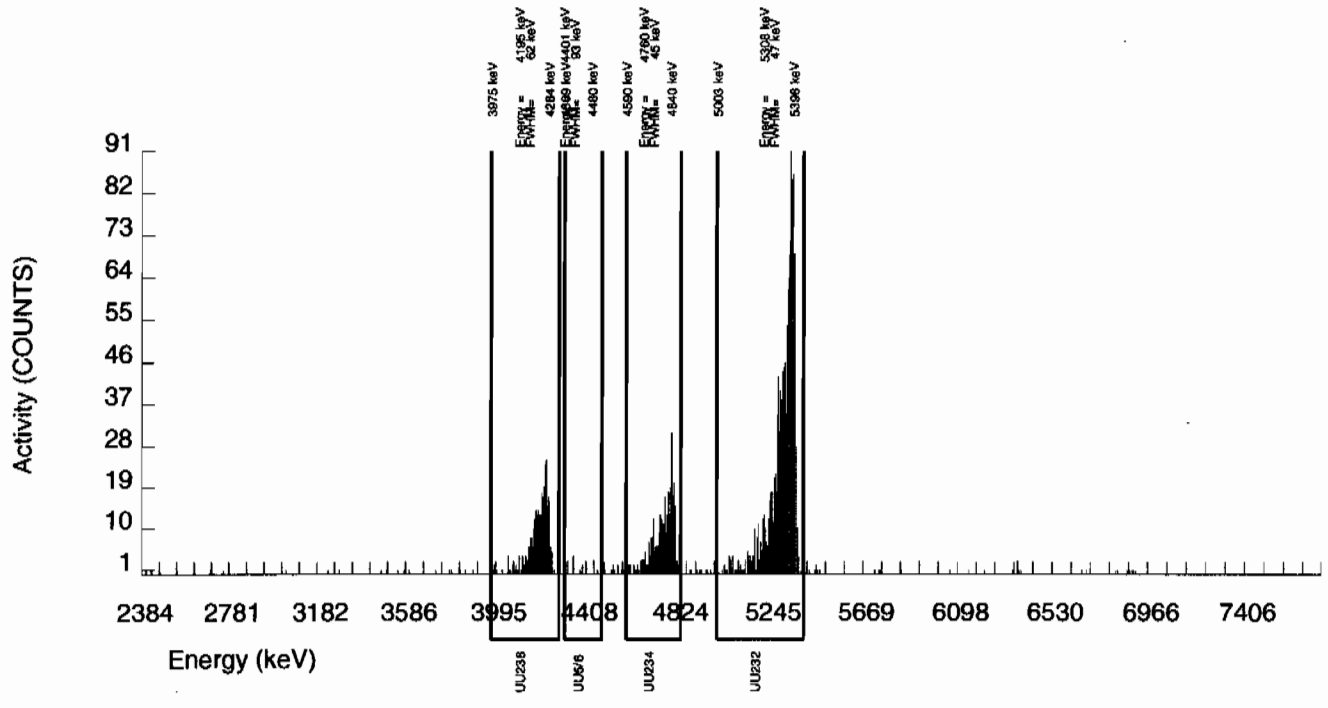
BATCH NUMBER: 937600 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S1202006350_UU SAMPLE QTY: 0.507 G
DETECTOR NUMBER :70325 AVERAGE %EFFICIENCY :37.7257 % YIELD : 72.310	COUNT DATE: 5-JAN-2010 20:21:02 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 0244-A ISOTOPE : U-238 PCI/G : 5.750E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 3.26210 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B164.CNF;156 BKG DATE : 3-JAN-2010 EFF FILE : W164.CNF;52 CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	332.000	329.757	1.000	6.0782	100.0000	1.07E+00	9.56E-02	4.61E-02	1.01E-01	5.93E-02
U232	5302.100	1237.000	1230.000	7.000	2.6458	100.0000	4.01E+00	3.02E-01	2.00E-02	4.89E-02	1.15E-01
U-235	4391.000	13.000	13.000	0.000	2.7628	80.90000	5.23E-02	1.50E-02	2.59E-02	6.27E-02	1.45E-02
U-238	4184.730	322.000	322.000	0.000	3.2810	100.0000	1.05E+00	9.36E-02	2.49E-02	5.85E-02	5.84E-02

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 937600
SAMPLE DATE : 30-DEC-2009 00:00:00

SAMPLE ID : S1202006351_UU
SAMPLE QTY: 0.103 G

DETECTOR NUMBER :72544
AVERAGE %EFFICIENCY :37.9939
% YIELD : 96.025

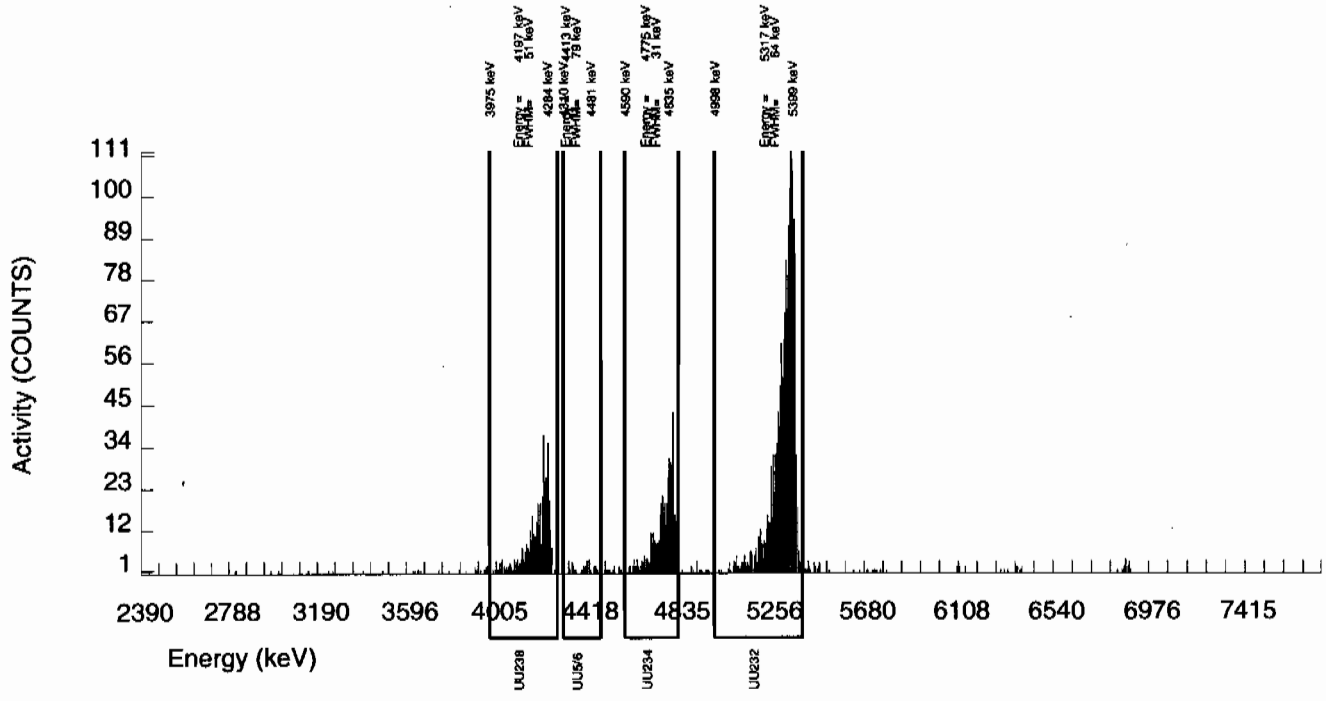
COUNT DATE: 5-JAN-2010 20:21:04
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :JXD2

MS/MSD	LCS/LCSD	TRACER	
ID : 0244-A	ID : 0244-A	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B165.CNF;156
PCI/G : 5.750E+00	PCI/G : 5.750E+00	NOMINAL : 4.50977 dpm	BKG DATE : 3-JAN-2010
		RESULTS : 4.33049 dpm	EFF FILE : W165.CNF;52
			CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/G	TPU 1-SIGMA	DLC pCi/G	MDC pCi/G	UNC pCi/G
U-3/4	4763.020	487.000	484.337	1.000	6.0782	100.0000	5.81E+00	5.08E-01	1.69E-01	3.71E-01	2.64E-01
U232	5302.100	1648.000	1645.000	3.000	1.7321	100.0000	1.97E+01	1.55E+00	4.83E-02	1.29E-01	4.87E-01
U-235	4391.000	28.000	27.000	1.000	2.7628	80.90000	4.00E-01	8.52E-02	9.52E-02	2.31E-01	7.98E-02
U-238	4184.730	444.000	444.000	0.000	3.2810	100.0000	5.32E+00	4.72E-01	9.15E-02	2.15E-01	2.53E-01

NOTE: Sg calculated via blank population (updated 5-JAN-2010)
NOTE: Sg of U232 calculated as sqrt(BKG AREA)
NOTE: Corrections made to U-3/4 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev 9

Batch# 936923 Product: GS Date: 1/6/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.			
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			NA
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			NA
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.			NA
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 1/6/10

Secondary Review Performed By: [signature] 1/6/10

1/20

Gamma Spec Que Sheet 1.0g. – 1/4/10

12/28/2009

Batch #:936923 Analyst: MXR1 First Client DueDate:01/20/2010 Internal Due Date: 01/09/2010

Gamma Spike Isotope: Mixed Gamma Spike Code: Na Expiration Date: Na Vol: Na Nominal Concentration: Na

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/2/10 Vol: 1.0mL Nominal Concentration: Am-241 15.91 Cs-137 5.574 Co-60 6.495

Initials: MS Prep Date: 12/28/09 Library: SOLID Witness: N/a

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date		Geometry	Wet/Dry Aliquot (1/g/F)	Detector	Sealing Date/Time (if Applicable)
243457001-1	RE12-10-7553	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF	can	111.113	5	12/28/09
243457002-1	RE12-10-7554	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		111.61	7	
243457003-1	RE12-10-7551	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		119.34	10	
243457004-1	RE12-10-7552	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		118.32	11	
243492001-1	RE12-10-7288	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		128.66	12	
243492002-1	RE12-10-7290	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		137.86	13	
243492003-1	RE12-10-7289	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		131.78	13 14	RF 1/5/10
243492004-1	RE12-10-7291	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		129.11	15	
243492005-1	RE12-10-7292	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		132.80	16	
243492006-1	RE12-10-7293	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		136.11	17	
243492007-1	RE12-10-7296	SAMPLE		LANL010	SOIL	18-DEC-09 12:00:00	RF		124.45	18	
1202004732-1	MB	MB		QC ACCOUNT	SOIL	12/28/09	RF		137.86	22	
1202004733-1	DUP RE12-10-7553(243457001)	DUP		QC ACCOUNT	SOIL	18-DEC-09 12:00:00	RF		111.113	15	
1202004734-1	LCS	LCS		QC ACCOUNT	SOIL	12/28/09	RF		155.44	5	

GEL Laboratories LLC, Radiochemistry Division

Data Reviewed By: 1/6/10

✓ no history
✓ dailies

KO 1/6/10

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
936923	243457001	SAMPLE	04-JAN-10		Cerium-139	0.01757	0.06112	0.050
					Europium-152	-0.00947	0.2164	0.200
					Ruthenium-106	0.599	0.822	0.800
					Sodium-22	0.04037	0.09795	0.080
					Tin-113	-0.02927	0.1026	0.100
936923	243457002	SAMPLE	04-JAN-10		Sodium-22	-0.00185	0.08347	0.080
936923	243457003	SAMPLE	04-JAN-10		Americium-241	-0.0045	0.3995	0.200
					Sodium-22	0.01792	0.08057	0.080
					Thorium-234	2.02	3.14	2.00
936923	243457004	SAMPLE	04-JAN-10					
936923	243492001	SAMPLE	04-JAN-10		Americium-241	0.02651	0.2397	0.200
936923	243492002	SAMPLE	04-JAN-10		Cerium-139	-0.00196	0.0525	0.050
					Sodium-22	0	0.09911	0.080
936923	243492003	SAMPLE	05-JAN-10		Cerium-139	-0.00524	0.05456	0.050
					Cesium-134	0.08957	0.1136	0.100
					Sodium-22	0.00083	0.08453	0.080
936923	243492004	SAMPLE	04-JAN-10		Americium-241	0.1668	0.4863	0.200
					Cerium-139	-0.01548	0.05894	0.050
					Sodium-22	0.0006	0.09006	0.080
					Thorium-234	2.342	3.661	2.00
936923	243492005	SAMPLE	04-JAN-10		Americium-241	0.09361	0.2184	0.200
936923	243492006	SAMPLE	04-JAN-10		Cesium-134	0.0853	0.1181	0.100
					Sodium-22	0.02544	0.09891	0.080
936923	243492007	SAMPLE	04-JAN-10		Americium-241	0.08976	0.282	0.200
					Thorium-234	1.171	2.208	2.00
936923	1202004732	MB	04-JAN-10					
936923	1202004733	DUP	04-JAN-10		Americium-241	0.1464	0.4711	0.200
					Cerium-139	-0.01189	0.05614	0.050
					Sodium-22	0.01637	0.0804	0.080
					Thorium-234	1.775	3.675	2.00
936923	1202004734	LCS	05-JAN-10		Cerium-139	-0.04529	0.4515	0.050
					Cesium-134	0.1102	0.252	0.100
					Europium-152	0.0329	0.35	0.200
					Mercury-203	13.63	18.2	0.100
					Potassium-40	0.6073	1.271	1.00
					Ruthenium-106	0.7365	2.271	0.800
					Sodium-22	-0.04157	0.11	0.080
					Tin-113	0.4912	1.244	0.100
					Uranium-235	-0.01163	0.5763	0.500
					Yttrium-88	0.1666	0.8744	0.100

GEL QUALS

Batch ID: 936923

Report run on: January 6, 2010 1:44 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
243457001-1 04-JAN-2010 13:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.873			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.673			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1236		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		6.278			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1479			
243457002-1 04-JAN-2010 13:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.444			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.749			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.361			
243457003-1 04-JAN-2010 13:58	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.22			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		4.165			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.419			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09047			
243457004-1 04-JAN-2010 13:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.492			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.408			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1328		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		1.527			
	Radium-228	UI	UI	UI	Data rejected due to low abundance.		1.245		.5	.5
243492001-1 04-JAN-2010 13:59	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.207			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.375			
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.285			
	Thorium-234	UI	UI	UI	Data rejected due to high counting uncertainty.		2.258			

GEL QUALS

Batch ID: 936923

Report run on: January 6, 2010 1:44 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
243492002-1 04-JAN-2010 14:00	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.375			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.651			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1298		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		2.071			
243492004-1 04-JAN-2010 14:01	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.246			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.097			
243492005-1 04-JAN-2010 14:01	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.284			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.793			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.09186		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.958			
243492006-1 04-JAN-2010 14:02	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.877			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.231			
	Radium-224	UI	UI	UI	Data rejected due to interference.		5.286			
243492007-1 04-JAN-2010 14:02	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.292			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.846			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1023		.1	.1
	Cesium-137	UI	UI	UI	Data rejected due to low abundance.		.06304		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.786			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1276			

GEL QUALS

Batch ID: 936923

Report run on: January 6, 2010 1:44 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
1202004732-1 MB 04-JAN-2010 14:05	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.1024			
1202004733-1 DUP 04-JAN-2010 16:16	Bismuth-211	UI	UI	UI	Data rejected due to interference.		4.613			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		2.877			
	Cesium-134	UI	UI	UI	Data rejected due to low abundance.		.1225		.1	.1
	Radium-224	UI	UI	UI	Data rejected due to interference.		4.895			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09968			
243492003-1 05-JAN-2010 14:15	Bismuth-211	UI	UI	UI	Data rejected due to interference.		3.755			
	Cadmium-109	UI	UI	UI	Data rejected due to interference.		3.274			
	Radium-224	UI	UI	UI	Data rejected due to interference.		3.868			
	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		.09707			
	Thorium-234	UI	UI	UI	Data rejected due to high counting uncertainty.		1.18			

Gamma Review Report based on Result > MDA for Batch:936923

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243457001	18-DEC-09 12:00	04-JAN-10 13:58	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.879	0.1949	pCi/g	0.2754	N	911.5	3	1.388	IDENTIFIED	8.331		
Americium-243	INT	0.4517	0.03935	pCi/g	0.07177	N	74.64	1	1.452	IDENTIFIED	7.782		
Annihilation Rad.	HE	0.1096	0.04488	pCi/g	0.06163	N	511.4	1	1.631	IDENTIFIED	40.84		
Barium-137m	NR	0.3282	0.03896	pCi/g	0.08185	N	661.7	2	2.012	IDENTIFIED	11.41		
Bismuth-210	HE	1.631	0.5546	pCi/g	1.031	N	46.46	3	1.164	IDENTIFIED	33.78		
Bismuth-211	INT	4.873	0.3377	pCi/g	0.4279	Y	352.1	4	1.372	IDENTIFIED	5.697	UF	
Bismuth-212	HE	1.217	0.3156	pCi/g	0.8938	N	0	12	0	FAIL_ABUND	0		
Bismuth-214	✓	1.507	0.1127	pCi/g	0.1454	0.200	609.4	4	1.437	IDENTIFIED	6.194		
Cadmium-109	INT	4.673	0.5192	pCi/g	1.177	Y	87.21	3	1.288	IDENTIFIED	10.44	UF	
Cerium-143	—	2532	420.3	pCi/g	0	N	0	12	0	SHORT_HLIF	0		
Cesium-134	LA	0.1236	0.04285	pCi/g	0.1206	0.100	0	12	0	FAIL_ABUND	0	UI	Data rejected due to low abundance.
Cesium-137	✓	0.347	0.0412	pCi/g	0.08652	0.100	661.7	2	2.012	IDENTIFIED	11.41		
Gross Gamma	—	10.62	1.742	pCi/g	6.349	N		0					
Iodine-126	HE	0.5898	0.1874	pCi/g	0.504	N	0	12	0	FAIL_ABUND	0		
Krypton-85	HE	28.25	5.471	pCi/g	18.75	N	0	12	0	NOT_IDENTI	0		
Lead-210	HE	1.631	0.5546	pCi/g	1.031	N	46.46	3	1.164	IDENTIFIED	33.78		
Lead-212	✓	1.937	0.1239	pCi/g	0.1105	0.100	238.8	4	1.237	IDENTIFIED	3.443		
Lead-214	✓	1.695	0.1255	pCi/g	0.146	0.100	352.1	4	1.372	IDENTIFIED	5.697		
Neptunium-237	INT	1.345	0.2039	pCi/g	0.3373	N	87.21	3	1.288	IDENTIFIED	10.44		
Niobium-95m	HE	0.3244	0.09426	pCi/g	0.299	N	0	12	0	NOT_IDENTI	0		
Niobium-97	—	1.10E+06	5.12E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0		
Polonium-210	HE	1.631	0.5536	pCi/g	1.031	N	46.46	3	1.164	IDENTIFIED	33.78		
Polonium-212	NR	1.937	0.1239	pCi/g	0.1105	N	238.8	4	1.237	IDENTIFIED	3.443		
Polonium-214	NR	1.695	0.1255	pCi/g	0.146	N	352.1	4	1.372	IDENTIFIED	5.697		
Polonium-216	NR	1.937	0.1239	pCi/g	0.1105	N	238.8	4	1.237	IDENTIFIED	3.443		
Polonium-218	NR	1.695	0.1255	pCi/g	0.146	N	352.1	4	1.372	IDENTIFIED	5.697		
Potassium-40	✓	22.25	1.154	pCi/g	0.7895	1.00	1461	1	2.061	IDENTIFIED	4.148		
Radium-224	INT	6.278	0.9443	pCi/g	1.257	Y	241.8	1	2.032	IDENTIFIED	14.23	UF	
Radium-226	✓	1.507	0.1127	pCi/g	0.1454	Y	609.4	4	1.437	IDENTIFIED	6.194		
Radium-228	✓	1.879	0.1949	pCi/g	0.2754	0.500	911.5	3	1.388	IDENTIFIED	8.331		
Sodium-24	HE	3.78E+05	3.42E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0		
Strontium-85	LA	0.1479	0.02864	pCi/g	0.09816	Y	0	12	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Technetium-99m	—	3.34E+17	0	pCi/g	0	N	0	12	0	SHORT_HLIF	0		
Thallium-208	✓	0.5872	0.05848	pCi/g	0.0721	0.080	583.4	1	1.511	IDENTIFIED	9.254		
Thorium-228	NR	1.97	0.126	pCi/g	0.1124	N	238.8	4	1.237	IDENTIFIED	3.443		
Thorium-230	NR	1.507	0.1127	pCi/g	0.1454	N	609.4	4	1.437	IDENTIFIED	6.194		
Thorium-232	NR	1.879	0.1949	pCi/g	0.2754	N	911.5	3	1.388	IDENTIFIED	8.331		
Thorium-234	✓	1.786	0.5381	pCi/g	1.242	2.00	63.19	2	1.111	IDENTIFIED	28.8		
Tin-126	INT	0.458	0.05089	pCi/g	0.1152	N	87.21	3	1.288	IDENTIFIED	10.44		
Titanium-44	LA	0.474	0.02879	pCi/g	0.08041	N	0	12	0	FAIL_ABUND	0		
Total Uranium	—	5.3285	1.60E-06	ug/g	1.8516	N		0					
Uranium-234	NR	1.507	0.1127	pCi/g	0.1454	N	609.4	4	1.437	IDENTIFIED	6.194		
Uranium-238	HE	1.786	0.5381	pCi/g	1.242	N	63.19	2	1.111	IDENTIFIED	28.8		
Zirconium-97	HE	1.67E+07	9.49E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243457002	18-DEC-09 12:00	04-JAN-10 13:58	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.628	0.1948	pCi/g	0.2295	N	911.8	3	1.689	IDENTIFIED	10.45		
Americium-243	INT	0.3241	0.03513	pCi/g	0.07212	N	74.69	1	1.106	IDENTIFIED	10.07		

Annihilation Rad.	—	0.1348	0.04087	pCi/g	0.05193	N	511	1	1.895	IDENTIFIED	30	☐
Bismuth-211	INT	3.444	0.2878	pCi/g	0.3605	Y	352	4	1.242	IDENTIFIED	7.05	☑ VI
Bismuth-212	HE	1.192	0.3456	pCi/g	0.7389	N	0	11	0	FAIL_ABUND	0	☐
Bismuth-214	✓	1.054	0.09596	pCi/g	0.1375	0.200	609.5	4	1.3	IDENTIFIED	7.497	☐
Cadmium-109	INT	2.749	0.5187	pCi/g	1.292	Y	87.16	3	1.489	IDENTIFIED	18.28	☑ VI
Cerium-143	—	1515	289.4	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Gross Gamma	—	9.544	1.838	pCi/g	3.724	N		0				☐
Iodine-123	HE	5.02E+07	3.63E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Iodine-133	HE	6772	15490	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Iodine-135	—	1.58E+18	0	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Lead-212	✓	1.604	0.099	pCi/g	0.09976	0.100	238.7	4	1.086	IDENTIFIED	3.901	☐
Lead-214	✓	1.198	0.1049	pCi/g	0.1257	0.100	352	4	1.242	IDENTIFIED	7.05	☐
Lutetium-177	HE	4.362	0.9572	pCi/g	2.657	N	0	11	0	FAIL_ABUND	0	☐
Neptunium-237	INT	0.7911	0.1701	pCi/g	0.383	N	87.16	3	1.489	IDENTIFIED	18.28	☐
Polonium-212	NR	1.604	0.099	pCi/g	0.09976	N	238.7	4	1.086	IDENTIFIED	3.901	☐
Polonium-214	NR	1.198	0.1049	pCi/g	0.1257	N	352	4	1.242	IDENTIFIED	7.05	☐
Polonium-216	NR	1.604	0.099	pCi/g	0.09976	N	238.7	4	1.086	IDENTIFIED	3.901	☐
Polonium-218	NR	1.198	0.1049	pCi/g	0.1257	N	352	4	1.242	IDENTIFIED	7.05	☐
Potassium-40	✓	35.29	1.852	pCi/g	0.6128	1.00	1461	1	2.033	IDENTIFIED	3.015	☐
Radium-224	INT	3.361	0.6274	pCi/g	1.135	Y	241.7	1	1.582	IDENTIFIED	18.18	☑ VI
Radium-226	✓	1.054	0.09596	pCi/g	0.1375	Y	609.5	4	1.3	IDENTIFIED	7.497	☐
Radium-228	✓	1.628	0.1948	pCi/g	0.2295	0.500	911.8	3	1.689	IDENTIFIED	10.45	☐
Sodium-24	HE	7.13E+06	3.65E+06	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Technetium-99m	—	4.03E+18	0	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Thallium-200	HE	461.5	869.6	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Thallium-208	✓	0.4995	0.05134	pCi/g	0.06365	0.080	583.2	1	1.433	IDENTIFIED	9.097	☐
Thorium-228	NR	1.632	0.1007	pCi/g	0.1015	N	238.7	4	1.086	IDENTIFIED	3.901	☐
Thorium-230	NR	1.054	0.09596	pCi/g	0.1375	N	609.5	4	1.3	IDENTIFIED	7.497	☐
Thorium-232	NR	1.628	0.1948	pCi/g	0.2295	N	911.8	3	1.689	IDENTIFIED	10.45	☐
Tin-126	INT	0.2694	0.05083	pCi/g	0.1269	N	87.16	3	1.489	IDENTIFIED	18.28	☐
Titanium-44	LA	0.3689	0.02825	pCi/g	0.0717	N	0	11	0	FAIL_ABUND	0	☐
Uranium-234	NR	1.054	0.09596	pCi/g	0.1375	N	609.5	4	1.3	IDENTIFIED	7.497	☐
Zirconium-97	—	2.99E+07	7.74E+06	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243457003	18-DEC-09 12:00	04-JAN-10 13:58	17.1	SAMPLE	LOAD	1	LANL	LANL01004 GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.905	0.2101	pCi/g	0.2049	N	911.7	3	1.435	IDENTIFIED	9.143	☐	
Americium-243	INT	0.382	0.0484	pCi/g	0.1087	N	74.7	1	1.034	IDENTIFIED	11.42	☐	
Annihilation Rad.	—	0.1377	0.03684	pCi/g	0.04772	N	511.1	1	1.603	IDENTIFIED	26.57	☐	
Barium-137m	NR	0.1082	0.02437	pCi/g	0.05636	N	662.4	2	1.881	IDENTIFIED	22.4	☐	
Bismuth-211	INT	4.22	0.279	pCi/g	0.3338	Y	351.9	4	1.341	IDENTIFIED	5.516	☑ VF	
Bismuth-212	HE	0.8214	0.2274	pCi/g	0.657	N	0	10	0	FAIL_ABUND	0	☐	
Bismuth-214	✓	1.244	0.09186	pCi/g	0.111	0.200	609.7	4	1.399	IDENTIFIED	6.33	☐	
Cadmium-109	INT	4.165	0.6387	pCi/g	1.29	Y	87.12	3	1.332	IDENTIFIED	14.26	☑ VI	
Cerium-143	— ✓	1629	287.5	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Cesium-137	✓	0.1143	0.02576	pCi/g	0.05958	0.100	662.4	2	1.881	IDENTIFIED	22.4	☐	
Curium-243	HE	0.196	0.06669	pCi/g	0.1721	N	0	10	0	FAIL_ABUND	0	☐	
Europium-155	HE	0.2189	0.07452	pCi/g	0.185	N	105.2	1	1.428	IDENTIFIED	33.78	☐	
Gross Gamma	—	8.877	1.257	pCi/g	3.338	N		0				☐	
Iodine-133	HE	10920	14720	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Krypton-85	HE	17.28	4.288	pCi/g	14.33	N	0	10	0	NOT_IDENTI	0	☐	
Lead-212	✓	1.757	0.08853	pCi/g	0.09436	0.100	238.6	4	1.155	IDENTIFIED	3.319	☐	
Lead-214	✓	1.468	0.1043	pCi/g	0.1156	0.100	351.9	4	1.341	IDENTIFIED	5.516	☐	
Lutetium-177	LA	4.516	0.8525	pCi/g	2.632	N	0	10	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	1.199	0.2215	pCi/g	0.3805	N	87.12	3	1.332	IDENTIFIED	14.26	☐	
Polonium-212	NR	1.757	0.08853	pCi/g	0.09436	N	238.6	4	1.155	IDENTIFIED	3.319	☐	

Polonium-214	NR	1.468	0.1043	pCi/g	0.1156	N	351.9	4	1.341	IDENTIFIED	5.516	☐	
Polonium-216	NR	1.757	0.08853	pCi/g	0.09436	N	238.6	4	1.155	IDENTIFIED	3.319	☐	
Polonium-218	NR	1.468	0.1043	pCi/g	0.1156	N	351.9	4	1.341	IDENTIFIED	5.516	☐	
Potassium-40	✓	19.89	1.154	pCi/g	0.4612	1.00	1462	1	1.726	IDENTIFIED	3.886	☐	
Radium-224	INT	5.419	0.7827	pCi/g	1.074	Y	241.6	1	1.963	IDENTIFIED	14.12	☑ UI	
Radium-226	✓	1.244	0.09186	pCi/g	0.111	Y	609.7	4	1.399	IDENTIFIED	6.33	☐	
Radium-228	✓	1.905	0.2101	pCi/g	0.2049	0.500	911.7	3	1.435	IDENTIFIED	9.143	☐	
Sodium-24	HE	1.85E+06	3.17E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Strontium-85	LA	0.09047	0.02244	pCi/g	0.075	Y	0	10	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Thallium-208	✓	0.5466	0.04293	pCi/g	0.05743	0.080	583.5	1	1.453	IDENTIFIED	7.099	☐	
Thorium-228	NR	1.787	0.09005	pCi/g	0.09598	N	238.6	4	1.155	IDENTIFIED	3.319	☐	
Thorium-230	NR	1.244	0.09186	pCi/g	0.111	N	609.7	4	1.399	IDENTIFIED	6.33	☐	
Thorium-232	NR	1.905	0.2101	pCi/g	0.2049	N	911.7	3	1.435	IDENTIFIED	9.143	☐	
Tin-126	INT	0.4081	0.06259	pCi/g	0.1273	N	87.12	3	1.332	IDENTIFIED	14.26	☐	
Titanium-44	LA	0.3852	0.03564	pCi/g	0.08452	N	0	10	0	FAIL_ABUND	0	☐	
Uranium-234	NR	1.244	0.09186	pCi/g	0.111	N	609.7	4	1.399	IDENTIFIED	6.33	☐	
Zirconium-97	HE	9.19E+06	6.76E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243457004	18-DEC-09 12:00	04-JAN-10 13:59	17.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	LA	1.245	0.1614	pCi/g	0.4703	N	0	14	0	FAIL_ABUND	0	☐	
Americium-243	INT	0.3542	0.03304	pCi/g	0.06592	N	74.7	1	0.9537	IDENTIFIED	8.403	☐	
Annihilation Rad.	—	0.1521	0.03447	pCi/g	0.04247	N	510.4	1	1.714	IDENTIFIED	22.02	☐	
Bismuth-211	INT	3.492	0.304	pCi/g	0.2686	Y	351.6	4	1.202	IDENTIFIED	5.695	☑ VF	
Bismuth-212	LA	1.149	0.2337	pCi/g	0.6644	N	0	14	0	FAIL_ABUND	0	☐	
Bismuth-214	✓	0.9594	0.09172	pCi/g	0.09742	0.200	608.9	4	1.314	IDENTIFIED	7.709	☐	
Cadmium-109	INT	2.408	0.3833	pCi/g	0.9601	Y	87.04	3	0.844	IDENTIFIED	15.21	☑ VF	
Cerium-143	—	1568	285.7	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Cesium-134	LA	0.1328	0.03171	pCi/g	0.08885	0.100	0	14	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	9.134	1.457	pCi/g	2.867	N		0				☐	
Iodine-123	HE	2.27E+07	2.93E+07	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Iodine-133	HE	5975	12660	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Iodine-135	—	1.60E+17	0	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Lead-212	✓	1.532	0.1203	pCi/g	0.08488	0.100	238.4	4	0.9526	IDENTIFIED	3.561	☐	
Lead-214	✓	1.215	0.1104	pCi/g	0.09365	0.100	351.6	4	1.202	IDENTIFIED	5.695	☐	
Lutetium-177	HE	3.135	0.942	pCi/g	2.36	N	0	14	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	0.693	0.1315	pCi/g	0.3051	N	87.04	3	0.844	IDENTIFIED	15.21	☐	
Niobium-97	HE	25330	3.20E+05	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Polonium-212	NR	1.532	0.1203	pCi/g	0.08488	N	238.4	4	0.9526	IDENTIFIED	3.561	☐	
Polonium-214	NR	1.215	0.1104	pCi/g	0.09365	N	351.6	4	1.202	IDENTIFIED	5.695	☐	
Polonium-216	NR	1.532	0.1203	pCi/g	0.08488	N	238.4	4	0.9526	IDENTIFIED	3.561	☐	
Polonium-218	NR	1.215	0.1104	pCi/g	0.09365	N	351.6	4	1.202	IDENTIFIED	5.695	☐	
Potassium-40	✓	32.6	1.685	pCi/g	0.4303	1.00	1460	1	1.712	IDENTIFIED	2.831	☐	
Radium-224	INT	1.527	0.4885	pCi/g	0.9663	Y	240.6	1	1.246	IDENTIFIED	31.28	☑ VF	
Radium-226	✓	0.9594	0.09172	pCi/g	0.09742	Y	608.9	4	1.314	IDENTIFIED	7.709	☐	
Radium-228	LA	1.245	0.1614	pCi/g	0.4703	0.500	0	14	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	84.94	695.6	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	
Thallium-208	✓	0.486	0.04643	pCi/g	0.0555	0.080	582.7	1	1.396	IDENTIFIED	7.881	☐	
Thorium-228	NR	1.559	0.1223	pCi/g	0.08634	N	238.4	4	0.9526	IDENTIFIED	3.561	☐	
Thorium-230	NR	0.9594	0.09171	pCi/g	0.09742	N	608.9	4	1.314	IDENTIFIED	7.709	☐	
Thorium-232	LA	1.245	0.1614	pCi/g	0.4703	N	0	14	0	FAIL_ABUND	0	☐	
Tin-126	INT	0.236	0.03757	pCi/g	0.0944	N	87.04	3	0.844	IDENTIFIED	15.21	☐	
Titanium-44	LA	0.3317	0.02346	pCi/g	0.05096	N	0	14	0	FAIL_ABUND	0	☐	
Total Uranium	—	2.2034	1.94E-06	ug/g	2.1046	N		0				☐	
Uranium-234	NR	0.9594	0.09171	pCi/g	0.09742	N	608.9	4	1.314	IDENTIFIED	7.709	☐	
Zirconium-97	—	2.96E+07	6.15E+06	pCi/g	0	N	0	14	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492001	18-DEC-09 12:00	04-JAN-10 13:59	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.724	0.157	pCi/g	0.1843	N	910.7	3	1.488	IDENTIFIED	7.265		
Americium-243	INT	0.4395	0.04163	pCi/g	0.08406	N	74.6	1	1.217	IDENTIFIED	8.843		
Annihilation Rad.	—	0.1749	0.034	pCi/g	0.04095	N	510.5	1	1.428	IDENTIFIED	19.2		
Barium-137m	NR	0.2006	0.03089	pCi/g	0.05954	N	661.1	2	1.228	IDENTIFIED	15.06		
Bismuth-211	INT	4.207	0.242	pCi/g	0.3119	Y	351.6	4	1.214	IDENTIFIED	4.817	☑ VE	
Bismuth-212	HE	0.8013	0.1884	pCi/g	0.6741	N	0	8	0	FAIL_ABUND	0		
Bismuth-214	✓	1.403	0.09826	pCi/g	0.1004	0.200	608.9	4	1.407	IDENTIFIED	5.663		
Cadmium-109	INT	3.375	0.4847	pCi/g	1.201	Y	87.1	3	1.31	IDENTIFIED	13.85	☑ VF	
Cerium-143	—	2365	348.1	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Cesium-137	✓	0.212	0.03266	pCi/g	0.06294	0.100	661.1	2	1.228	IDENTIFIED	15.06		
Gross Gamma	—	8.713	1.312	pCi/g	3.009	N		0					
Iodine-123	HE	2.43E+06	3.04E+07	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Iodine-133	HE	3687	15680	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Lead-212	✓	1.537	0.07745	pCi/g	0.09257	0.100	238.4	4	1.105	IDENTIFIED	3.576		
Lead-214	✓	1.463	0.09242	pCi/g	0.1111	0.100	351.6	4	1.214	IDENTIFIED	4.817		
Lutetium-177	HE	2.475	0.962	pCi/g	2.294	N	0	8	0	FAIL_ABUND	0		
Neptunium-237	INT	0.9713	0.1718	pCi/g	0.4059	N	87.1	3	1.31	IDENTIFIED	13.85		
Niobium-95	HE	0.07249	0.03409	pCi/g	0.05709	N	767.3	1	1.52	IDENTIFIED	46.89		
Niobium-97	—	9.58E+05	3.40E+05	pCi/g	0	N	0	8	0	SHORT_HLIF	0		
Polonium-212	NR	1.537	0.07745	pCi/g	0.09257	N	238.4	4	1.105	IDENTIFIED	3.576		
Polonium-214	NR	1.463	0.09242	pCi/g	0.1111	N	351.6	4	1.214	IDENTIFIED	4.817		
Polonium-216	NR	1.537	0.07745	pCi/g	0.09257	N	238.4	4	1.105	IDENTIFIED	3.576		
Polonium-218	NR	1.463	0.09242	pCi/g	0.1111	N	351.6	4	1.214	IDENTIFIED	4.817		
Potassium-40	✓	21.3	1.066	pCi/g	0.3972	1.00	1460	1	2.036	IDENTIFIED	3.509		
Radium-224	INT	4.285	0.6703	pCi/g	1.053	Y	241.5	1	1.775	IDENTIFIED	15.4	☑ VE	
Radium-226	✓	1.403	0.09826	pCi/g	0.1004	Y	608.9	4	1.407	IDENTIFIED	5.663		
Radium-228	✓	1.724	0.157	pCi/g	0.1843	0.500	910.7	3	1.488	IDENTIFIED	7.265		
Thallium-208	✓	0.447	0.04493	pCi/g	0.0525	0.080	582.9	1	1.362	IDENTIFIED	9.393		
Thorium-228	NR	1.563	0.07878	pCi/g	0.09416	N	238.4	4	1.105	IDENTIFIED	3.576		
Thorium-230	NR	1.403	0.09826	pCi/g	0.1004	N	608.9	4	1.407	IDENTIFIED	5.663		
Thorium-232	NR	1.724	0.157	pCi/g	0.1843	N	910.7	3	1.488	IDENTIFIED	7.265		
Thorium-234	UNC	2.258	1.069	pCi/g	2.106	2.00	63.3	2	1.204	IDENTIFIED	46.59	☑ UI	
Tin-126	INT	0.3308	0.0475	pCi/g	0.1183	N	87.1	3	1.31	IDENTIFIED	13.85		
Titanium-44	LA	0.3929	0.02762	pCi/g	0.07499	N	0	8	0	FAIL_ABUND	0		
Total Uranium	—	6.7782	3.18E-06	ug/g	3.1361	N		0					
Uranium-234	NR	1.403	0.09826	pCi/g	0.1004	N	608.9	4	1.407	IDENTIFIED	5.663		
Uranium-238	HE	2.258	1.069	pCi/g	2.106	N	63.3	2	1.204	IDENTIFIED	46.59		
Zirconium-97	—	2.91E+07	6.82E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0		

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492002	18-DEC-09 12:00	04-JAN-10 14:00	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.666	0.2195	pCi/g	0.2922	N	910.9	3	1.728	IDENTIFIED	12.1		
Americium-243	INT	0.402	0.03933	pCi/g	0.06463	N	74.75	1	1.477	IDENTIFIED	8.781		
Annihilation Rad.	—	0.1834	0.04411	pCi/g	0.06186	N	510.8	1	2.194	IDENTIFIED	23.8		
Bismuth-211	INT	3.375	0.2834	pCi/g	0.4132	Y	351.7	4	1.279	IDENTIFIED	7.567	☑ VF	
Bismuth-212	HE	1.19	0.2914	pCi/g	0.8183	N	0	11	0	FAIL_ABUND	0		
Bismuth-214	✓	1.3	0.1117	pCi/g	0.1379	0.200	609.2	4	1.547	IDENTIFIED	7.211		
Cadmium-109	INT	3.651	0.4564	pCi/g	1.091	Y	87.08	3	1.225	IDENTIFIED	11.85	☑ VE	
Cerium-143	—	2334	364	pCi/g	0	N	0	11	0	SHORT_HLIF	0		
Cesium-134	LA	0.1298	0.03207	pCi/g	0.1203	0.100	0	11	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	9.986	1.674	pCi/g	3.218	N		0					

Iodine-123	HE	2.38E+06	3.61E+07	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Iodine-135	—	2.79E+17	0	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Lead-212	✓	1.695	0.09648	pCi/g	0.1015	0.100	238.5	4	1.212	IDENTIFIED	3.428	☐
Lead-214	✓	1.174	0.1032	pCi/g	0.1441	0.100	351.7	4	1.279	IDENTIFIED	7.567	☐
Lutetium-177	HE	2.766	1.129	pCi/g	2.696	N	0	11	0	FAIL_ABUND	0	☐
Neptunium-237	INT	1.051	0.1703	pCi/g	0.3126	N	87.08	3	1.225	IDENTIFIED	11.85	☐
Polonium-212	NR	1.695	0.09648	pCi/g	0.1015	N	238.5	4	1.212	IDENTIFIED	3.428	☐
Polonium-214	NR	1.174	0.1032	pCi/g	0.1441	N	351.7	4	1.279	IDENTIFIED	7.567	☐
Polonium-216	NR	1.695	0.09648	pCi/g	0.1015	N	238.5	4	1.212	IDENTIFIED	3.428	☐
Polonium-218	NR	1.174	0.1032	pCi/g	0.1441	N	351.7	4	1.279	IDENTIFIED	7.567	☐
Potassium-40	✓	33.68	1.456	pCi/g	0.7701	1.00	1460	1	2.255	IDENTIFIED	3.057	☐
Radium-224	INT	2.071	0.6425	pCi/g	1.155	Y	240.7	1	1.374	IDENTIFIED	30.77	☑ VI
Radium-226	✓	1.3	0.1117	pCi/g	0.1379	Y	609.2	4	1.547	IDENTIFIED	7.211	☐
Radium-228	✓	1.666	0.2195	pCi/g	0.2922	0.500	910.9	3	1.728	IDENTIFIED	12.1	☐
Sodium-24	HE	4.19E+06	4.30E+06	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Technetium-99m	—	7.26E+17	0	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Thallium-200	HE	272.3	917.4	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐
Thallium-208	✓	0.5868	0.05448	pCi/g	0.07113	0.080	583.1	1	1.629	IDENTIFIED	8.311	☐
Thorium-228	NR	1.724	0.09813	pCi/g	0.1032	N	238.5	4	1.212	IDENTIFIED	3.428	☐
Thorium-230	NR	1.3	0.1117	pCi/g	0.1379	N	609.2	4	1.547	IDENTIFIED	7.211	☐
Thorium-232	NR	1.666	0.2195	pCi/g	0.2922	N	910.9	3	1.728	IDENTIFIED	12.1	☐
Thorium-234	✓	1.896	0.6243	pCi/g	1.091	2.00	63.01	2	0.9917	IDENTIFIED	31.63	☐
Tin-126	INT	0.3578	0.04472	pCi/g	0.1068	N	87.08	3	1.225	IDENTIFIED	11.85	☐
Titanium-44	LA	0.3869	0.02712	pCi/g	0.06043	N	0	11	0	FAIL_ABUND	0	☐
Total Uranium	—	5.6525	1.86E-06	ug/g	1.6267	N		0				☐
Uranium-234	NR	1.3	0.1117	pCi/g	0.1379	N	609.2	4	1.547	IDENTIFIED	7.211	☐
Uranium-238	HE	1.896	0.6243	pCi/g	1.091	N	63.01	2	0.9917	IDENTIFIED	31.63	☐
Zirconium-97	—	3.14E+07	8.54E+06	pCi/g	0	N	0	11	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492003	18-DEC-09 12:00	05-JAN-10 14:15	18.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.421	0.206	pCi/g	0.3095	N	911.1	3	1.667	IDENTIFIED	13.54	☐	
Americium-243	INT	0.3352	0.02926	pCi/g	0.06405	N	74.71	1	1.075	IDENTIFIED	7.584	☐	
Annihilation Rad.	—	0.1909	0.04297	pCi/g	0.05657	N	510.9	1	1.983	IDENTIFIED	22.24	☐	
Bismuth-210	HE	0.9917	0.4047	pCi/g	0.804	N	46.37	3	1.041	IDENTIFIED	40.6	☐	
Bismuth-211	INT	3.755	0.2748	pCi/g	0.406	Y	351.7	4	1.495	IDENTIFIED	6.35	☑ VI	
Bismuth-214	✓	1.362	0.1191	pCi/g	0.1505	0.200	608.9	4	1.695	IDENTIFIED	7.392	☐	
Cadmium-109	INT	3.274	0.3673	pCi/g	0.9466	Y	87.11	3	1.506	IDENTIFIED	10.49	☑ VI	
Cadmium-115	HE	10.1	16.51	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐	
Cerium-143	—	3233	556.6	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐	
Cesium-135	HE	0.352	0.09373	pCi/g	0.3113	N	0	13	0	NOT_IDENTI	0	☐	
Gross Gamma	—	8.158	1.501	pCi/g	2.976	N		0				☐	
Iodine-123	HE	7.72E+07	1.35E+08	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐	
Iodine-133	HE	21240	39700	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐	
Krypton-85	HE	18.35	4.646	pCi/g	15.79	N	0	13	0	NOT_IDENTI	0	☐	
Lead-210	HE	0.9917	0.4047	pCi/g	0.804	N	46.37	3	1.041	IDENTIFIED	40.6	☐	
Lead-212	✓	1.54	0.09015	pCi/g	0.09435	0.100	238.5	4	1.242	IDENTIFIED	3.691	☐	
Lead-214	✓	1.306	0.1015	pCi/g	0.1416	0.100	351.7	4	1.495	IDENTIFIED	6.35	☐	
Lutetium-177	HE	2.961	1.103	pCi/g	2.923	N	0	13	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	0.9408	0.1434	pCi/g	0.2958	N	87.11	3	1.506	IDENTIFIED	10.49	☐	
Niobium-95m	HE	0.2707	0.07282	pCi/g	0.242	N	0	13	0	NOT_IDENTI	0	☐	
Polonium-210	HE	0.9917	0.4042	pCi/g	0.804	N	46.37	3	1.041	IDENTIFIED	40.6	☐	
Polonium-212	NR	1.54	0.09015	pCi/g	0.09435	N	238.5	4	1.242	IDENTIFIED	3.691	☐	
Polonium-214	NR	1.306	0.1015	pCi/g	0.1416	N	351.7	4	1.495	IDENTIFIED	6.35	☐	
Polonium-216	NR	1.54	0.09015	pCi/g	0.09435	N	238.5	4	1.242	IDENTIFIED	3.691	☐	
Polonium-218	NR	1.306	0.1015	pCi/g	0.1416	N	351.7	4	1.495	IDENTIFIED	6.35	☐	

Potassium-40	✓	21.78	1.052	pCi/g	0.6343	1.00	1460	1	1.972	IDENTIFIED	3.738	☐		
Promethium-149	HE	90.89	121.9	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Radium-224	INT	3.868	0.618	pCi/g	1.074	Y	241.5	1	1.664	IDENTIFIED	15.48	☑ VF		
Radium-226	✓	1.362	0.1191	pCi/g	0.1505	Y	608.9	4	1.695	IDENTIFIED	7.392	☐		
Radium-228	✓	1.421	0.206	pCi/g	0.3095	0.500	911.1	3	1.667	IDENTIFIED	13.54	☐		
Sodium-24	HE	2.22E+06	1.24E+07	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		
Strontium-85	LA	0.09707	0.02458	pCi/g	0.08354	Y	0	13	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.	
Thallium-208	✓	0.5619	0.05638	pCi/g	0.07741	0.080	582.9	1	1.583	IDENTIFIED	9.142	☐		
Thorium-228	NR	1.568	0.09179	pCi/g	0.09607	N	238.5	4	1.242	IDENTIFIED	3.691	☐		
Thorium-230	NR	1.362	0.1191	pCi/g	0.1505	N	608.9	4	1.695	IDENTIFIED	7.392	☐		
Thorium-232	NR	1.421	0.206	pCi/g	0.3095	N	911.1	3	1.667	IDENTIFIED	13.54	☐		
Thorium-234	UNC	1.18	0.5112	pCi/g	1.036	2.00	63.14	2	1.308	IDENTIFIED	42.33	☑ UI		
Tin-126	INT	0.3204	0.03594	pCi/g	0.09251	N	87.11	3	1.506	IDENTIFIED	10.49	☐		
Titanium-44	LA	0.3501	0.02555	pCi/g	0.05805	N	0	13	0	FAIL_ABUND	0	☐		
Total Uranium		3.6261	1.52E-06	ug/g	1.5437	N		0				☐		
Uranium-234	NR	1.362	0.1191	pCi/g	0.1505	N	608.9	4	1.695	IDENTIFIED	7.392	☐		
Uranium-238	HE	1.18	0.5112	pCi/g	1.036	N	63.14	2	1.308	IDENTIFIED	42.33	☐		
Zirconium-97		1.32E+08	2.34E+07	pCi/g	0	N	0	13	0	SHORT_HLIF	0	☐		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492004	18-DEC-09 12:00	04-JAN-10 14:01	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.542	0.1641	pCi/g	0.2241	N	911	3	2.031	IDENTIFIED	9.073	☐	
Americium-243	INT	0.3608	0.05363	pCi/g	0.1298	N	74.29	1	1.245	IDENTIFIED	13.79	☐	
Bismuth-211	INT	4.246	0.3066	pCi/g	0.3948	Y	351.5	4	1.542	IDENTIFIED	6.352	☑ VF	
Bismuth-214	✓	1.283	0.09564	pCi/g	0.1235	0.200	609	4	1.618	IDENTIFIED	6.466	☐	
Cerium-143	—	3535	509.6	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐	
Gross Gamma	—	8.652	1.722	pCi/g	4.099	N		0				☐	
Iodine-133	HE	3899	17370	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐	
Iodine-135	—	1.85E+17	0	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐	
Lead-212	✓	1.719	0.09884	pCi/g	0.108	0.100	238.2	4	1.428	IDENTIFIED	3.993	☐	
Lead-214	✓	1.477	0.1134	pCi/g	0.1376	0.100	351.5	4	1.542	IDENTIFIED	6.352	☐	
Niobium-95m	LA	1.594	0.1273	pCi/g	0.4231	N	0	7	0	NOT_IDENTI	0	☐	
Polonium-212	NR	1.719	0.09884	pCi/g	0.108	N	238.2	4	1.428	IDENTIFIED	3.993	☐	
Polonium-214	NR	1.477	0.1134	pCi/g	0.1376	N	351.5	4	1.542	IDENTIFIED	6.352	☐	
Polonium-216	NR	1.719	0.09884	pCi/g	0.108	N	238.2	4	1.428	IDENTIFIED	3.993	☐	
Polonium-218	NR	1.477	0.1134	pCi/g	0.1376	N	351.5	4	1.542	IDENTIFIED	6.352	☐	
Potassium-40	✓	20.5	1.205	pCi/g	0.6862	1.00	1461	1	1.977	IDENTIFIED	4.468	☐	
Radium-224	INT	5.097	0.8264	pCi/g	1.228	Y	241.2	1	2.019	IDENTIFIED	15.84	☑ VI	
Radium-226	✓	1.283	0.09564	pCi/g	0.1235	Y	609	4	1.618	IDENTIFIED	6.466	☐	
Radium-228	✓	1.542	0.1641	pCi/g	0.2241	0.500	911	3	2.031	IDENTIFIED	9.073	☐	
Thallium-208	✓	0.6367	0.04655	pCi/g	0.06837	0.080	582.8	1	1.608	IDENTIFIED	6.582	☐	
Thorium-228	NR	1.748	0.1005	pCi/g	0.1098	N	238.2	4	1.428	IDENTIFIED	3.993	☐	
Thorium-230	NR	1.283	0.09564	pCi/g	0.1235	N	609	4	1.618	IDENTIFIED	6.466	☐	
Thorium-232	NR	1.542	0.1641	pCi/g	0.2241	N	911	3	2.031	IDENTIFIED	9.073	☐	
Tin-126	HE	0.2539	0.06752	pCi/g	0.2141	N	0	7	0	FAIL_ABUND	0	☐	
Titanium-44	LA	0.273	0.03228	pCi/g	0.1036	N	0	7	0	NOT_IDENTI	0	☐	
Total Uranium	—	7.1339	4.76E-06	ug/g	5.7247	N		0				☐	
Uranium-234	NR	1.283	0.09564	pCi/g	0.1235	N	609	4	1.618	IDENTIFIED	6.466	☐	
Zirconium-97	—	4.60E+07	9.06E+06	pCi/g	0	N	0	7	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492005	18-DEC-09 12:00	04-JAN-10 14:01	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.817	0.1852	pCi/g	0.191	N	910.8	3	1.527	IDENTIFIED	8.278	☐	
Americium-243	INT	0.3851	0.03697	pCi/g	0.08053	N	74.72	1	1.078	IDENTIFIED	8.659	☐	

Annihilation Rad.	—	0.1851	0.03383	pCi/g	0.04219	N	510.5	1	1.675	IDENTIFIED	17.65	☐	
Bismuth-211	INT ✓	4.284	0.3145	pCi/g	0.2854	Y	351.7	4	1.152	IDENTIFIED	4.908	☑ UL	
Bismuth-214		1.302	0.09988	pCi/g	0.1017	0.200	609	4	1.525	IDENTIFIED	5.562	☐	
Cadmium-109	INT	3.793	0.449	pCi/g	1.041	Y	87.27	3	1.046	IDENTIFIED	10.83	☑ UL	
Cerium-143	—	1715	301.1	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Cesium-134	LA	0.09186	0.04039	pCi/g	0.0857	0.100	0	8	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Gross Gamma	—	10.32	1.49	pCi/g	3.433	N		0				☐	
Iodine-133	HE	5927	12610	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Iodine-135	—	5.13E+16	0	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Lead-212	✓	1.686	0.1136	pCi/g	0.08846	0.100	238.5	4	0.9443	IDENTIFIED	3.214	☐	
Lead-214	✓	1.49	0.1161	pCi/g	0.09947	0.100	351.7	4	1.152	IDENTIFIED	4.908	☐	
Lutetium-177	HE	3.02	0.8324	pCi/g	2.326	N	0	8	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	1.092	0.1714	pCi/g	0.2894	N	87.27	3	1.046	IDENTIFIED	10.83	☐	
Polonium-212	NR	1.686	0.1136	pCi/g	0.08846	N	238.5	4	0.9443	IDENTIFIED	3.214	☐	
Polonium-214	NR	1.49	0.1161	pCi/g	0.09947	N	351.7	4	1.152	IDENTIFIED	4.908	☐	
Polonium-216	NR	1.686	0.1136	pCi/g	0.08846	N	238.5	4	0.9443	IDENTIFIED	3.214	☐	
Polonium-218	NR	1.49	0.1161	pCi/g	0.09947	N	351.7	4	1.152	IDENTIFIED	4.908	☐	
Potassium-40	✓	31.2	1.638	pCi/g	0.4806	1.00	1460	1	1.84	IDENTIFIED	2.87	☐	
Radium-224	INT	4.958	0.6587	pCi/g	1.007	Y	241.4	1	1.737	IDENTIFIED	12.09	☑ UF	
Radium-226	✓	1.302	0.09988	pCi/g	0.1017	Y	609	4	1.525	IDENTIFIED	5.562	☐	
Radium-228	✓	1.817	0.1852	pCi/g	0.191	0.500	910.8	3	1.527	IDENTIFIED	8.278	☐	
Sodium-24	HE	1.08E+06	3.02E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	
Thallium-208	✓	0.5428	0.0488	pCi/g	0.05158	0.080	582.9	1	1.319	IDENTIFIED	7.501	☐	
Thorium-228	NR	1.715	0.1155	pCi/g	0.08997	N	238.5	4	0.9443	IDENTIFIED	3.214	☐	
Thorium-230	NR	1.301	0.09987	pCi/g	0.1017	N	609	4	1.525	IDENTIFIED	5.562	☐	
Thorium-232	NR	1.817	0.1852	pCi/g	0.191	N	910.8	3	1.527	IDENTIFIED	8.278	☐	
Tin-126	INT	0.3718	0.044	pCi/g	0.1025	N	87.27	3	1.046	IDENTIFIED	10.83	☐	
Titanium-44	LA	0.3673	0.02621	pCi/g	0.06743	N	0	8	0	FAIL_ABUND	0	☐	
Total Uranium	—	5.0394	2.73E-06	ug/g	2.5962	N		0				☐	
Uranium-234	NR	1.301	0.09987	pCi/g	0.1017	N	609	4	1.525	IDENTIFIED	5.562	☐	
Zirconium-97	HE	1.06E+07	6.44E+06	pCi/g	0	N	0	8	0	SHORT_HLIF	0	☐	

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Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492006	18-DEC-09 12:00	04-JAN-10 14:02	17.1	SAMPLE	LOAD	1	LANL	LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.793	0.2171	pCi/g	0.2436	N	911.1	3	1.8	IDENTIFIED	10.97	☐	
Americium-243	INT	0.4001	0.03162	pCi/g	0.06177	N	74.02	1	0.9853	IDENTIFIED	6.659	☐	
Annihilation Rad.	—	0.2066	0.04182	pCi/g	0.05367	N	510.7	1	1.949	IDENTIFIED	19.96	☐	
Bismuth-211	INT	3.877	0.2759	pCi/g	0.3576	Y	351.3	4	1.285	IDENTIFIED	6.146	☑ UL	
Bismuth-212	HE	1.141	0.2871	pCi/g	0.8316	N	0	10	0	FAIL_ABUND	0	☐	
Bismuth-214	✓	1.306	0.1211	pCi/g	0.1335	0.200	609	4	1.364	IDENTIFIED	8.12	☐	
Cadmium-109	INT	3.231	0.4826	pCi/g	0.9729	Y	88.97	1	1.307	IDENTIFIED	14.37	☑ UL	
Cerium-143	—	3561	528	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Cesium-135	HE	0.3141	0.09013	pCi/g	0.2993	N	0	10	0	NOT_IDENTI	0	☐	
Gross Gamma	—	10.82	1.646	pCi/g	4.318	N		0				☐	
Iodine-123	HE	2.03E+07	3.40E+07	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Iodine-133	HE	1075	17540	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐	
Lead-212	✓	1.797	0.09927	pCi/g	0.0953	0.100	238	4	1.044	IDENTIFIED	3.357	☐	
Lead-214	✓	1.348	0.1022	pCi/g	0.117	0.100	351.3	4	1.285	IDENTIFIED	6.146	☐	
Lutetium-177	HE	3.42	0.9043	pCi/g	2.618	N	0	10	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	1.403	0.1987	pCi/g	0.279	N	86.43	2	1.231	IDENTIFIED	8.822	☐	
Niobium-95m	HE	0.3214	0.08016	pCi/g	0.2646	N	0	10	0	NOT_IDENTI	0	☐	
Polonium-212	NR	1.797	0.09927	pCi/g	0.0953	N	238	4	1.044	IDENTIFIED	3.357	☐	
Polonium-214	NR	1.348	0.1022	pCi/g	0.117	N	351.3	4	1.285	IDENTIFIED	6.146	☐	
Polonium-216	NR	1.797	0.09927	pCi/g	0.0953	N	238	4	1.044	IDENTIFIED	3.357	☐	
Polonium-218	NR	1.348	0.1022	pCi/g	0.117	N	351.3	4	1.285	IDENTIFIED	6.146	☐	
Potassium-40	✓	34.32	1.534	pCi/g	0.6528	1.00	1461	1	2.1	IDENTIFIED	3.244	☐	

Radium-224	INT	5.286	0.8353	pCi/g	1.085	Y	240.9	1	1.923	IDENTIFIED	15.35	☑ VI
Radium-226	✓	1.306	0.1211	pCi/g	0.1335	Y	609	4	1.364	IDENTIFIED	8.12	☐
Radium-228	✓	1.793	0.2171	pCi/g	0.2436	0.500	911.1	3	1.8	IDENTIFIED	10.97	☐
Sodium-24	HE	1.18E+06	4.01E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐
Thallium-200	HE	1473	808.3	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐
Thallium-208	✓	0.6008	0.05696	pCi/g	0.0705	0.080	582.7	1	1.291	IDENTIFIED	8.613	☐
Thorium-228	NR	1.828	0.101	pCi/g	0.09694	N	238	4	1.044	IDENTIFIED	3.357	☐
Thorium-230	NR	1.305	0.1211	pCi/g	0.1335	N	609	4	1.364	IDENTIFIED	8.12	☐
Thorium-232	NR ✓	1.793	0.2171	pCi/g	0.2436	N	911.1	3	1.8	IDENTIFIED	10.97	☐
Thorium-234		1.925	0.562	pCi/g	1.071	2.00	62.28	2	0.8346	IDENTIFIED	27.75	☐
Tin-126	INT LA NR 11/10/9	0.4777	0.04637	pCi/g	0.09524	N	86.43	2	1.231	IDENTIFIED	8.822	☐
Total Uranium		5.7213	1.67E-06	ug/g	1.5954	N		0				☐
Uranium-234	NR	1.305	0.1211	pCi/g	0.1335	N	609	4	1.364	IDENTIFIED	8.12	☐
Uranium-238	HE	1.925	0.562	pCi/g	1.071	N	62.28	2	0.8346	IDENTIFIED	27.75	☐
Zirconium-97	HE	1.22E+07	8.36E+06	pCi/g	0	N	0	10	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243492007	18-DEC-09 12:00	04-JAN-10 14:02	17.1	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.539	0.1578	pCi/g	0.1707	N	911.3	3	2.171	IDENTIFIED	7.822	☐	
Americium-243	INT	0.3528	0.03811	pCi/g	0.09032	N	75.14	1	1.043	IDENTIFIED	9.958	☐	
Annihilation Rad.	—	0.1216	0.02871	pCi/g	0.03781	N	511.1	1	1.897	IDENTIFIED	23.38	☐	
Barium-137m	HE	0.05963	0.01545	pCi/g	0.05722	N	0	16	0	NOT_IDENTI	0	☐	
Bismuth-211	WT	4.292	0.2355	pCi/g	0.2418	Y	352.1	4	1.314	IDENTIFIED	4.45	☑ VF	
Bismuth-212	LA	0.926	0.1894	pCi/g	0.5456	N	0	16	0	FAIL_ABUND	0	☐	
Bismuth-214	✓	1.175	0.08175	pCi/g	0.09157	0.200	609.6	4	1.542	IDENTIFIED	5.335	☐	
Cadmium-109	INT	3.846	0.4617	pCi/g	1.247	Y	87.66	3	1.331	IDENTIFIED	11.08	☑ VF	
Cerium-143	—	1743	269.2	pCi/g	0	N	0	16	0	SHORT_HLIF	0	☐	
Cesium-134	LA	0.1023	0.0226	pCi/g	0.07153	0.100	0	16	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Cesium-135	HE	0.2696	0.07255	pCi/g	0.2353	N	0	16	0	NOT_IDENTI	0	☐	
Cesium-137	LA	0.06304	0.01634	pCi/g	0.06048	0.100	0	16	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Gold-195	HE	0.4737	0.1166	pCi/g	0.3834	N	0	16	0	FAIL_ABUND	0	☐	
Gross Gamma	—	8.397	1.202	pCi/g	2.17	N		0				☐	
Iodine-133	HE	895.1	11520	pCi/g	0	N	0	16	0	SHORT_HLIF	0	☐	
Krypton-85	LA	24.38	3.668	pCi/g	12.69	N	0	16	0	NOT_IDENTI	0	☐	
Lead-212	✓	1.595	0.07512	pCi/g	0.07828	0.100	239	4	1.161	IDENTIFIED	3.068	☐	
Lead-214	✓	1.493	0.09071	pCi/g	0.08426	0.100	352.1	4	1.314	IDENTIFIED	4.45	☐	
Lutetium-177	HE	3.704	0.8706	pCi/g	2.04	N	0	16	0	FAIL_ABUND	0	☐	
Neptunium-237	INT	1.107	0.1752	pCi/g	0.3873	N	87.66	3	1.331	IDENTIFIED	11.08	☐	
Niobium-97	HE	64460	2.88E+05	pCi/g	0	N	0	16	0	SHORT_HLIF	0	☐	
Polonium-212	NR	1.595	0.07512	pCi/g	0.07828	N	239	4	1.161	IDENTIFIED	3.068	☐	
Polonium-214	NR	1.493	0.09071	pCi/g	0.08426	N	352.1	4	1.314	IDENTIFIED	4.45	☐	
Polonium-216	NR	1.595	0.07512	pCi/g	0.07828	N	239	4	1.161	IDENTIFIED	3.068	☐	
Polonium-218	NR	1.493	0.09071	pCi/g	0.08426	N	352.1	4	1.314	IDENTIFIED	4.45	☐	
Potassium-40	✓	24.68	1.144	pCi/g	0.4572	1.00	1461	1	2.493	IDENTIFIED	2.664	☐	
Radium-224	INT	3.786	0.494	pCi/g	0.8897	Y	241.9	1	1.541	IDENTIFIED	12.75	☑ VI	
Radium-226	✓	1.175	0.08175	pCi/g	0.09157	Y	609.6	4	1.542	IDENTIFIED	5.335	☐	
Radium-228	✓	1.539	0.1578	pCi/g	0.1707	0.500	911.3	3	2.171	IDENTIFIED	7.822	☐	
Sodium-24	HE	1.00E+06	2.46E+06	pCi/g	0	N	0	16	0	SHORT_HLIF	0	☐	
Strontium-85	LA	0.1276	0.0192	pCi/g	0.06644	Y	0	16	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	115.3	630	pCi/g	0	N	0	16	0	SHORT_HLIF	0	☐	
Thallium-208	✓	0.5096	0.03834	pCi/g	0.0436	0.080	583.4	1	1.667	IDENTIFIED	6.42	☐	
Thorium-228	NR	1.623	0.07641	pCi/g	0.07963	N	239	4	1.161	IDENTIFIED	3.068	☐	
Thorium-230	NR	1.175	0.08175	pCi/g	0.09157	N	609.6	4	1.542	IDENTIFIED	5.335	☐	
Thorium-232	NR	1.539	0.1578	pCi/g	0.1707	N	911.3	3	2.171	IDENTIFIED	7.822	☐	
Tin-126	INT	0.3769	0.04525	pCi/g	0.123	N	87.66	3	1.331	IDENTIFIED	11.08	☐	
Titanium-44	LA	0.3294	0.02587	pCi/g	0.08308	N	0	16	0	FAIL_ABUND	0	☐	

Total Uranium	—	3.5497	3.21E-06	ug/g	3.4267	N		0					☐
Uranium-234	NR	1.175	0.08175	pCi/g	0.09157	N	609.6	4	1.542	IDENTIFIED	5.335		☐
Zirconium-97	—	1.55E+07	5.86E+06	pCi/g	0	N	0	16	0	SHORT_HLIF	0		☐

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202004732		04-JAN-10 14:05	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Annihilation Rad.	—	0.06883	0.02004	pCi/g	0.02386	N	510.9	1	3.208	IDENTIFIED	28.68	☐	
Gross Gamma	HE	0.1214	0.09053	pCi/g	0.118	N		0				☐	
Iodine-133	HE	4.919	3.926	pCi/g	0	N	0	6	0	SHORT_HLIF	0	☐	
Iodine-135	HE	1.30E+06	7.07E+06	pCi/g	0	N	0	6	0	SHORT_HLIF	0	☐	
Krypton-85	LA	21.62	2.835	pCi/g	10.07	N	0	6	0	NOT_IDENTI	0	☐	
Strontium-85	LA	0.1024	0.01343	pCi/g	0.04772	Y	0	6	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Total Uranium	—	2.6036	1.58E-06	ug/g	1.6162	N		0				☐	
Tungsten-181	HE	0.2546	0.151	pCi/g	0.2426	N	0	6	0	FAIL_ABUND	0	☐	
Zirconium-97	—	2255	379.9	pCi/g	0	N	0	6	0	SHORT_HLIF	0	☐	

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202004733	18-DEC-09 12:00	04-JAN-10 16:16	17.2	DUP	LOAD	1		LANL01004GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	NR	1.837	0.1928	pCi/g	0.2352	N	910.9	3	1.799	IDENTIFIED	8.904	☐	
Americium-243	INT	0.4465	0.06669	pCi/g	0.1211	N	74.22	1	1.686	IDENTIFIED	13.86	☐	
Annihilation Rad.		0.1448	0.04081	pCi/g	0.05274	N	510.7	1	1.721	IDENTIFIED	28.05	☐	
Barium-137m	NR	0.2375	0.04174	pCi/g	0.05669	N	662	2	1.567	IDENTIFIED	17.39	☐	
Bismuth-211	INT	4.613	0.2912	pCi/g	0.3686	Y	351.5	4	1.471	IDENTIFIED	5.297	☑ VF	
Bismuth-212	HE	0.9775	0.3019	pCi/g	0.6942	N	0	12	0	FAIL_ABUND	0	☐	
Bismuth-214	✓	1.478	0.1032	pCi/g	0.1219	0.200	609.1	4	1.582	IDENTIFIED	5.909	☐	
Cadmium-109	INT	2.877	0.6029	pCi/g	1.535	Y	86.68	3	1.196	IDENTIFIED	20.15	☑ VF	
Cerium-143	—	4486	608.4	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐	
Cesium-134	LA	0.1225	0.0323	pCi/g	0.09281	0.100	0	12	0	FAIL_ABUND	0	☑ UI	Data rejected due to low abundance.
Cesium-135	NR	0.7384	0.1383	pCi/g	0.2745	N	269.6	1	2.789	IDENTIFIED	18.24	☐	
Cesium-137	✓	0.2511	0.04413	pCi/g	0.05993	0.100	662	2	1.567	IDENTIFIED	17.39	☐	
Gross Gamma	—	9.786	1.549	pCi/g	4.167	N		0				☐	
Iodine-133	HE	5507	17090	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐	
Krypton-85	HE	19.02	4.605	pCi/g	14.91	N	0	12	0	NOT_IDENTI	0	☐	
Lead-212	✓	1.911	0.101	pCi/g	0.1055	0.100	238.1	4	1.368	IDENTIFIED	3.29	☐	
Lead-214	✓	1.605	0.1096	pCi/g	0.1235	0.100	351.5	4	1.471	IDENTIFIED	5.297	☐	
Lutetium-177	HE	5.135	1.235	pCi/g	2.879	N	0	12	0	FAIL_ABUND	0	☐	
Neptunium-237	HE	0.8278	0.1933	pCi/g	0.4536	N	86.68	3	1.196	IDENTIFIED	20.15	☐	
Niobium-95m	LA	1.792	0.1287	pCi/g	0.3946	N	0	12	0	NOT_IDENTI	0	☐	
Niobium-97	HE	4.54E+05	4.79E+05	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐	
Polonium-212	NR	1.911	0.101	pCi/g	0.1055	N	238.1	4	1.368	IDENTIFIED	3.29	☐	
Polonium-214	NR	1.605	0.1096	pCi/g	0.1235	N	351.5	4	1.471	IDENTIFIED	5.297	☐	
Polonium-216	NR	1.911	0.101	pCi/g	0.1055	N	238.1	4	1.368	IDENTIFIED	3.29	☐	
Polonium-218	NR	1.605	0.1096	pCi/g	0.1235	N	351.5	4	1.471	IDENTIFIED	5.297	☐	
Potassium-40	✓	22	1.11	pCi/g	0.5286	1.00	1461	1	2.025	IDENTIFIED	3.294	☐	
Radium-224	INT	4.895	0.8129	pCi/g	1.201	Y	240.9	1	1.912	IDENTIFIED	16.24	☑ VC	
Radium-226	✓	1.478	0.1032	pCi/g	0.1219	Y	609.1	4	1.582	IDENTIFIED	5.909	☐	
Radium-228	✓	1.837	0.1928	pCi/g	0.2352	0.500	910.9	3	1.799	IDENTIFIED	8.904	☐	
Strontium-85	LA	0.09968	0.02413	pCi/g	0.07814	Y	0	12	0	NOT_IDENTI	0	☑ UI	Data rejected due to low abundance.
Thallium-200	HE	757.7	948.9	pCi/g	0	N	0	12	0	SHORT_HLIF	0	☐	
Thallium-208	✓	0.6055	0.05116	pCi/g	0.06427	0.080	582.9	1	1.72	IDENTIFIED	7.826	☐	
Thorium-228	NR	1.944	0.1028	pCi/g	0.1074	N	238.1	4	1.368	IDENTIFIED	3.29	☐	
Thorium-230	NR	1.478	0.1032	pCi/g	0.1219	N	609.1	4	1.582	IDENTIFIED	5.909	☐	
Thorium-232	NR	1.837	0.1928	pCi/g	0.2352	N	910.9	3	1.799	IDENTIFIED	8.904	☐	
Tin-126	INT	0.2819	0.05907	pCi/g	0.1516	N	86.68	3	1.196	IDENTIFIED	20.15	☐	

Titanium-44	LA	0.2371	0.03045	pCi/g	0.09282	N	0	12	0	NOT_IDENTI	0		
Uranium-234	NR	1.478	0.1032	pCi/g	0.1219	N	609.1	4	1.582	IDENTIFIED	5.909		
Zirconium-97		5.93E+07	9.66E+06	pCi/g	0	N	0	12	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202004734		05-JAN-10 07:39	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act Rpt	Err(%)	Qual	Qual Comment
Actinium-228	HE	0.874	0.2773	pCi/g	0.7405	N	0	29	0	FAIL_ABUND	0		
Americium-241	✓	13.95	0.6444	pCi/g	0.2336	0.200	59.31	1	1.223	IDENTIFIED	1.196		
Americium-243		0.2554	0.03582	pCi/g	0.1002	N	74.74	1	1.205	IDENTIFIED	13.47		
Annihilation Rad.	HE	0.1353	0.05705	pCi/g	0.105	N	510.5	1	2.275	IDENTIFIED	42.06		
Antimony-122		9.75E+36	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Antimony-127		5.04E+25	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Arsenic-73	HE	27.58	6.483	pCi/g	15.83	N	53.5	1	1.55	IDENTIFIED	23.2		
Arsenic-74	HE	10850	34420	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Barium-137m		5.51	0.2325	pCi/g	0.1296	N	661.7	2	1.809	IDENTIFIED	2.645		
Bismuth-210	HE	2.929	0.7013	pCi/g	2.486	N	0	29	0	NOT_IDENTI	0		
Bismuth-211		2.124	0.2963	pCi/g	0.6816	Y	352	4	1.603	IDENTIFIED	13.38		
Bismuth-214		0.9161	0.1273	pCi/g	0.241	0.200	610.1	4	1.666	IDENTIFIED	13.25		
Bromine-77		1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Cadmium-109		55.26	2.75	pCi/g	3.124	Y	87.91	3	1.249	IDENTIFIED	3.207		
Cadmium-115		1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Cerium-143		1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Cesium-137	✓	5.824	0.2463	pCi/g	0.1371	0.100	661.7	2	1.809	IDENTIFIED	2.645		
Cobalt-57		0.5644	0.08756	pCi/g	0.1566	N	121.9	1	1.242	IDENTIFIED	13.81		
Cobalt-60	✓	7.036	0.2871	pCi/g	0.1277	0.100	1333	1	2.155	IDENTIFIED	2.878		
Gross Gamma		26.91	2.424	pCi/g	4.21	N		0					
Hafnium-181	HE	13.73	10.25	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Iodine-126		1.74E+07	8.39E+06	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Iodine-131	HE	2.31E+11	2.06E+11	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Iodine-133		1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Iodine-135		1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Lanthanum-140		2.12E+06	2.93E+06	pCi/g	0	Y	0	29	0	SHORT_HLIF	0		
Lead-210	HE	2.929	0.7013	pCi/g	2.486	N	0	29	0	NOT_IDENTI	0		
Lead-212		0.9271	0.1039	pCi/g	0.1891	0.100	238.6	4	1.474	IDENTIFIED	9.825		
Lead-214		0.7392	0.1049	pCi/g	0.2397	0.100	352	4	1.603	IDENTIFIED	13.38		
Lutetium-177	HE	7.20E+14	4.73E+14	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Manganese-52		7.52E+16	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Neodymium-147	HE	5.85E+08	5.74E+08	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Neptunium-237		9.783	1.121	pCi/g	0.5401	N	87.91	3	1.249	IDENTIFIED	3.207		
Niobium-97		1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Polonium-210	HE	2.929	0.6984	pCi/g	2.486	N	0	29	0	NOT_IDENTI	0		
Polonium-212		0.9271	0.1039	pCi/g	0.1891	N	238.6	4	1.474	IDENTIFIED	9.825		
Polonium-214		0.7392	0.1049	pCi/g	0.2397	N	352	4	1.603	IDENTIFIED	13.38		
Polonium-216		0.9271	0.1039	pCi/g	0.1891	N	238.6	4	1.474	IDENTIFIED	9.825		
Polonium-218		0.7392	0.1049	pCi/g	0.2397	N	352	4	1.603	IDENTIFIED	13.38		
Radium-224		6.226	0.8179	pCi/g	2.807	Y	0	29	0	NOT_IDENTI	0		
Radium-226		0.9161	0.1273	pCi/g	0.241	Y	610.1	4	1.666	IDENTIFIED	13.25		
Radium-228		0.874	0.2773	pCi/g	0.7405	0.500	0	29	0	FAIL_ABUND	0		
Rubidium-86	HE	2.99E+05	2.06E+05	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Silver-110m		1.046	0.1391	pCi/g	0.4982	N	0	29	0	NOT_IDENTI	0		
Thallium-201		2.37E+33	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Thallium-202	HE	1.07E+06	8.89E+06	pCi/g	0	N	0	29	0	SHORT_HLIF	0		
Thallium-208		0.3779	0.06136	pCi/g	0.125	0.080	583.3	1	1.575	IDENTIFIED	15.81		
Thorium-228		1.303	0.146	pCi/g	0.2657	N	238.6	4	1.474	IDENTIFIED	9.825		
Thorium-230		0.9157	0.1272	pCi/g	0.2409	N	610.1	4	1.666	IDENTIFIED	13.25		
Thorium-232	HE	0.874	0.2773	pCi/g	0.7405	N	0	29	0	FAIL_ABUND	0		

Tin-126	3.331	0.1658	pCi/g	0.1881	N	87.91	3	1.249	IDENTIFIED	3.207	☐
Titanium-44	0.2533	0.02739	pCi/g	0.08983	N	0	29	0	FAIL_ABUND	0	☐
Uranium-234	0.9157	0.1272	pCi/g	0.2409	N	610.1	4	1.666	IDENTIFIED	13.25	☐
Zirconium-97	1.00E+41	0	pCi/g	0	N	0	29	0	SHORT_HLIF	0	☐

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
936923	243492007	SAMPLE	04-JAN-10	Cadmium-109	3.846	0.4617	pCi/g	0.624	Y
				Cadmium-115	15.32	7.989	pCi/g	14.02	N
				Cerium-143	1743	269.2	pCi/g	0	N
				Cesium-134	0.1023	0.0226	pCi/g	0.03578	0.100
				Cesium-137	0.06304	0.01634	pCi/g	0.03026	0.100
				Gross Gamma	8.397	1.202	pCi/g	1.05	N
				Iodine-133	895.1	11520	pCi/g	0	N
				Krypton-85	24.38	3.868	pCi/g	6.35	N
				Lead-212	1.595	0.07512	pCi/g	0.03916	0.100
				Lead-214	1.493	0.09071	pCi/g	0.04215	0.100
				Niobium-97	64460	2.88E+05	pCi/g	0	N
				Potassium-40	24.68	1.144	pCi/g	0.2287	1.00
				Radium-224	3.786	0.494	pCi/g	0.4451	Y
				Radium-226	1.175	0.08175	pCi/g	0.04581	Y
				Radium-228	1.539	0.1578	pCi/g	0.08538	0.500
				Sodium-24	1.00E+06	2.46E+06	pCi/g	0	N
				Strontium-85	0.1276	0.0192	pCi/g	0.03324	Y
				Thallium-200	115.3	630	pCi/g	0	N
				Thallium-208	0.5098	0.03834	pCi/g	0.02181	0.080
				Thorium-234	1.171	1.078	pCi/g	1.152	2.00
				Zirconium-97	1.55E+07	5.86E+06	pCi/g	0	N
936923	1202004732	MB	04-JAN-10	Iodine-135	1.30E+06	7.07E+06	pCi/g	0	N
				Krypton-85	21.62	2.835	pCi/g	5.04	N
				Strontium-85	0.1024	0.01343	pCi/g	0.02388	Y
				Thallium-208	0.01691	0.01834	pCi/g	0.0152	0.080
				Thorium-234	0.8851	0.5297	pCi/g	0.543	2.00
				Zirconium-97	2255	379.9	pCi/g	0	N
936923	1202004733	DUP	04-JAN-10	Bismuth-211	4.613	0.2912	pCi/g	0.1844	Y
				Bismuth-214	1.478	0.1032	pCi/g	0.06099	0.200
				Cadmium-109	2.877	0.6029	pCi/g	0.7678	Y
				Cerium-143	4486	608.4	pCi/g	0	N
				Cesium-134	0.1225	0.0323	pCi/g	0.04643	0.100
				Cesium-137	0.2511	0.04413	pCi/g	0.02998	0.100
				Gross Gamma	9.786	1.549	pCi/g	2.03	N
				Iodine-133	5507	17090	pCi/g	0	N
				Krypton-85	19.02	4.605	pCi/g	7.459	N
				Lanthanum-140	0.1004	0.05212	pCi/g	0.08686	Y

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 14:04:38.42

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243457001.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 13:58:02.
Sample ID : G243457001 Sample quantity : 1.11113E+02 GRAM
Detector name : GAM05 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.74 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.46*	149	542	1.16	93.91	88	11	2.07E-02	33.8	
2	0	63.19*	162	582	1.11	127.35	123	9	2.25E-02	28.8	
3	1	74.64*	709	647	1.45	150.26	144	17	9.85E-02	7.8	4.84E+00
4	1	77.11*	1096	468	1.20	155.20	144	17	1.52E-01	4.7	
5	2	84.21*	205	518	1.49	169.39	164	30	2.85E-02	20.7	2.38E+00
6	2	87.21*	394	426	1.29	175.39	164	30	5.47E-02	10.4	
7	2	89.97	257	350	1.14	180.92	164	30	3.57E-02	14.0	
8	2	92.78*	335	412	1.45	186.53	164	30	4.65E-02	13.6	
9	0	186.22*	281	446	1.35	373.39	366	15	3.90E-02	17.8	
10	0	210.46	74	377	1.61	421.87	413	12	1.02E-02	54.0	
11	3	238.76*	1220	171	1.24	478.45	473	22	1.69E-01	3.4	1.48E+00
12	3	241.80	347	217	2.03	484.53	473	22	4.82E-02	14.2	
13	0	270.22*	132	181	1.86	541.35	536	11	1.84E-02	21.8	
14	0	277.29	41	142	0.67	555.48	553	7	5.69E-03	50.7	
15	2	295.35*	370	137	1.32	591.60	586	21	5.14E-02	7.6	1.77E+00
16	2	300.26	106	171	1.91	601.41	586	21	1.47E-02	26.3	
17	0	328.88	34	198	1.41	658.65	651	11	4.78E-03	81.0	
18	0	338.31	234	179	1.15	677.50	673	11	3.25E-02	12.8	
19	0	352.10*	656	176	1.37	705.06	699	12	9.11E-02	5.7	
20	0	463.10	81	84	1.33	926.98	921	11	1.13E-02	24.6	
21	0	511.37*	82	151	1.63	1023.49	1015	17	1.14E-02	40.8	
22	0	583.39*	330	122	1.51	1167.45	1161	15	4.59E-02	9.3	
23	0	609.43*	448	72	1.44	1219.51	1213	12	6.23E-02	6.2	
24	1	661.67	176	63	2.01	1323.94	1317	25	2.44E-02	11.4	2.79E+00
25	1	665.89	56	54	2.01	1332.37	1317	25	7.80E-03	31.6	
26	0	727.43	79	81	1.19	1455.37	1450	12	1.09E-02	25.5	
27	0	768.43	52	67	1.34	1537.32	1532	11	7.27E-03	33.1	
28	0	795.21	47	55	1.67	1590.84	1586	12	6.56E-03	34.4	
29	0	863.50	12	74	2.23	1727.32	1721	11	1.73E-03	150.3	
30	0	911.48*	233	30	1.39	1823.22	1817	12	3.23E-02	8.3	
31	1	962.04	33	18	2.19	1924.26	1920	37	4.60E-03	28.7	2.46E+00
32	1	964.72	66	27	2.19	1929.60	1920	37	9.20E-03	21.8	
33	1	969.12*	158	30	2.19	1938.40	1920	37	2.20E-02	11.1	
34	0	1120.93*	75	76	2.03	2241.75	2236	15	1.05E-02	28.4	
35	0	1238.94	60	38	1.65	2477.55	2470	15	8.26E-03	25.9	
36	0	1461.13*	705	27	2.06	2921.41	2912	16	9.79E-02	4.1	
37	0	1588.81	25	12	1.67	3176.44	3169	12	3.47E-03	34.2	
38	0	1731.41	28	6	1.34	3461.24	3455	14	3.94E-03	26.9	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1765.49	60	19	1.96	3529.31	3524	11	8.34E-03	19.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 14:04:41

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243457001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 13:58:02
Sample ID : G243457001 Sample quantity : 111.11 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.74 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.225E+01	2.307E+00	7.937E-01	4.936E-02	28.039
CD-109	+	88.03	*	4.673E+00	1.038E+00	1.158E+00	8.816E-02	4.036
SN-126	+	64.28		7.068E-01	4.205E-01	4.868E-01	7.255E-02	1.452
	+	86.94		1.904E+00	8.787E-01	4.702E-01	1.935E-01	4.049
	+	87.57	*	4.580E-01	1.018E-01	1.133E-01	8.629E-03	4.042
BA-137M	+	661.65	*	3.282E-01	7.793E-02	8.176E-02	5.377E-03	4.014
CS-137	+	661.65	*	3.470E-01	8.240E-02	8.643E-02	5.702E-03	4.014
TL-208	+	277.35		4.773E-01	4.879E-01	7.718E-01	9.900E-02	0.618
	+	510.84		5.073E-01	4.177E-01	2.844E-01	2.988E-02	1.784
	+	583.14	*	5.872E-01	1.170E-01	7.196E-02	5.295E-03	8.160
		860.37		3.878E-01	5.480E-01	8.345E-01	8.468E-02	0.465
BI-210	+	46.50	*	1.631E+00	1.109E+00	1.009E+00	7.873E-02	1.616
PB-210	+	46.50	*	1.631E+00	1.109E+00	1.009E+00	7.873E-02	1.616
PO-210	+	46.50	*	1.631E+00	1.107E+00	1.009E+00	6.788E-02	1.616
BI-211		72.87		1.164E+01	3.096E+00	4.839E+00	3.809E-01	2.405
	+	351.07	*	4.873E+00	6.754E-01	4.254E-01	3.371E-02	11.455
PB-212	+	74.81		2.786E+00	5.509E-01	4.350E-01	5.304E-02	6.404
	+	77.11		2.568E+00	3.120E-01	2.598E-01	2.022E-02	9.886
	+	87.30		2.118E+00	5.162E-01	5.237E-01	6.583E-02	4.045
	+	238.63	*	1.937E+00	2.478E-01	1.095E-01	1.181E-02	17.688
	+	300.09		2.626E+00	1.411E+00	1.591E+00	1.691E-01	1.650
PO-212	+	74.81		2.786E+00	5.509E-01	4.350E-01	5.304E-02	6.404
	+	77.11		2.568E+00	3.120E-01	2.598E-01	2.022E-02	9.886
	+	87.30		2.118E+00	5.162E-01	5.237E-01	6.583E-02	4.045
		115.19		1.962E+00	4.167E+00	6.899E+00	8.778E-01	0.284
	+	238.63	*	1.937E+00	2.478E-01	1.095E-01	1.181E-02	17.688
	+	300.09		2.626E+00	1.411E+00	1.591E+00	1.691E-01	1.650
BI-214	+	609.31	*	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
	+	1120.29		1.341E+00	7.719E-01	5.711E-01	5.455E-02	2.348
	+	1764.49		1.491E+00	5.771E-01	5.393E-01	3.118E-02	2.765
PB-214	+	74.81		4.801E+00	9.089E-01	7.496E-01	8.079E-02	6.404
	+	77.11		4.403E+00	6.314E-01	4.453E-01	4.850E-02	9.886
	+	87.30		3.628E+00	8.535E-01	8.971E-01	9.723E-02	4.045
	+	241.98		3.311E+00	1.013E+00	6.595E-01	7.433E-02	5.020

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.607E+00	3.011E-01	2.786E-01	3.046E-02	5.768
	+	351.92	*	1.695E+00	2.510E-01	1.451E-01	1.374E-02	11.680
PO-214	+	74.81		4.801E+00	9.089E-01	7.496E-01	8.079E-02	6.404
	+	77.11		4.403E+00	6.314E-01	4.453E-01	4.850E-02	9.886
	+	87.30		3.628E+00	8.535E-01	8.971E-01	9.723E-02	4.045
	+	241.98		3.311E+00	1.013E+00	6.595E-01	7.433E-02	5.020
	+	295.21		1.607E+00	3.011E-01	2.786E-01	3.046E-02	5.768
	+	351.92	*	1.695E+00	2.510E-01	1.451E-01	1.374E-02	11.680
PO-216	+	74.81		2.786E+00	5.509E-01	4.350E-01	5.304E-02	6.404
	+	77.11		2.568E+00	3.120E-01	2.598E-01	2.022E-02	9.886
	+	87.30		2.118E+00	5.162E-01	5.237E-01	6.583E-02	4.045
	+	238.63	*	1.937E+00	2.478E-01	1.095E-01	1.181E-02	17.688
	+	300.09		2.626E+00	1.411E+00	1.591E+00	1.691E-01	1.650
PO-218	+	74.81		4.801E+00	9.089E-01	7.496E-01	8.079E-02	6.404
	+	77.11		4.403E+00	6.314E-01	4.453E-01	4.850E-02	9.886
	+	87.30		3.628E+00	8.535E-01	8.971E-01	9.723E-02	4.045
	+	241.98		3.311E+00	1.013E+00	6.595E-01	7.433E-02	5.020
	+	295.21		1.607E+00	3.011E-01	2.786E-01	3.046E-02	5.768
	+	351.92	*	1.695E+00	2.510E-01	1.451E-01	1.374E-02	11.680
RA-224	+	240.98	*	6.278E+00	1.889E+00	1.246E+00	1.220E-01	5.036
RA-226	+	609.31	*	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
	+	1120.29		1.341E+00	7.719E-01	5.711E-01	5.455E-02	2.348
	+	1764.49		1.491E+00	5.771E-01	5.393E-01	3.118E-02	2.765
AC-228	+	338.32		1.912E+00	9.253E-01	5.113E-01	2.102E-01	3.739
	+	911.07	*	1.879E+00	3.899E-01	2.759E-01	3.414E-02	6.810
	+	969.11		2.255E+00	7.298E-01	4.229E-01	9.989E-02	5.332
RA-228	+	338.32		1.912E+00	9.253E-01	5.113E-01	2.102E-01	3.739
	+	911.07	*	1.879E+00	3.899E-01	2.759E-01	3.414E-02	6.810
	+	969.11		2.255E+00	7.298E-01	4.229E-01	9.989E-02	5.332
TH-228	+	74.81		2.834E+00	4.948E-01	4.425E-01	3.500E-02	6.404
	+	77.11		2.612E+00	3.174E-01	2.642E-01	2.057E-02	9.886
	+	87.30		2.154E+00	4.788E-01	5.326E-01	4.058E-02	4.045
	+	238.63	*	1.970E+00	2.521E-01	1.114E-01	1.201E-02	17.688
	+	300.09		2.671E+00	2.119E+00	1.619E+00	9.601E-01	1.650
TH-230	+	609.31	*	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
	+	1120.29		1.341E+00	7.719E-01	5.711E-01	5.455E-02	2.348
	+	1764.49		1.491E+00	5.771E-01	5.393E-01	3.118E-02	2.765
TH-232	+	338.32		1.912E+00	5.111E-01	5.113E-01	4.009E-02	3.739
	+	911.07	*	1.879E+00	3.899E-01	2.759E-01	3.414E-02	6.810
	+	969.11		2.255E+00	7.298E-01	4.229E-01	9.989E-02	5.332
TH-234	+	63.29	*	1.786E+00	1.076E+00	1.219E+00	2.166E-01	1.465
	+	92.38		2.697E+00	8.809E-01	7.864E-01	1.413E-01	3.429
U-234	+	609.31	*	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
	+	1120.29		1.341E+00	7.719E-01	5.711E-01	5.455E-02	2.348
	+	1764.49		1.491E+00	5.771E-01	5.393E-01	3.118E-02	2.765
NP-237	+	86.50	*	1.345E+00	4.078E-01	3.317E-01	7.298E-02	4.054
		95.87		-3.469E-02	1.134E+00	1.624E+00	4.022E-01	-0.021
U-238	+	63.29	*	1.786E+00	1.076E+00	1.219E+00	2.166E-01	1.465
	+	92.38		2.697E+00	7.695E-01	7.864E-01	6.580E-02	3.429

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	+	74.67	*	4.517E-01	7.870E-02	7.051E-02	5.523E-03	6.406
	+	86.72		5.043E+01	1.121E+01	1.245E+01	9.494E-01	4.051
		117.66		-6.176E-01	4.476E+00	7.246E+00	9.595E-01	-0.085
		142.18		8.431E+00	2.210E+01	3.626E+01	4.506E+00	0.232
ANH-511	+	511.00	*	1.096E-01	8.976E-02	6.145E-02	3.933E-03	1.783

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	4.158E-02	4.294E-01	7.058E-01	5.056E-02	0.059
NA-22		1274.54	*	4.037E-02	5.636E-02	9.836E-02	5.729E-03	0.410
NA-24		1368.53	*	3.775E-01	5.636E-02	Half-Life too short		
AL-26		1129.67		-1.406E+00	2.534E+00	3.407E+00	2.282E-01	-0.413
		1808.65	*	1.612E-02	4.534E-02	7.910E-02	4.539E-03	0.204
TI-44		67.85		2.762E-03	4.283E-02	5.255E-02	4.205E-03	0.053
	+	78.38	*	4.740E-01	5.758E-02	7.903E-02	6.132E-03	5.998
SC-46		889.25	*	1.964E-03	5.260E-02	8.732E-02	8.770E-03	0.022
	+	1120.51		2.334E-01	1.334E-01	1.730E-01	1.190E-02	1.349
V-48		944.10		4.059E-01	1.156E+00	1.975E+00	1.910E-01	0.206
		983.50	*	4.461E-02	9.591E-02	1.588E-01	1.455E-02	0.281
		1312.09		2.961E-02	1.136E-01	1.894E-01	1.098E-02	0.156
CR-51		320.08	*	-1.835E-01	5.105E-01	8.084E-01	7.149E-02	-0.227
MN-52		744.21		-3.141E-01	4.129E-01	6.458E-01	5.014E-02	-0.486
		848.13		3.503E+00	1.044E+01	1.787E+01	1.675E+00	0.196
		935.52		5.107E-01	4.193E-01	7.633E-01	7.462E-02	0.669
		1246.25		7.360E+00	1.306E+01	1.969E+01	1.145E+00	0.374
		1333.61		1.236E-01	6.889E+00	1.115E+01	6.453E-01	0.011
		1434.06	*	1.030E-01	3.667E-01	6.361E-01	3.725E-02	0.162
MN-54		834.83	*	1.356E-03	5.192E-02	8.636E-02	7.912E-03	0.016
CO-56		846.75	*	2.116E-02	5.051E-02	8.692E-02	8.129E-03	0.243
		977.42		5.968E-01	4.252E+00	6.137E+00	5.673E-01	0.097
		1037.82		-1.758E-01	4.152E-01	6.503E-01	5.737E-02	-0.270
		1175.09		-1.197E+00	2.977E+00	4.644E+00	2.694E-01	-0.258
	+	1238.25		3.026E-01	1.579E-01	2.250E-01	1.390E-02	1.345
		1360.21		-2.206E-01	1.090E+00	1.695E+00	9.847E-02	-0.130
		1771.40		-1.885E-02	3.831E-01	5.312E-01	3.068E-02	-0.035
CO-57		122.06	*	-2.574E-02	3.030E-02	4.719E-02	6.695E-03	-0.545
		136.48		-1.564E-01	2.664E-01	4.203E-01	5.630E-02	-0.372
CO-58		810.76	*	-4.644E-02	5.243E-02	7.985E-02	7.028E-03	-0.582
FE-59		142.65		2.006E+00	3.498E+00	5.775E+00	7.151E-01	0.347
		192.34		4.399E-01	1.383E+00	1.970E+00	2.825E-01	0.223
		1099.22	*	6.001E-02	1.123E-01	1.939E-01	1.571E-02	0.309
		1291.56		-8.283E-02	1.700E-01	2.588E-01	1.922E-02	-0.320
CO-60		1173.22		5.439E-02	5.757E-02	1.022E-01	5.926E-03	0.532
		1332.49	*	8.457E-04	4.506E-02	7.294E-02	4.221E-03	0.012
ZN-65		1115.52	*	-1.142E-01	1.423E-01	1.753E-01	1.225E-02	-0.652
GE-68		1077.35	*	6.442E-01	1.581E+00	2.694E+00	2.069E-01	0.239
AS-73		53.44	*	-5.442E-02	2.889E-01	4.728E-01	3.559E-02	-0.115

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AS-74		595.88	*	1.217E-01	1.295E-01	2.242E-01	1.475E-02	0.543
		634.78		1.883E-01	5.270E-01	8.729E-01	5.754E-02	0.216
SE-75		66.05		-1.699E+00	3.485E+00	4.951E+00	4.939E-01	-0.343
		96.73		-4.326E-01	9.435E-01	1.320E+00	1.843E-01	-0.328
		121.11		-1.051E-01	1.617E-01	2.545E-01	4.000E-02	-0.413
		136.00		-2.024E-02	4.996E-02	7.955E-02	1.037E-02	-0.254
		198.60		-7.979E-01	2.465E+00	3.856E+00	4.168E-01	-0.207
		264.65	*	-3.052E-03	6.179E-02	8.969E-02	8.563E-03	-0.034
		279.53		1.157E-01	1.580E-01	2.404E-01	2.302E-02	0.481
		303.91		3.316E+00	2.884E+00	4.498E+00	5.216E-01	0.737
		400.65		1.631E-01	3.553E-01	5.998E-01	5.488E-02	0.272
BR-77	+	87.88		1.786E+03	3.968E+02	6.387E+02	4.861E+01	2.796
		200.40		3.815E+02	3.786E+02	6.294E+02	6.285E+01	0.606
	+	239.00		5.518E+02	6.611E+01	8.317E+01	8.152E+00	6.634
		249.79		9.469E+01	1.643E+02	2.487E+02	2.412E+01	0.381
		281.68		-2.255E+01	2.256E+02	3.253E+02	3.005E+01	-0.069
		297.23		8.334E+02	1.689E+02	2.998E+02	2.677E+01	2.779
		303.76		5.241E+02	4.309E+02	6.769E+02	5.944E+01	0.774
		439.47		1.723E+01	3.288E+02	5.408E+02	3.297E+01	0.032
		484.57		3.943E+02	5.281E+02	9.064E+02	5.714E+01	0.435
		520.65	*	-3.084E+00	2.404E+01	3.869E+01	2.488E+00	-0.080
		574.64		-3.878E+02	4.936E+02	7.460E+02	4.888E+01	-0.520
		578.91		1.650E+02	2.125E+02	3.232E+02	2.120E+01	0.511
		585.48		4.113E+03	6.716E+02	1.240E+03	8.144E+01	3.316
		755.35		6.446E+02	4.243E+02	7.790E+02	6.178E+01	0.827
		817.79		1.302E+02	3.201E+02	5.499E+02	4.889E+01	0.237
SR-82		698.33		2.259E+01	4.825E+01	8.350E+01	5.923E+00	0.271
		776.49	*	-5.843E-01	5.450E-01	7.972E-01	6.578E-02	-0.733
		1395.20		5.654E+00	1.454E+01	2.551E+01	1.489E+00	0.222
RB-83		520.41	*	-5.887E-03	9.325E-02	1.467E-01	9.431E-03	-0.040
		529.64		-6.860E-02	1.465E-01	2.231E-01	1.441E-02	-0.307
		552.65		3.280E-02	2.737E-01	4.476E-01	2.915E-02	0.073
RB-84		881.50	*	-1.208E-02	8.620E-02	1.405E-01	1.394E-02	-0.086
KR-85		513.99	*	2.825E+01	1.094E+01	1.870E+01	1.198E+00	1.511
SR-85		513.99	*	1.479E-01	5.728E-02	9.787E-02	6.273E-03	1.511
RB-86		1076.63	*	-2.882E-01	1.093E+00	1.738E+00	1.337E-01	-0.166
Y-88		898.02		-1.580E-02	5.596E-02	9.003E-02	9.206E-03	-0.175
		1836.01	*	2.266E-02	4.178E-02	7.631E-02	4.366E-03	0.297
ZR-88		392.90	*	-1.395E-02	4.409E-02	7.131E-02	4.152E-03	-0.196
Y-91		1204.90	*	-1.817E+01	2.671E+01	4.056E+01	2.357E+00	-0.448
NB-94		702.63	*	-1.144E-02	4.570E-02	7.516E-02	5.378E-03	-0.152
		871.10		3.236E-02	4.496E-02	7.780E-02	7.582E-03	0.416
NB-95		765.79	*	1.024E-01	6.245E-02	1.052E-01	8.509E-03	0.973
NB-95M		235.69	*	3.244E-01	1.885E-01	2.963E-01	3.241E-02	1.095
ZR-95		724.18		6.976E-03	1.647E-01	2.270E-01	1.888E-02	0.031
		756.15	*	1.534E-01	1.043E-01	1.908E-01	1.695E-02	0.804
NB-97		657.90	*	1.097E+00	1.043E-01	Half-Life too short		
		1024.50		4.539E+01	1.043E-01	Half-Life too short		
ZR-97		254.15		-3.615E+01	1.043E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		355.39		1.857E+01	1.043E-01	Half-Life too short		
		507.63	*	1.670E+01	1.043E-01	Half-Life too short		
		602.52		1.394E+01	1.043E-01	Half-Life too short		
		1021.30		9.086E+01	1.043E-01	Half-Life too short		
		1147.95		-1.600E+01	1.043E-01	Half-Life too short		
		1362.66		-4.609E+01	1.043E-01	Half-Life too short		
		1750.46		2.464E+01	1.043E-01	Half-Life too short		
MO-99		140.51		1.651E+00	5.437E+01	8.813E+01	2.571E+01	0.019
		181.06		-1.124E+01	4.078E+01	5.607E+01	1.063E+01	-0.200
		366.43		-1.098E+02	1.723E+02	2.729E+02	1.873E+01	-0.402
		739.58	*	1.684E+01	2.532E+01	4.431E+01	6.504E+00	0.380
		778.00		-3.723E+01	7.056E+01	1.119E+02	9.264E+00	-0.333
TC-99M		140.51	*	3.338E+11	7.056E+01	Half-Life too short		
RH-101		127.23		5.057E-02	3.991E-02	6.692E-02	9.213E-03	0.756
		198.01	*	-5.062E-02	4.525E-02	6.787E-02	6.777E-03	-0.746
		325.23		1.054E-01	3.180E-01	4.700E-01	3.868E-02	0.224
RH-102		418.52		9.878E-02	3.936E-01	6.563E-01	3.925E-02	0.151
		475.06	*	-8.922E-03	3.859E-02	6.197E-02	3.882E-03	-0.144
		631.29		-2.128E-02	7.557E-02	1.187E-01	7.826E-03	-0.179
		697.49		7.678E-02	1.045E-01	1.839E-01	1.302E-02	0.418
		766.84		3.571E-01	1.613E-01	2.814E-01	2.281E-02	1.269
		1046.59		4.510E-02	1.409E-01	2.387E-01	1.959E-02	0.189
		1112.84		5.889E-02	3.044E-01	4.709E-01	3.309E-02	0.125
RU-103		497.08	*	-1.381E-02	5.627E-02	8.999E-02	1.162E-02	-0.153
	+	610.33		1.685E+01	3.373E+00	3.975E+00	6.253E-01	4.238
RH-106	+	511.85		5.493E-01	4.500E-01	5.591E-01	3.580E-02	0.982
		621.84	*	5.990E-01	4.707E-01	8.208E-01	9.971E-02	0.730
		1050.47		-1.093E+00	2.757E+00	4.311E+00	3.509E-01	-0.253
RU-106	+	511.85		5.493E-01	4.500E-01	5.591E-01	3.580E-02	0.982
		621.84	*	5.990E-01	4.668E-01	8.208E-01	5.410E-02	0.730
		1050.47		-1.093E+00	2.757E+00	4.311E+00	3.509E-01	-0.253
AG-108M		433.93	*	-1.353E-02	4.144E-02	6.640E-02	4.345E-03	-0.204
		614.37		9.852E-03	5.570E-02	7.904E-02	5.554E-03	0.125
		722.95		1.337E-02	5.946E-02	8.802E-02	6.900E-03	0.152
AG-110M		657.75	*	5.385E-02	5.313E-02	8.224E-02	5.685E-03	0.655
		677.61		-1.664E-02	4.295E-01	7.189E-01	5.107E-02	-0.023
		706.67		1.765E-01	2.804E-01	4.831E-01	3.621E-02	0.365
		763.93		7.043E-02	2.183E-01	3.269E-01	2.720E-02	0.215
		884.67		-2.545E-02	6.042E-02	9.551E-02	9.751E-03	-0.266
		937.48		-7.675E-02	1.496E-01	2.344E-01	2.351E-02	-0.327
		1384.27		-1.904E-01	2.159E-01	3.201E-01	1.979E-02	-0.595
IN-111		171.28		-1.222E+00	2.054E+00	3.209E+00	3.190E-01	-0.381
		245.39	*	-8.719E-02	2.325E+00	3.390E+00	3.303E-01	-0.026
IN-113M		391.69	*	-2.927E-02	6.367E-02	1.021E-01	6.335E-03	-0.287
SN-113		391.69	*	-2.927E-02	6.367E-02	1.021E-01	6.335E-03	-0.287
IN-114M		190.27	*	-6.714E-03	2.725E-01	3.802E-01	3.797E-02	-0.018
CD-115		260.90		-6.619E+01	3.075E+02	5.099E+02	4.875E+01	-0.130
		492.35		1.118E+01	8.611E+01	1.417E+02	8.976E+00	0.079
		527.90	*	-1.168E+01	2.767E+01	4.237E+01	2.734E+00	-0.276

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SN-117M		156.02		8.524E-01	3.137E+00	5.117E+00	5.642E-01	0.167
		158.56	*	-6.943E-02	7.605E-02	1.172E-01	1.260E-02	-0.593
SB-122		563.90	*	3.585E+00	4.836E+00	8.236E+00	5.382E-01	0.435
		692.80		-1.090E+01	9.924E+01	1.650E+02	1.158E+01	-0.066
I-123		159.00	*	-5.263E+01	9.924E+01	Half-Life too short		
		528.96		-3.435E+03	9.924E+01	Half-Life too short		
TE-123M		159.00	*	-2.181E-02	3.576E-02	5.600E-02	6.017E-03	-0.390
I-124		602.71	*	3.574E-01	1.409E+00	2.015E+00	1.327E-01	0.177
		722.78		1.514E+00	8.670E+00	1.276E+01	9.504E-01	0.119
		1325.50		1.512E+01	5.860E+01	9.793E+01	5.671E+00	0.154
		1376.25		6.530E+01	6.008E+01	1.109E+02	6.460E+00	0.589
		1509.49		1.157E+01	2.776E+01	4.880E+01	2.869E+00	0.237
		1691.02		5.732E+00	6.849E+00	1.293E+01	7.545E-01	0.443
SB-124		602.71		1.534E-02	6.047E-02	8.649E-02	5.696E-03	0.177
		645.85		-2.398E-01	6.920E-01	1.078E+00	7.817E-02	-0.222
		709.31		-2.041E+00	3.703E+00	5.926E+00	4.297E-01	-0.344
		713.82		9.463E-01	2.087E+00	3.616E+00	4.029E-01	0.262
		722.78		9.420E-02	5.394E-01	7.939E-01	6.083E-02	0.119
	+	968.20		2.375E+01	5.704E+00	1.005E+01	9.412E-01	2.363
		1045.16		-9.333E-02	3.125E+00	5.105E+00	4.201E-01	-0.018
		1325.50		1.005E+00	3.894E+00	6.507E+00	3.768E-01	0.154
		1368.21		1.708E-01	1.828E+00	2.996E+00	3.559E-01	0.057
		1436.60		-1.140E+00	4.812E+00	7.765E+00	4.548E-01	-0.147
		1691.02	*	8.412E-02	1.005E-01	1.897E-01	1.201E-02	0.443
SB-125		427.89	*	-4.180E-03	1.297E-01	2.124E-01	1.332E-02	-0.020
	+	463.38		9.676E-01	4.806E-01	6.908E-01	4.919E-02	1.401
		600.56		7.293E-02	2.359E-01	3.899E-01	2.883E-02	0.187
		635.90		-1.255E-02	3.840E-01	6.161E-01	4.608E-02	-0.020
TE-125M		109.28	*	-7.896E-01	1.113E+01	1.812E+01	2.329E+00	-0.044
I-126		388.63		1.420E-01	3.225E-01	5.441E-01	3.238E-02	0.261
	+	666.33	*	5.898E-01	3.748E-01	5.035E-01	3.343E-02	1.171
		753.82		1.010E+00	2.335E+00	4.019E+00	3.178E-01	0.251
SB-126		223.80		-2.819E+00	5.443E+00	8.955E+00	8.873E-01	-0.315
	+	278.60		3.522E+00	3.587E+00	6.133E+00	5.698E-01	0.574
	+	296.50		1.785E+01	3.154E+00	5.174E+00	4.628E-01	3.450
		414.70		-1.011E-01	1.149E-01	1.782E-01	1.062E-02	-0.567
		415.30		-7.092E+00	9.308E+00	1.454E+01	8.667E-01	-0.488
		555.20		3.000E+00	5.980E+00	1.006E+01	6.555E-01	0.298
		573.80		-1.280E+00	1.578E+00	2.382E+00	1.561E-01	-0.537
		593.00		6.507E-01	1.358E+00	2.278E+00	1.498E-01	0.286
		656.30		-1.455E-01	5.676E+00	7.824E+00	5.149E-01	-0.019
	+	666.33		2.476E-01	1.573E-01	2.113E-01	1.403E-02	1.171
		675.00		-2.547E-01	3.324E+00	5.145E+00	3.479E-01	-0.049
		695.00		-1.102E-01	1.209E-01	1.888E-01	1.330E-02	-0.584
		697.00		1.758E-01	4.046E-01	6.987E-01	4.943E-02	0.252
		720.50	*	6.357E-02	2.295E-01	3.546E-01	2.629E-02	0.179
		856.80		6.820E-01	7.579E-01	1.203E+00	1.145E-01	0.567
		989.30		-5.322E-01	1.733E+00	2.753E+00	2.500E-01	-0.193
		1034.80		1.081E+01	1.253E+01	2.228E+01	1.871E+00	0.485

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1213.00		-1.373E+00	6.761E+00	1.076E+01	6.253E-01	-0.128
SB-127		61.10		1.053E+02	4.894E+01	7.518E+01	8.635E+00	1.401
		252.40		-2.385E+00	7.895E+00	1.295E+01	5.494E+00	-0.184
		290.80		2.239E+01	4.197E+01	6.309E+01	7.630E+00	0.355
		411.60		7.942E+00	2.271E+01	3.808E+01	5.676E+00	0.209
		444.90		6.850E+00	1.929E+01	3.229E+01	3.739E+00	0.212
		473.00		8.368E-01	3.120E+00	5.189E+00	6.232E-01	0.161
		543.00		-2.705E+00	3.254E+01	5.245E+01	7.208E+00	-0.052
		603.60		8.547E+00	2.464E+01	3.559E+01	4.201E+00	0.240
		685.20	*	-1.244E+00	2.634E+00	4.255E+00	4.599E-01	-0.292
		698.50		1.357E+01	2.905E+01	5.016E+01	7.773E+00	0.271
		722.20		1.394E+01	6.080E+01	9.005E+01	9.842E+00	0.155
		783.80		1.196E+01	7.057E+00	1.297E+01	1.659E+00	0.922
XE-127		57.60		7.337E-01	2.934E+00	4.552E+00	3.665E-01	0.161
		145.22		3.199E-01	9.154E-01	1.463E+00	1.776E-01	0.219
		172.10		-1.986E-02	1.552E-01	2.482E-01	2.469E-02	-0.080
		202.84	*	-3.870E-02	7.524E-02	1.013E-01	1.012E-02	-0.382
		374.96		1.139E-01	2.565E-01	4.347E-01	2.837E-02	0.262
I-131		80.18		-1.759E-01	7.279E+00	7.563E+00	5.903E-01	-0.023
		284.30		-6.066E-02	2.195E+00	3.659E+00	3.522E-01	-0.017
		364.48	*	-6.770E-02	1.710E-01	2.755E-01	2.074E-02	-0.246
		636.97		1.135E+00	2.485E+00	4.148E+00	2.999E-01	0.274
		722.89		2.720E+00	1.187E+01	1.758E+01	1.323E+00	0.155
TE-132		49.72		-8.694E+00	8.435E+00	1.167E+01	1.200E+00	-0.745
		111.76		5.399E+00	5.252E+01	8.595E+01	1.216E+01	0.063
		116.30		1.065E+01	4.856E+01	7.973E+01	1.192E+01	0.134
		228.16	*	-2.219E-01	1.305E+00	2.180E+00	3.664E-01	-0.102
BA-133		53.15		4.274E-01	1.195E+00	1.990E+00	1.491E-01	0.215
		79.62		2.760E+00	1.811E+00	2.043E+00	3.011E-01	1.351
		81.00		-3.623E-02	1.322E-01	1.345E-01	2.072E-02	-0.269
	+	276.40		4.718E-01	4.836E-01	8.272E-01	1.231E-01	0.570
		302.84		1.947E-01	2.064E-01	3.164E-01	4.242E-02	0.615
		356.01	*	-8.329E-03	6.207E-02	8.805E-02	1.087E-02	-0.095
		383.85		-2.110E-01	4.031E-01	6.429E-01	7.115E-02	-0.328
I-133	+	510.53		5.366E+00	4.031E-01	Half-Life too short		
		529.87	*	-2.427E-02	4.031E-01	Half-Life too short		
		706.58		1.708E+00	4.031E-01	Half-Life too short		
		856.28		8.003E-01	4.031E-01	Half-Life too short		
		875.33		-6.877E-02	4.031E-01	Half-Life too short		
		1236.41		3.754E+00	4.031E-01	Half-Life too short		
		1298.22		3.075E+00	4.031E-01	Half-Life too short		
CS-134		475.35		2.533E-01	2.457E+00	4.041E+00	2.532E-01	0.063
		563.23		2.031E-01	5.104E-01	8.499E-01	5.644E-02	0.239
		569.32		1.366E-01	2.718E-01	4.560E-01	3.054E-02	0.300
		604.70		2.397E-02	4.889E-02	7.178E-02	4.747E-03	0.334
	+	795.84	*	1.236E-01	8.569E-02	1.207E-01	1.039E-02	1.024
		801.93		1.235E-01	6.884E-01	1.017E+00	8.838E-02	0.121
		1038.57		-2.065E+00	5.154E+00	8.098E+00	6.751E-01	-0.255
		1167.94		1.556E-01	3.411E+00	5.577E+00	3.297E-01	0.028

---- Non-Identified Nuclides ----

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		1365.15		-4.602E-01	1.198E+00	1.782E+00	1.137E-01	-0.258
CS-135		268.24	*	3.366E-01	2.284E-01	3.553E-01	3.801E-02	0.948
I-135		288.45		1.098E+12	2.284E-01	Half-Life too short		
		417.63		1.970E+12	2.284E-01	Half-Life too short		
		546.56		9.779E+11	2.284E-01	Half-Life too short		
		836.80		3.151E+12	2.284E-01	Half-Life too short		
		1038.76		-4.579E+11	2.284E-01	Half-Life too short		
		1124.00		2.033E+13	2.284E-01	Half-Life too short		
		1131.51		8.889E+11	2.284E-01	Half-Life too short		
		1260.41	*	-4.440E+11	2.284E-01	Half-Life too short		
		1457.56		5.397E+13	2.284E-01	Half-Life too short		
		1678.03		-9.549E+11	2.284E-01	Half-Life too short		
		1706.46		2.956E+12	2.284E-01	Half-Life too short		
		1791.20		2.763E+11	2.284E-01	Half-Life too short		
CS-136		66.91		-8.204E-03	6.389E-01	9.266E-01	1.401E-01	-0.009
	+	86.29		6.628E+00	1.603E+00	2.367E+00	2.891E-01	2.800
		153.22		7.740E-01	9.142E-01	1.519E+00	1.841E-01	0.509
		163.89		-1.645E-01	1.477E+00	2.368E+00	2.617E-01	-0.069
		176.55		1.582E-01	5.234E-01	8.517E-01	8.854E-02	0.186
		273.65		3.618E-01	1.006E+00	1.027E+00	1.017E-01	0.352
		340.57		6.629E-01	2.425E-01	3.973E-01	3.197E-02	1.669
		818.51		-2.028E-02	1.141E-01	1.868E-01	1.664E-02	-0.109
		1048.07	*	3.387E-02	1.402E-01	2.359E-01	2.021E-02	0.144
		1235.34		3.661E-01	9.754E-01	1.419E+00	1.419E-01	0.258
CE-139		165.85	*	1.757E-02	3.678E-02	6.041E-02	5.998E-03	0.291
BA-140		162.64		-1.363E-01	1.035E+00	1.659E+00	1.778E-01	-0.082
		304.84		1.553E+00	1.989E+00	2.979E+00	8.360E-01	0.521
		423.70		-5.809E-01	3.005E+00	4.867E+00	1.549E+00	-0.119
		537.32	*	1.106E-02	3.949E-01	6.422E-01	2.097E-01	0.017
LA-140	+	328.77		3.857E-01	6.257E-01	7.619E-01	6.582E-02	0.506
		432.53		-1.696E+00	2.996E+00	4.721E+00	3.136E-01	-0.359
		487.03		1.424E-02	2.080E-01	3.408E-01	2.394E-02	0.042
		751.79		-1.086E+00	2.811E+00	4.557E+00	4.045E-01	-0.238
		815.85		-1.249E-01	4.885E-01	7.936E-01	7.801E-02	-0.157
		867.82		-1.114E-01	2.318E+00	3.280E+00	3.313E-01	-0.034
		919.63		-1.587E-01	3.903E+00	6.275E+00	7.378E-01	-0.025
		925.24		1.097E-01	1.562E+00	2.597E+00	2.693E-01	0.042
		1596.49	*	6.920E-02	1.443E-01	2.416E-01	1.420E-02	0.286
CE-141		145.44	*	3.024E-02	8.315E-02	1.330E-01	1.625E-02	0.227
CE-143		57.37		8.969E-05	8.315E-02	Half-Life too short		
		231.56		6.247E-03	8.315E-02	Half-Life too short		
		293.26	*	2.532E-03	8.315E-02	Half-Life too short		
		350.59		9.713E-02	8.315E-02	Half-Life too short		
		490.36		9.625E-04	8.315E-02	Half-Life too short		
	+	664.57		1.021E-02	8.315E-02	Half-Life too short		
		721.93		1.233E-03	8.315E-02	Half-Life too short		
CE-144		80.11		3.015E-01	2.846E+00	2.987E+00	2.308E-01	0.101
		133.54	*	1.006E-01	2.553E-01	4.194E-01	7.765E-02	0.240
PM-144		476.78		8.136E-02	8.655E-02	1.504E-01	1.104E-02	0.541

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		618.01		-3.720E-02	4.658E-02	7.018E-02	4.843E-03	-0.530
		696.49	*	3.466E-03	4.617E-02	7.781E-02	5.502E-03	0.045
		778.57		-1.068E+00	2.948E+00	4.755E+00	3.940E-01	-0.225
PR-144		696.49	*	2.351E-01	3.132E+00	5.278E+00	3.730E-01	0.045
		1489.15		-8.897E+00	1.445E+01	2.161E+01	1.270E+00	-0.412
PM-146		453.90	*	-6.147E-03	5.756E-02	9.351E-02	8.298E-03	-0.066
		633.02		-4.877E-01	1.956E+00	3.070E+00	1.134E+00	-0.159
		735.90		5.784E-03	2.104E-01	3.448E-01	9.767E-02	0.017
		747.13		6.055E-02	1.232E-01	2.132E-01	2.890E-02	0.284
ND-147	+	91.11		1.169E+00	3.428E-01	6.552E-01	5.828E-02	1.785
		319.41		-3.133E-01	4.814E+00	7.972E+00	6.691E-01	-0.039
		439.89		5.190E-01	8.593E+00	1.414E+01	8.626E-01	0.037
		531.02	*	-7.875E-03	8.409E-01	1.365E+00	1.886E-01	-0.006
PM-149		285.90	*	-9.795E+01	2.123E+02	3.452E+02	5.472E+01	-0.284
EU-152		121.78		-6.260E-02	8.676E-02	1.361E-01	2.035E-02	-0.460
		244.69		6.604E-01	4.547E-01	7.186E-01	7.006E-02	0.919
		344.27	*	-9.471E-03	1.594E-01	2.151E-01	1.769E-02	-0.044
		443.98		6.841E-01	1.311E+00	2.218E+00	1.357E-01	0.308
		778.89		-6.207E-02	3.394E-01	5.565E-01	4.612E-02	-0.112
		867.32		2.157E-02	1.211E+00	1.729E+00	1.674E-01	0.012
	+	964.01		1.086E+00	4.837E-01	7.663E-01	7.220E-02	1.417
		1085.78		-1.546E-01	5.389E-01	8.553E-01	6.440E-02	-0.181
		1112.02		2.456E-01	3.983E-01	6.782E-01	4.776E-02	0.362
		1407.95		-3.805E-02	2.468E-01	4.048E-01	2.365E-02	-0.094
GD-153		69.67		1.199E+00	1.341E+00	2.007E+00	1.596E-01	0.597
	+	83.37		4.188E+01	1.763E+01	2.446E+01	1.877E+00	1.712
		97.43	*	-3.412E-03	9.562E-02	1.369E-01	1.269E-02	-0.025
		103.18		-1.462E-01	1.187E-01	1.834E-01	1.897E-02	-0.797
EU-154		123.07		-2.176E-02	6.097E-02	9.752E-02	1.554E-02	-0.223
		247.94		-1.253E-01	5.014E-01	7.198E-01	8.869E-02	-0.174
		591.81		3.750E-02	8.525E-01	1.301E+00	1.334E-01	0.029
		723.30		-1.307E-02	2.577E-01	3.695E-01	3.137E-02	-0.035
		756.87		1.319E+00	1.088E+00	1.959E+00	2.254E-01	0.673
		873.19		3.222E-02	3.820E-01	6.376E-01	8.343E-02	0.051
		996.32		-4.756E-02	5.003E-01	8.147E-01	1.462E-01	-0.058
		1004.76		1.418E-01	2.781E-01	4.785E-01	5.654E-02	0.296
		1274.45	*	1.096E-01	1.571E-01	2.734E-01	2.556E-02	0.401
EU-155		48.70		1.436E-01	6.407E-01	9.469E-01	6.599E-02	0.152
		60.01		2.385E+00	2.746E+00	4.134E+00	3.422E-01	0.577
	+	86.54		5.520E-01	1.229E-01	1.934E-01	1.494E-02	2.854
		105.31	*	-1.605E-02	1.210E-01	1.967E-01	2.130E-02	-0.082
TB-160	+	86.79		1.501E+00	3.336E-01	5.163E-01	3.937E-02	2.908
		197.04		-9.908E-01	7.793E-01	1.158E+00	1.156E-01	-0.856
		215.65		-5.033E-01	9.910E-01	1.540E+00	1.532E-01	-0.327
		298.57		2.720E-01	1.563E-01	2.769E-01	2.464E-02	0.982
		879.36	*	6.145E-02	1.732E-01	2.966E-01	2.930E-02	0.207
	+	962.29		1.018E+00	5.931E-01	1.280E+00	1.209E-01	0.795
	+	966.15		7.595E-01	3.384E-01	6.888E-01	6.471E-02	1.103
		1177.93		-5.594E-01	4.961E-01	7.118E-01	4.130E-02	-0.786

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1271.85		-1.068E+00	9.855E-01	1.391E+00	8.084E-02	-0.767
HO-166M		80.57		-8.904E-02	3.629E-01	3.704E-01	2.860E-02	-0.240
		184.41		1.498E-01	5.585E-02	8.676E-02	8.657E-03	1.726
		280.46		1.088E-02	1.174E-01	1.716E-01	1.589E-02	0.063
		410.95		1.241E-01	3.175E-01	5.342E-01	3.171E-02	0.232
		711.68	*	-5.356E-02	7.631E-02	1.201E-01	8.752E-03	-0.446
		752.31		-1.397E-01	4.078E-01	6.635E-01	5.232E-02	-0.211
		810.29		-1.044E-01	7.984E-02	1.161E-01	1.019E-02	-0.899
TM-171		51.35		1.233E+01	9.838E+00	1.514E+01	1.102E+00	0.814
		52.39		1.881E+00	5.161E+00	8.334E+00	6.167E-01	0.226
		59.40		1.403E+01	1.423E+01	2.152E+01	1.783E+00	0.652
		66.72	*	-9.355E+00	2.106E+01	2.998E+01	2.410E+00	-0.312
LU-176	+	88.36		1.086E+00	2.414E-01	4.041E-01	3.100E-02	2.688
		201.83		4.459E-03	3.903E-02	6.051E-02	6.040E-03	0.074
		306.84	*	6.487E-03	3.241E-02	5.157E-02	4.491E-03	0.126
		401.10		7.328E-01	9.251E+00	1.529E+01	8.986E-01	0.048
LU-177		112.95		-7.544E-01	2.359E+00	3.796E+00	4.656E-01	-0.199
		208.36	*	2.691E+00	1.779E+00	2.991E+00	2.982E-01	0.900
LU-177M		52.97		2.415E-01	5.403E-01	9.022E-01	6.739E-02	0.268
		54.07		-1.149E-01	3.059E-01	4.972E-01	3.781E-02	-0.231
		61.30		1.923E+00	9.119E-01	1.417E+00	1.165E-01	1.357
		121.62		-1.467E-01	4.393E-01	7.038E-01	9.915E-02	-0.208
		147.16		-8.030E-01	8.085E-01	1.243E+00	1.484E-01	-0.646
		171.86		-3.478E-01	6.174E-01	9.663E-01	9.610E-02	-0.360
		218.09		4.516E-01	1.028E+00	1.764E+00	1.753E-01	0.256
	+	268.79		3.261E+00	1.457E+00	1.862E+00	1.760E-01	1.751
		319.02		-9.542E-02	3.380E-01	5.532E-01	4.647E-02	-0.172
		367.43		-4.201E-01	1.128E+00	1.819E+00	1.241E-01	-0.231
		413.65	*	-1.705E-01	2.378E-01	3.729E-01	2.220E-02	-0.457
HF-181		56.28		-4.652E-01	3.994E-01	6.349E-01	5.004E-02	-0.733
		57.53		4.803E-02	2.443E-01	3.783E-01	3.042E-02	0.127
		65.20		9.552E-02	7.037E-01	1.027E+00	8.304E-02	0.093
		133.02		-6.064E-02	8.611E-02	1.352E-01	1.794E-02	-0.449
		136.25		-3.613E-01	6.026E-01	9.505E-01	1.234E-01	-0.380
		345.85		-1.361E-01	3.298E-01	4.309E-01	3.273E-02	-0.316
		482.03	*	-2.496E-02	5.833E-02	9.221E-02	5.803E-03	-0.271
W-181		56.28		-1.783E-01	1.531E-01	2.434E-01	1.919E-02	-0.733
		57.53		1.827E-02	9.370E-02	1.451E-01	1.167E-02	0.126
		65.20	*	3.635E-02	2.678E-01	3.909E-01	3.160E-02	0.093
TA-182		67.75		2.382E-02	9.263E-02	1.266E-01	1.013E-02	0.188
		100.10		3.321E-01	2.018E-01	3.354E-01	3.274E-02	0.990
		152.43		1.934E-01	4.248E-01	6.980E-01	7.961E-02	0.277
		222.10		-2.183E-01	4.229E-01	6.960E-01	6.902E-02	-0.314
		1001.68		-8.649E-01	2.949E+00	4.620E+00	4.113E-01	-0.187
	+	1121.28		6.417E-01	3.668E-01	4.731E-01	3.248E-02	1.356
		1189.05		-1.244E-01	4.018E-01	6.326E-01	3.673E-02	-0.197
		1221.42	*	-1.337E-01	2.670E-01	4.123E-01	2.397E-02	-0.324
		1230.97		1.410E-01	7.488E-01	1.065E+00	6.194E-02	0.132
RE-183		57.98		1.131E-01	9.920E-02	1.513E-01	1.225E-02	0.748

---- Non-Identified Nuclides ----

Nuclide	Ided	Line Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		59.32		5.730E-02	5.928E-02	8.962E-02	7.418E-03	0.639
		67.20		3.329E-02	1.528E-01	2.235E-01	1.793E-02	0.149
		162.32	*	-1.262E-02	1.389E-01	2.229E-01	2.303E-02	-0.057
		208.81		2.219E+00	1.345E+00	2.266E+00	2.259E-01	0.979
		291.72		2.251E-01	1.311E+00	1.924E+00	1.740E-01	0.117
RE-184		57.98		4.121E-01	3.614E-01	5.510E-01	4.464E-02	0.748
		59.32		2.086E-01	2.158E-01	3.262E-01	2.700E-02	0.639
		67.20		1.212E-01	5.563E-01	8.140E-01	6.529E-02	0.149
		161.27		2.783E-01	4.326E-01	7.154E-01	7.477E-02	0.389
		216.55		-4.014E-02	3.232E-01	5.422E-01	5.391E-02	-0.074
		252.85	*	-2.126E-01	2.996E-01	4.851E-01	4.687E-02	-0.438
		318.01		-3.041E-01	5.886E-01	9.507E-01	8.012E-02	-0.320
		792.07		6.869E-01	1.487E+00	2.248E+00	1.908E-01	0.306
		903.28		-1.810E-01	1.436E+00	2.166E+00	2.195E-01	-0.084
		920.93		-1.290E-01	5.810E-01	9.376E-01	9.323E-02	-0.138
OS-185		59.72		1.260E-01	1.632E-01	2.449E-01	2.030E-02	0.515
		61.14		2.211E-01	9.813E-02	1.532E-01	1.262E-02	1.443
		69.30		2.194E-01	2.403E-01	3.600E-01	2.866E-02	0.609
		592.07		4.264E-01	3.550E+00	5.458E+00	3.588E-01	0.078
		646.12	*	-2.901E-02	5.772E-02	8.854E-02	5.833E-03	-0.328
		717.42		1.322E-01	1.169E+00	1.973E+00	1.454E-01	0.067
		874.81		-1.124E-01	7.790E-01	1.272E+00	1.247E-01	-0.088
		880.27		5.748E-02	9.514E-01	1.584E+00	1.568E-01	0.036
RE-188		155.03	*	1.118E-01	2.198E-01	3.616E-01	4.025E-02	0.309
		477.96		-2.151E-02	4.082E+00	6.662E+00	4.181E-01	-0.003
		633.10		-8.834E-01	4.022E+00	6.354E+00	4.189E-01	-0.139
W-188	+	63.58		7.319E+01	4.257E+01	5.649E+01	4.598E+00	1.296
		227.08		-4.418E+00	1.599E+01	2.660E+01	2.630E+00	-0.166
		290.67	*	5.999E+00	1.042E+01	1.572E+01	1.425E+00	0.382
IR-192	+	295.96		1.248E+00	2.208E-01	3.611E-01	3.255E-02	3.456
		308.46		-1.238E-01	1.229E-01	1.925E-01	1.678E-02	-0.643
		316.51	*	2.251E-03	4.499E-02	7.500E-02	6.366E-03	0.030
		468.07		1.050E-01	9.468E-02	1.486E-01	1.050E-02	0.706
		604.41		3.454E-01	6.667E-01	9.810E-01	1.155E-01	0.352
		612.46		4.452E+00	1.374E+00	2.348E+00	1.924E-01	1.896
AU-195		65.12		3.369E-02	1.237E-01	1.815E-01	1.468E-02	0.186
		66.83		-5.350E-03	6.946E-02	1.005E-01	8.070E-03	-0.053
	+	75.70		1.473E+00	2.566E-01	4.496E-01	3.512E-02	3.275
		98.88	*	3.905E-01	2.739E-01	4.172E-01	3.978E-02	0.936
		129.76		2.972E+00	3.615E+00	6.011E+00	8.146E-01	0.494
TL-200		367.94	*	-6.314E-04	3.615E+00	Half-Life too short		
		579.30		1.405E-02	3.615E+00	Half-Life too short		
		828.27		-6.217E-03	3.615E+00	Half-Life too short		
		1205.75		2.309E-03	3.615E+00	Half-Life too short		
TL-201		68.90		6.204E+00	6.271E+00	8.829E+00	7.039E-01	0.703
		70.82		5.715E-01	3.575E+00	5.211E+00	4.128E-01	0.110
		80.30		-1.850E+00	1.046E+01	1.074E+01	8.297E-01	-0.172
		135.34		-8.496E+00	4.952E+01	7.970E+01	1.041E+01	-0.107
		167.43	*	4.031E+00	1.364E+01	2.223E+01	2.207E+00	0.181

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		68.90		3.987E-01	4.030E-01	5.674E-01	4.524E-02	0.703
		70.82		3.663E-02	2.291E-01	3.340E-01	2.646E-02	0.110
		80.30		-1.186E-01	6.708E-01	6.885E-01	5.319E-02	-0.172
		439.56	*	5.863E-03	1.004E-01	1.651E-01	1.007E-02	0.036
HG-203		70.83		1.483E-01	9.151E-01	1.334E+00	1.757E-01	0.111
		72.87		2.383E+00	6.774E-01	9.910E-01	1.261E-01	2.405
		82.60		1.117E+00	1.641E+00	1.802E+00	2.375E-01	0.620
		279.20	*	6.486E-02	6.005E-02	9.311E-02	8.853E-03	0.697
BI-207		72.80		6.147E-01	1.777E-01	2.774E-01	2.184E-02	2.216
	+	74.97		8.109E-01	1.413E-01	2.174E-01	1.702E-02	3.729
	+	84.90		5.387E-01	2.268E-01	3.361E-01	2.572E-02	1.603
		569.67		1.784E-02	4.276E-02	7.130E-02	4.666E-03	0.250
		1063.62	*	-1.898E-02	7.108E-02	1.132E-01	8.968E-03	-0.168
		1770.23		3.505E-01	7.227E-01	1.143E+00	6.604E-02	0.307
TL-207		81.07		-7.840E-02	2.919E-01	2.972E-01	2.292E-02	-0.264
	+	83.78		3.551E-01	1.495E-01	2.091E-01	1.603E-02	1.699
		94.90		7.127E-01	2.884E-01	4.479E-01	3.947E-02	1.591
		122.32		-1.693E+00	2.092E+00	3.265E+00	4.755E-01	-0.519
		144.24		2.394E-01	8.767E-01	1.399E+00	1.814E-01	0.171
		154.21		5.775E-01	4.987E-01	8.353E-01	9.934E-02	0.691
	+	269.46		7.570E-01	3.385E-01	4.427E-01	4.251E-02	1.710
		323.87	*	-3.501E-01	9.696E-01	1.356E+00	2.379E-01	-0.258
	+	338.28		7.983E+00	2.247E+00	3.143E+00	3.703E-01	2.540
		445.03		9.115E-01	3.141E+00	5.238E+00	5.477E-01	0.174
PO-209		260.50		-1.479E+00	1.231E+01	2.050E+01	1.962E+00	-0.072
		262.80		-4.058E+01	3.464E+01	5.270E+01	5.026E+00	-0.770
		896.60	*	2.177E+00	9.716E+00	1.640E+01	1.667E+00	0.133
PB-211		404.84	*	-4.121E-01	1.292E+00	2.043E+00	1.274E+00	-0.202
		427.08		1.310E+00	2.987E+00	4.849E+00	2.998E+00	0.270
		831.96		-1.177E+00	1.826E+00	2.609E+00	1.636E+00	-0.451
BI-212	+	727.18	*	1.217E+00	6.312E-01	8.935E-01	8.105E-02	1.362
		785.46		1.209E+00	2.428E+00	4.194E+00	3.518E-01	0.288
		1620.62		1.429E+00	1.675E+00	3.116E+00	1.828E-01	0.459
PO-215		81.07		-7.840E-02	2.919E-01	2.972E-01	2.292E-02	-0.264
	+	83.78		3.551E-01	1.495E-01	2.091E-01	1.603E-02	1.699
		94.90		7.127E-01	2.884E-01	4.479E-01	3.947E-02	1.591
		122.32		-1.693E+00	2.092E+00	3.265E+00	4.755E-01	-0.519
		144.24		2.394E-01	8.767E-01	1.399E+00	1.814E-01	0.171
		154.21		5.775E-01	4.987E-01	8.353E-01	9.934E-02	0.691
	+	269.46		7.570E-01	3.385E-01	4.427E-01	4.251E-02	1.710
		323.87	*	-3.501E-01	9.696E-01	1.356E+00	2.379E-01	-0.258
	+	338.28		7.983E+00	2.247E+00	3.143E+00	3.703E-01	2.540
		445.03		9.115E-01	3.141E+00	5.238E+00	5.477E-01	0.174
RN-219	+	271.23		9.712E-01	4.374E-01	5.724E-01	6.287E-02	1.697
		401.81	*	-1.279E-01	5.623E-01	9.126E-01	1.245E-01	-0.140
RN-220		549.76	*	-1.442E+01	3.565E+01	5.595E+01	3.640E+00	-0.258
RA-223		81.07		-7.840E-02	2.919E-01	2.972E-01	2.292E-02	-0.264
	+	83.78		3.551E-01	1.495E-01	2.091E-01	1.603E-02	1.699
		94.90		7.127E-01	2.884E-01	4.479E-01	3.947E-02	1.591

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		-1.693E+00	2.092E+00	3.265E+00	4.755E-01	-0.519
		144.24		2.394E-01	8.767E-01	1.399E+00	1.814E-01	0.171
		154.21		5.775E-01	4.987E-01	8.353E-01	9.934E-02	0.691
	+	269.46		7.570E-01	3.385E-01	4.427E-01	4.251E-02	1.710
		323.87	*	-3.501E-01	9.696E-01	1.356E+00	2.379E-01	-0.258
	+	338.28		7.983E+00	2.247E+00	3.143E+00	3.703E-01	2.540
		445.03		9.115E-01	3.141E+00	5.238E+00	5.477E-01	0.174
AC-227		79.80		1.488E+00	2.228E+00	2.413E+00	5.106E-01	0.617
		236.00		1.242E+00	3.932E-01	6.112E-01	8.020E-02	2.032
		256.20	*	1.845E-01	4.918E-01	8.367E-01	1.333E-01	0.221
		286.10		-5.181E-01	1.918E+00	3.156E+00	4.279E-01	-0.164
	+	299.80		4.866E+00	2.702E+00	3.373E+00	5.942E-01	1.443
		304.40		2.138E+00	2.589E+00	3.937E+00	7.285E-01	0.543
		334.20		1.412E+00	4.062E+00	4.789E+00	9.161E-01	0.295
TH-227		79.80		1.488E+00	2.229E+00	2.413E+00	5.173E-01	0.617
	+	94.00		1.042E+01	3.631E+00	4.162E+00	9.070E-01	2.504
		236.00		1.242E+00	3.879E-01	6.112E-01	7.359E-02	2.032
		256.20	*	1.845E-01	4.922E-01	8.367E-01	1.553E-01	0.221
		286.10		-5.181E-01	1.986E+00	3.156E+00	3.169E+00	-0.164
	+	299.80		4.866E+00	2.702E+00	3.373E+00	5.942E-01	1.443
		304.40		2.138E+00	2.589E+00	3.937E+00	7.285E-01	0.543
		334.20		1.412E+00	4.062E+00	4.789E+00	9.161E-01	0.295
TH-229	+	85.43		5.316E-01	2.238E-01	3.573E-01	2.732E-02	1.488
	+	88.47		6.253E-01	1.390E-01	2.323E-01	1.786E-02	2.692
		100.00		3.523E-01	2.074E-01	3.451E-01	3.362E-02	1.021
		193.63	*	2.514E-01	6.707E-01	1.054E+00	1.053E-01	0.238
	+	210.97		1.463E+00	1.587E+00	1.739E+00	1.733E-01	0.841
PA-231		283.67	*	-5.853E-01	1.964E+00	3.140E+00	4.873E-01	-0.186
	+	301.29		1.947E+00	1.053E+00	1.343E+00	1.665E-01	1.449
TH-231		81.07		-7.840E-02	2.919E-01	2.972E-01	2.292E-02	-0.264
	+	83.78		3.551E-01	1.495E-01	2.091E-01	1.603E-02	1.699
		94.90		7.127E-01	2.884E-01	4.479E-01	3.947E-02	1.591
		122.32		-1.693E+00	2.092E+00	3.265E+00	4.755E-01	-0.519
		144.24		2.394E-01	8.767E-01	1.399E+00	1.814E-01	0.171
		154.21		5.775E-01	4.987E-01	8.353E-01	9.934E-02	0.691
	+	269.46		7.570E-01	3.385E-01	4.427E-01	4.251E-02	1.710
		323.87	*	-3.501E-01	9.696E-01	1.356E+00	2.379E-01	-0.258
	+	338.28		7.983E+00	2.247E+00	3.143E+00	3.703E-01	2.540
		445.03		9.115E-01	3.141E+00	5.238E+00	5.477E-01	0.174
U-231	+	84.21		2.115E+01	8.904E+00	1.238E+01	9.490E-01	1.708
	+	92.29		1.423E+01	4.062E+00	6.002E+00	5.012E-01	2.371
		95.87	*	-5.436E-02	1.777E+00	2.545E+00	2.288E-01	-0.021
		108.00		9.199E-01	3.233E+00	5.330E+00	6.008E-01	0.173
PA-233	+	75.28		2.366E+01	5.101E+00	6.816E+00	1.016E+00	3.471
	+	86.59		8.965E+00	3.026E+00	3.129E+00	8.297E-01	2.866
	+	300.12		1.357E+00	7.430E-01	9.379E-01	1.408E-01	1.446
		311.98	*	8.136E-03	7.880E-02	1.318E-01	1.164E-02	0.062
		340.50		3.073E+00	1.268E+00	1.760E+00	4.143E-01	1.746
		398.62		4.244E-01	2.841E+00	4.714E+00	1.219E+00	0.090

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		-7.199E-01	2.220E+00	3.566E+00	7.357E-01	-0.202
PA-234	+	63.00		2.081E+00	1.240E+00	1.617E+00	2.466E-01	1.287
		94.67		7.354E-01	2.226E-01	3.348E-01	4.188E-02	2.196
		98.44		1.327E-01	1.320E-01	1.661E-01	9.288E-02	0.799
		99.86		9.316E-01	5.266E-01	8.775E-01	8.526E-02	1.062
		111.00		1.066E-01	2.158E-01	3.575E-01	5.214E-02	0.298
		131.20		-1.537E-02	1.326E-01	2.141E-01	2.875E-02	-0.072
		152.70		3.513E-01	4.068E-01	6.717E-01	1.249E-01	0.523
	+	186.00		8.388E+00	3.989E+00	3.266E+00	1.032E+00	2.569
		226.40		1.137E-01	4.836E-01	8.219E-01	1.156E-01	0.138
		227.20		-1.175E-01	5.309E-01	8.852E-01	8.754E-02	-0.133
		248.90		2.519E-01	1.131E+00	1.675E+00	3.828E-01	0.150
		293.70		6.269E+00	1.593E+00	2.126E+00	3.720E-01	2.948
		369.80		-6.580E-01	1.075E+00	1.692E+00	3.570E-01	-0.389
		568.70		1.324E-01	1.424E+00	2.321E+00	1.518E-01	0.057
		569.50		1.935E-01	3.758E-01	6.309E-01	4.129E-02	0.307
		574.00		-1.559E+00	2.036E+00	3.088E+00	2.023E-01	-0.505
		699.00		1.709E-01	9.631E-01	1.633E+00	3.013E-01	0.105
		706.10		1.065E+00	1.476E+00	2.434E+00	1.079E+00	0.438
		733.00		2.418E-01	5.923E-01	8.890E-01	1.940E-01	0.272
		742.81		-1.530E+00	2.104E+00	2.857E+00	1.918E+00	-0.535
	+	796.30		2.397E+00	1.772E+00	2.357E+00	6.372E-01	1.017
		805.60		1.467E+00	1.511E+00	2.582E+00	7.919E-01	0.568
		819.60		1.251E-03	1.751E+00	2.910E+00	1.109E+00	0.000
		826.30		-2.356E-01	1.156E+00	1.879E+00	8.421E-01	-0.125
		831.60		-1.338E-01	8.408E-01	1.376E+00	4.125E-01	-0.097
		876.40		-5.393E-01	1.251E+00	1.733E+00	1.783E+00	-0.311
		880.51		2.899E-02	3.399E-01	5.674E-01	5.618E-02	0.051
		883.24		-2.119E-01	3.895E-01	5.644E-01	3.804E-01	-0.376
		899.00		-5.217E-01	1.147E+00	1.776E+00	7.825E-01	-0.294
		925.00		2.845E-01	1.432E+00	2.412E+00	2.387E-01	0.118
		926.50		6.709E-03	2.116E-01	3.504E-01	9.016E-02	0.019
		946.00	*	9.300E-02	3.612E-01	6.106E-01	1.176E-01	0.152
		949.00		-2.096E-01	5.255E-01	8.275E-01	7.954E-02	-0.253
		980.50		-2.135E-01	1.030E+00	1.405E+00	1.293E-01	-0.152
		1394.10		4.982E-01	1.510E+00	2.574E+00	1.667E+00	0.194
PA-234M		766.42		3.435E+01	2.394E+01	2.886E+01	1.462E+01	1.190
		1001.03	*	-4.036E-01	6.642E+00	1.064E+01	1.088E+00	-0.038
U-235	+	89.95		4.114E+00	1.708E+00	2.033E+00	6.235E-01	2.024
	+	93.35		3.242E+00	1.266E+00	1.335E+00	3.738E-01	2.428
		105.00		7.191E-02	1.171E+00	1.917E+00	5.847E-01	0.038
		143.76	*	3.529E-02	2.713E-01	4.306E-01	8.425E-02	0.082
		163.35		-1.992E-01	5.880E-01	9.311E-01	1.848E-01	-0.214
	+	185.71		3.107E-01	1.146E-01	1.204E-01	1.202E-02	2.581
		205.31		-7.063E-01	7.955E-01	1.028E+00	2.028E-01	-0.687
NP-236		94.67		5.609E-01	1.615E-01	2.542E-01	2.230E-02	2.206
		98.44		1.003E-01	8.306E-02	1.256E-01	1.187E-02	0.799
		111.00		8.065E-02	1.631E-01	2.704E-01	3.210E-02	0.298
		160.31	*	-2.215E-02	9.788E-02	1.562E-01	1.649E-02	-0.142

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		2.735E-01	1.831E-01	2.924E-01	2.824E-02	0.935
		117.00	*	-1.010E-02	2.242E-01	3.645E-01	4.775E-02	-0.028
	+	209.75		1.474E+00	1.599E+00	1.781E+00	1.775E-01	0.828
		228.18		-4.625E-02	2.810E-01	4.698E-01	4.643E-02	-0.098
	+	277.60		2.302E-01	2.344E-01	3.973E-01	3.698E-02	0.579
		334.30		7.277E-01	2.082E+00	2.714E+00	2.161E-01	0.268
AM-241		59.54	*	8.480E-02	8.314E-02	1.258E-01	1.126E-02	0.674
CM-243		99.55		2.814E-01	1.884E-01	3.009E-01	2.907E-02	0.935
		103.76	*	-7.328E-02	1.077E-01	1.710E-01	1.787E-02	-0.428
		117.00		-1.039E-02	2.307E-01	3.750E-01	4.913E-02	-0.028
	+	209.75		1.453E+00	1.576E+00	1.756E+00	1.750E-01	0.828
		228.18		-4.674E-02	2.840E-01	4.747E-01	4.692E-02	-0.098
	+	277.60		2.321E-01	2.364E-01	4.006E-01	3.728E-02	0.579
AM-246		798.80		-2.400E-01	2.429E-01	3.074E-01	2.642E-02	-0.781
		1036.00		1.127E-01	3.894E-01	6.570E-01	5.504E-02	0.171
		1062.04		-3.182E-01	3.096E-01	4.507E-01	3.582E-02	-0.706
		1078.86	*	-3.657E-02	1.901E-01	3.048E-01	2.333E-02	-0.120
CM-247	+	278.00		9.546E-01	9.721E-01	1.643E+00	1.528E-01	0.581
		287.40		-6.348E-01	1.541E+00	2.517E+00	2.297E-01	-0.252
		402.60	*	-1.837E-02	4.967E-02	7.990E-02	4.702E-03	-0.230
CF-249		252.85		-7.913E-01	1.115E+00	1.806E+00	1.745E-01	-0.438
		333.44		1.749E-02	3.668E-01	3.561E-01	2.845E-02	0.049
		387.95	*	1.837E-02	5.561E-02	9.332E-02	5.582E-03	0.197
CF-251		176.60	*	5.858E-02	1.626E-01	2.651E-01	2.641E-02	0.221
		227.00		6.698E-03	4.635E-01	7.809E-01	7.724E-02	0.009
		285.00		-8.338E-01	2.166E+00	3.543E+00	3.250E-01	-0.235

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243457001		
Acquisition date	: 4-JAN-2010 13:58:02	Detector SN#	:
Detector ID	: GAM05	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.74	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243457001	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.1111E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 11-JUN-2009 16:41:00	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.225E+01	2.261E+00	7.895E-01	0.000E+00
CD-109	4.673E+00	1.018E+00	1.177E+00	0.000E+00
SN-126	4.580E-01	9.974E-02	1.152E-01	0.000E+00
BA-137M	3.282E-01	7.637E-02	8.185E-02	0.000E+00
CS-137	3.470E-01	8.075E-02	8.652E-02	0.000E+00
TL-208	5.872E-01	1.146E-01	7.210E-02	0.000E+00
BI-210	1.631E+00	1.087E+00	1.031E+00	0.000E+00
PB-210	1.631E+00	1.087E+00	1.031E+00	0.000E+00
PO-210	1.631E+00	1.085E+00	1.031E+00	0.000E+00
BI-211	4.873E+00	6.619E-01	4.279E-01	0.000E+00
PB-212	1.937E+00	2.429E-01	1.105E-01	0.000E+00
PO-212	1.937E+00	2.429E-01	1.105E-01	0.000E+00
BI-214	1.507E+00	2.209E-01	1.454E-01	0.000E+00
PB-214	1.695E+00	2.460E-01	1.460E-01	0.000E+00
PO-214	1.695E+00	2.460E-01	1.460E-01	0.000E+00
PO-216	1.937E+00	2.429E-01	1.105E-01	0.000E+00
PO-218	1.695E+00	2.460E-01	1.460E-01	0.000E+00
RA-224	6.278E+00	1.851E+00	1.257E+00	0.000E+00
RA-226	1.507E+00	2.209E-01	1.454E-01	0.000E+00
AC-228	1.879E+00	3.821E-01	2.754E-01	0.000E+00
RA-228	1.879E+00	3.821E-01	2.754E-01	0.000E+00
TH-228	1.970E+00	2.470E-01	1.124E-01	0.000E+00
TH-230	1.507E+00	2.209E-01	1.454E-01	0.000E+00
TH-232	1.879E+00	3.821E-01	2.754E-01	0.000E+00
TH-234	1.786E+00	1.055E+00	1.242E+00	0.000E+00
U-234	1.507E+00	2.209E-01	1.454E-01	0.000E+00
NP-237	1.345E+00	3.997E-01	3.373E-01	0.000E+00
U-238	1.786E+00	1.055E+00	1.242E+00	0.000E+00
AM-243	4.517E-01	7.713E-02	7.177E-02	0.000E+00
ANH-511	1.096E-01	8.796E-02	6.163E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM	)	
BE-7	4.158E-02	4.208E-01	7.083E-01	0.000E+00	NOT IDENT.
NA-22	4.037E-02	5.523E-02	9.795E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	6.697E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.612E-02	4.444E-02	7.855E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.643E-02	8.041E-02	0.000E+00	FAIL ABUN
SC-46	1.964E-03	5.155E-02	8.720E-02	0.000E+00	FAIL ABUN
V-48	4.461E-02	9.399E-02	1.585E-01	0.000E+00	NOT IDENT.
CR-51	-1.835E-01	5.003E-01	8.138E-01	0.000E+00	NOT IDENT.
MN-52	1.030E-01	3.594E-01	6.329E-01	0.000E+00	NOT IDENT.
MN-54	1.356E-03	5.088E-02	8.629E-02	0.000E+00	NOT IDENT.
CO-56	2.116E-02	4.950E-02	8.684E-02	0.000E+00	FAIL ABUN
CO-57	-2.574E-02	2.969E-02	4.785E-02	0.000E+00	NOT IDENT.
CO-58	-4.644E-02	5.138E-02	7.980E-02	0.000E+00	NOT IDENT.
FE-59	6.001E-02	1.101E-01	1.934E-01	0.000E+00	NOT IDENT.
CO-60	8.457E-04	4.416E-02	7.261E-02	0.000E+00	NOT IDENT.
ZN-65	-1.142E-01	1.394E-01	1.748E-01	0.000E+00	NOT IDENT.
GE-68	6.442E-01	1.549E+00	2.687E+00	0.000E+00	NOT IDENT.
AS-73	-5.442E-02	2.832E-01	4.825E-01	0.000E+00	NOT IDENT.
AS-74	1.217E-01	1.269E-01	2.246E-01	0.000E+00	NOT IDENT.
SE-75	-3.052E-03	6.055E-02	9.042E-02	0.000E+00	NOT IDENT.
BR-77	-3.084E+00	2.356E+01	3.881E+01	0.000E+00	FAIL ABUN
SR-82	-5.843E-01	5.341E-01	7.970E-01	0.000E+00	NOT IDENT.
RB-83	-5.887E-03	9.139E-02	1.471E-01	0.000E+00	NOT IDENT.
RB-84	-1.208E-02	8.448E-02	1.404E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	1.072E+01	1.875E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	5.613E-02	9.816E-02	0.000E+00	NOT IDENT.
RB-86	-2.882E-01	1.071E+00	1.733E+00	0.000E+00	NOT IDENT.
Y-88	2.266E-02	4.094E-02	7.578E-02	0.000E+00	NOT IDENT.
ZR-88	-1.395E-02	4.320E-02	7.167E-02	0.000E+00	NOT IDENT.
Y-91	-1.817E+01	2.618E+01	4.041E+01	0.000E+00	NOT IDENT.
NB-94	-1.144E-02	4.479E-02	7.520E-02	0.000E+00	NOT IDENT.
NB-95	1.024E-01	6.120E-02	1.052E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.847E-01	2.990E-01	0.000E+00	NOT IDENT.
ZR-95	1.534E-01	1.023E-01	1.908E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	1.003E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.859E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.684E+01	2.481E+01	4.431E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.077E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-5.062E-02	4.434E-02	6.857E-02	0.000E+00	NOT IDENT.
RH-102	-8.922E-03	3.782E-02	6.220E-02	0.000E+00	NOT IDENT.
RU-103	-1.381E-02	5.515E-02	9.028E-02	0.000E+00	FAIL ABUN
RH-106	5.990E-01	4.613E-01	8.220E-01	0.000E+00	FAIL ABUN
RU-106	5.990E-01	4.574E-01	8.220E-01	0.000E+00	FAIL ABUN
AG-108M	-1.353E-02	4.061E-02	6.669E-02	0.000E+00	NOT IDENT.
AG-110M	5.385E-02	5.206E-02	8.233E-02	0.000E+00	NOT IDENT.
IN-111	-8.719E-02	2.279E+00	3.420E+00	0.000E+00	NOT IDENT.
IN-113M	-2.927E-02	6.240E-02	1.026E-01	0.000E+00	NOT IDENT.
SN-113	-2.927E-02	6.240E-02	1.026E-01	0.000E+00	NOT IDENT.
IN-114M	-6.714E-03	2.671E-01	3.843E-01	0.000E+00	NOT IDENT.
CD-115	-1.168E+01	2.712E+01	4.249E+01	0.000E+00	NOT IDENT.
SN-117M	-6.943E-02	7.453E-02	1.186E-01	0.000E+00	NOT IDENT.
SB-122	3.585E+00	4.740E+00	8.254E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.456E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.181E-02	3.504E-02	5.667E-02	0.000E+00	NOT IDENT.
I-124	3.574E-01	1.381E+00	2.019E+00	0.000E+00	NOT IDENT.
SB-124	8.412E-02	9.852E-02	1.885E-01	0.000E+00	FAIL ABUN
SB-125	-4.180E-03	1.271E-01	2.134E-01	0.000E+00	FAIL ABUN
TE-125M	-7.896E-01	1.091E+01	1.839E+01	0.000E+00	NOT IDENT.
I-126	0.000E+00	3.674E-01	5.040E-01	0.000E+00	FAIL ABUN
SB-126	6.357E-02	2.249E-01	3.547E-01	0.000E+00	FAIL ABUN
SB-127	-1.244E+00	2.581E+00	4.258E+00	0.000E+00	NOT IDENT.
XE-127	-3.870E-02	7.374E-02	1.024E-01	0.000E+00	NOT IDENT.
I-131	-6.770E-02	1.676E-01	2.771E-01	0.000E+00	NOT IDENT.
TE-132	-2.219E-01	1.279E+00	2.201E+00	0.000E+00	NOT IDENT.
BA-133	-8.329E-03	6.083E-02	8.856E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	3.891E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	8.398E-02	1.206E-01	0.000E+00	FAIL ABUN
CS-135	3.366E-01	2.239E-01	3.581E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	9.691E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.387E-02	1.374E-01	2.353E-01	0.000E+00	FAIL ABUN
CE-139	1.757E-02	3.605E-02	6.112E-02	0.000E+00	NOT IDENT.
BA-140	1.106E-02	3.870E-01	6.439E-01	0.000E+00	NOT IDENT.
LA-140	6.920E-02	1.414E-01	2.402E-01	0.000E+00	FAIL ABUN
CE-141	3.024E-02	8.148E-02	1.346E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	8.237E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	1.006E-01	2.502E-01	4.250E-01	0.000E+00	NOT IDENT.
PM-144	3.466E-03	4.525E-02	7.785E-02	0.000E+00	NOT IDENT.
PR-144	2.351E-01	3.070E+00	5.281E+00	0.000E+00	NOT IDENT.
PM-146	-6.147E-03	5.641E-02	9.388E-02	0.000E+00	NOT IDENT.
ND-147	-7.875E-03	8.241E-01	1.368E+00	0.000E+00	FAIL ABUN
PM-149	-9.795E+01	2.080E+02	3.478E+02	0.000E+00	NOT IDENT.
EU-152	-9.471E-03	1.562E-01	2.164E-01	0.000E+00	FAIL ABUN
GD-153	-3.412E-03	9.370E-02	1.391E-01	0.000E+00	FAIL ABUN
EU-154	1.096E-01	1.540E-01	2.723E-01	0.000E+00	NOT IDENT.
EU-155	-1.605E-02	1.186E-01	1.997E-01	0.000E+00	FAIL ABUN
TB-160	6.145E-02	1.697E-01	2.962E-01	0.000E+00	FAIL ABUN
HO-166M	-5.356E-02	7.478E-02	1.202E-01	0.000E+00	NOT IDENT.
TM-171	-9.355E+00	2.063E+01	3.055E+01	0.000E+00	NOT IDENT.
LU-176	6.487E-03	3.177E-02	5.193E-02	0.000E+00	FAIL ABUN
LU-177	2.691E+00	1.744E+00	3.021E+00	0.000E+00	NOT IDENT.
LU-177M	-1.705E-01	2.330E-01	3.747E-01	0.000E+00	FAIL ABUN
HF-181	-2.496E-02	5.717E-02	9.253E-02	0.000E+00	NOT IDENT.
W-181	3.635E-02	2.625E-01	3.984E-01	0.000E+00	NOT IDENT.
TA-182	-1.337E-01	2.616E-01	4.108E-01	0.000E+00	FAIL ABUN
RE-183	-1.262E-02	1.361E-01	2.256E-01	0.000E+00	NOT IDENT.
RE-184	-2.126E-01	2.936E-01	4.892E-01	0.000E+00	NOT IDENT.
OS-185	-2.901E-02	5.657E-02	8.865E-02	0.000E+00	NOT IDENT.
RE-188	1.118E-01	2.154E-01	3.660E-01	0.000E+00	NOT IDENT.
W-188	5.999E+00	1.021E+01	1.583E+01	0.000E+00	FAIL ABUN
IR-192	2.251E-03	4.409E-02	7.551E-02	0.000E+00	FAIL ABUN
AU-195	3.905E-01	2.684E-01	4.238E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.947E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	4.031E+00	1.337E+01	2.249E+01	0.000E+00	NOT IDENT.
TL-202	5.863E-03	9.835E-02	1.658E-01	0.000E+00	NOT IDENT.
HG-203	6.486E-02	5.885E-02	9.383E-02	0.000E+00	NOT IDENT.
BI-207	-1.898E-02	6.966E-02	1.129E-01	0.000E+00	FAIL ABUN
TL-207	-3.501E-01	9.502E-01	1.365E+00	0.000E+00	FAIL ABUN
PO-209	2.177E+00	9.522E+00	1.637E+01	0.000E+00	NOT IDENT.
PB-211	-4.121E-01	1.266E+00	2.053E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	6.186E-01	8.938E-01	0.000E+00	FAIL ABUN
PO-215	-3.501E-01	9.502E-01	1.365E+00	0.000E+00	FAIL ABUN
RN-219	-1.279E-01	5.511E-01	9.170E-01	0.000E+00	FAIL ABUN
RN-220	-1.442E+01	3.493E+01	5.609E+01	0.000E+00	NOT IDENT.
RA-223	-3.501E-01	9.502E-01	1.365E+00	0.000E+00	FAIL ABUN
AC-227	1.845E-01	4.820E-01	8.437E-01	0.000E+00	FAIL ABUN
TH-227	1.845E-01	4.823E-01	8.437E-01	0.000E+00	FAIL ABUN
TH-229	2.514E-01	6.573E-01	1.066E+00	0.000E+00	FAIL ABUN
PA-231	-5.853E-01	1.925E+00	3.163E+00	0.000E+00	FAIL ABUN
TH-231	-3.501E-01	9.502E-01	1.365E+00	0.000E+00	FAIL ABUN
U-231	-5.436E-02	1.741E+00	2.586E+00	0.000E+00	FAIL ABUN
PA-233	8.136E-03	7.722E-02	1.327E-01	0.000E+00	FAIL ABUN
PA-234	9.300E-02	3.539E-01	6.095E-01	0.000E+00	FAIL ABUN
PA-234M	-4.036E-01	6.510E+00	1.062E+01	0.000E+00	NOT IDENT.
U-235	3.529E-02	2.658E-01	4.361E-01	0.000E+00	FAIL ABUN
NP-236	-2.215E-02	9.593E-02	1.581E-01	0.000E+00	NOT IDENT.
NP-239	-1.010E-02	2.197E-01	3.697E-01	0.000E+00	FAIL ABUN
AM-241	8.480E-02	8.148E-02	1.283E-01	0.000E+00	NOT IDENT.
CM-243	-7.328E-02	1.056E-01	1.737E-01	0.000E+00	FAIL ABUN
AM-246	-3.657E-02	1.863E-01	3.039E-01	0.000E+00	NOT IDENT.
CM-247	-1.837E-02	4.868E-02	8.029E-02	0.000E+00	FAIL ABUN
CF-249	1.837E-02	5.449E-02	9.381E-02	0.000E+00	NOT IDENT.
CF-251	5.858E-02	1.593E-01	2.681E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 14:04:39.48

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243457001.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 13:58:02.
Sample ID : G243457001 Sample quantity : 1.11113E+02 GRAM
Detector name : GAM05 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.74 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	705	10.67*	1.003E+00	2.225E+01	2.225E+01	10.37
CD-109	88.03	394	3.72*	7.859E+00	4.555E+00	4.673E+00	22.22
SN-126	64.28	162	9.60	8.064E+00	7.068E-01	7.068E-01	59.50
	86.94	394	8.90	7.859E+00	1.904E+00	1.904E+00	46.15
	87.57	394	37.00*	7.859E+00	4.580E-01	4.580E-01	22.22
BA-137M	661.65	176	89.98*	2.015E+00	3.279E-01	3.282E-01	23.74
CS-137	661.65	176	85.12*	2.015E+00	3.466E-01	3.470E-01	23.75
TL-208	277.35	41	6.80	4.262E+00	4.773E-01	4.773E-01	102.21
	510.84	82	21.60	2.542E+00	5.073E-01	5.073E-01	82.34
	583.14	330	84.20*	2.258E+00	5.872E-01	5.872E-01	19.92
	860.37	------	12.46	1.590E+00	------ Line Not Found		------
BI-210	46.50	149	4.05*	7.629E+00	1.629E+00	1.631E+00	68.01
PB-210	46.50	149	4.05*	7.629E+00	1.629E+00	1.631E+00	68.01
PO-210	46.50	149	4.05*	7.629E+00	1.629E+00	1.631E+00	67.89
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	656	12.94*	3.514E+00	4.873E+00	4.873E+00	13.86
PB-212	74.81	709	10.70	8.037E+00	2.786E+00	2.786E+00	19.77
	77.11	1096	18.00	8.012E+00	2.568E+00	2.568E+00	12.15
	87.30	394	8.00	7.859E+00	2.118E+00	2.118E+00	24.37
	238.63	1220	44.60*	4.771E+00	1.937E+00	1.937E+00	12.79
	300.09	106	3.41	4.003E+00	2.626E+00	2.626E+00	53.73
PO-212	74.81	709	10.70	8.037E+00	2.786E+00	2.786E+00	19.77
	77.11	1096	18.00	8.012E+00	2.568E+00	2.568E+00	12.15
	87.30	394	8.00	7.859E+00	2.118E+00	2.118E+00	24.37
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	1220	44.60*	4.771E+00	1.937E+00	1.937E+00	12.79
	300.09	106	3.41	4.003E+00	2.626E+00	2.626E+00	53.73
BI-214	609.31	448	46.30*	2.171E+00	1.507E+00	1.507E+00	14.96
	1120.29	75	15.10	1.257E+00	1.341E+00	1.341E+00	57.55
	1764.49	60	15.80	8.608E-01	1.491E+00	1.491E+00	38.71
PB-214	74.81	709	6.21	8.037E+00	4.800E+00	4.801E+00	18.93
	77.11	1096	10.50	8.012E+00	4.403E+00	4.403E+00	14.34

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	394	4.67	7.859E+00	3.628E+00	3.628E+00	23.52
	241.98	347	7.49	4.727E+00	3.311E+00	3.311E+00	30.60
	295.21	370	19.20	4.056E+00	1.607E+00	1.607E+00	18.74
	351.92	656	37.20*	3.514E+00	1.695E+00	1.695E+00	14.81
PO-214	74.81	709	6.21	8.037E+00	4.800E+00	4.801E+00	18.93
	77.11	1096	10.50	8.012E+00	4.403E+00	4.403E+00	14.34
	87.30	394	4.67	7.859E+00	3.628E+00	3.628E+00	23.52
	241.98	347	7.49	4.727E+00	3.311E+00	3.311E+00	30.60
	295.21	370	19.20	4.056E+00	1.607E+00	1.607E+00	18.74
	351.92	656	37.20*	3.514E+00	1.695E+00	1.695E+00	14.81
PO-216	74.81	709	10.70	8.037E+00	2.786E+00	2.786E+00	19.77
	77.11	1096	18.00	8.012E+00	2.568E+00	2.568E+00	12.15
	87.30	394	8.00	7.859E+00	2.118E+00	2.118E+00	24.37
	238.63	1220	44.60*	4.771E+00	1.937E+00	1.937E+00	12.79
	300.09	106	3.41	4.003E+00	2.626E+00	2.626E+00	53.73
PO-218	74.81	709	6.21	8.037E+00	4.800E+00	4.801E+00	18.93
	77.11	1096	10.50	8.012E+00	4.403E+00	4.403E+00	14.34
	87.30	394	4.67	7.859E+00	3.628E+00	3.628E+00	23.52
	241.98	347	7.49	4.727E+00	3.311E+00	3.311E+00	30.60
	295.21	370	19.20	4.056E+00	1.607E+00	1.607E+00	18.74
	351.92	656	37.20*	3.514E+00	1.695E+00	1.695E+00	14.81
RA-224	240.98	347	3.95*	4.727E+00	6.278E+00	6.278E+00	30.09
RA-226	609.31	448	46.30*	2.171E+00	1.507E+00	1.507E+00	14.96
	1120.29	75	15.10	1.257E+00	1.341E+00	1.341E+00	57.55
	1764.49	60	15.80	8.608E-01	1.491E+00	1.491E+00	38.71
AC-228	338.32	234	11.40	3.633E+00	1.912E+00	1.912E+00	48.40
	911.07	233	27.70*	1.510E+00	1.879E+00	1.879E+00	20.75
	969.11	158	16.60	1.429E+00	2.255E+00	2.255E+00	32.36
RA-228	338.32	234	11.40	3.633E+00	1.912E+00	1.912E+00	48.40
	911.07	233	27.70*	1.510E+00	1.879E+00	1.879E+00	20.75
	969.11	158	16.60	1.429E+00	2.255E+00	2.255E+00	32.36
TH-228	74.81	709	10.70	8.037E+00	2.786E+00	2.834E+00	17.46
	77.11	1096	18.00	8.012E+00	2.568E+00	2.612E+00	12.15
	87.30	394	8.00	7.859E+00	2.118E+00	2.154E+00	22.22
	238.63	1220	44.60*	4.771E+00	1.937E+00	1.970E+00	12.79
	300.09	106	3.41	4.003E+00	2.626E+00	2.671E+00	79.32
TH-230	609.31	448	46.30*	2.171E+00	1.507E+00	1.507E+00	14.96
	1120.29	75	15.10	1.257E+00	1.341E+00	1.341E+00	57.55
	1764.49	60	15.80	8.608E-01	1.491E+00	1.491E+00	38.71
TH-232	338.32	234	11.40	3.633E+00	1.912E+00	1.912E+00	26.74
	911.07	233	27.70*	1.510E+00	1.879E+00	1.879E+00	20.75
	969.11	158	16.60	1.429E+00	2.255E+00	2.255E+00	32.36
TH-234	63.29	162	3.80*	8.064E+00	1.786E+00	1.786E+00	60.28
	92.38	335	5.41	7.752E+00	2.697E+00	2.697E+00	32.66
U-234	609.31	448	46.30*	2.171E+00	1.507E+00	1.507E+00	14.96
	1120.29	75	15.10	1.257E+00	1.341E+00	1.341E+00	57.55
	1764.49	60	15.80	8.608E-01	1.491E+00	1.491E+00	38.71
NP-237	86.50	394	12.60*	7.859E+00	1.345E+00	1.345E+00	30.33
	95.87	------	2.60	7.687E+00	------ Line Not Found		------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-238	63.29	162	3.80*	8.064E+00	1.786E+00	1.786E+00	60.28
	92.38	335	5.41	7.752E+00	2.697E+00	2.697E+00	28.53
AM-243	74.67	709	66.00*	8.037E+00	4.517E-01	4.517E-01	17.42
	86.72	394	0.34	7.859E+00	5.043E+01	5.043E+01	22.22
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	82	100.00*	2.542E+00	1.096E-01	1.096E-01	81.92

Flag: "*" = Keyline

Sample ID : G243457001 Acquisition date : 4-JAN-2010 13:58:02

Total number of lines in spectrum 39
Number of unidentified lines 4
Number of lines tentatively identified by NID 35 89.74%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.225E+01	2.225E+01	0.231E+01	10.37	
CD-109	464.00D	1.03	4.555E+00	4.673E+00	1.038E+00	22.22	
SN-126	1.00E+05Y	1.00	4.580E-01	4.580E-01	1.018E-01	22.22	
BA-137M	30.17Y	1.00	3.279E-01	3.282E-01	0.779E-01	23.74	
CS-137	30.17Y	1.00	3.466E-01	3.470E-01	0.824E-01	23.75	
TL-208	1.41E+10Y	1.00	5.872E-01	5.872E-01	1.170E-01	19.92	
BI-210	22.26Y	1.00	1.629E+00	1.631E+00	1.109E+00	68.01	
PB-210	22.26Y	1.00	1.629E+00	1.631E+00	1.109E+00	68.01	
PO-210	22.26Y	1.00	1.629E+00	1.631E+00	1.107E+00	67.89	
BI-211	7.04E+08Y	1.00	4.873E+00	4.873E+00	0.675E+00	13.86	
PB-212	1.41E+10Y	1.00	1.937E+00	1.937E+00	0.248E+00	12.79	
PO-212	1.41E+10Y	1.00	1.937E+00	1.937E+00	0.248E+00	12.79	
BI-214	1600.00Y	1.00	1.507E+00	1.507E+00	0.225E+00	14.96	
PB-214	1600.00Y	1.00	1.695E+00	1.695E+00	0.251E+00	14.81	
PO-214	1600.00Y	1.00	1.695E+00	1.695E+00	0.251E+00	14.81	
PO-216	1.41E+10Y	1.00	1.937E+00	1.937E+00	0.248E+00	12.79	
PO-218	1600.00Y	1.00	1.695E+00	1.695E+00	0.251E+00	14.81	
RA-224	1.41E+10Y	1.00	6.278E+00	6.278E+00	1.889E+00	30.09	
RA-226	1600.00Y	1.00	1.507E+00	1.507E+00	0.225E+00	14.96	
AC-228	1.41E+10Y	1.00	1.879E+00	1.879E+00	0.390E+00	20.75	
RA-228	1.41E+10Y	1.00	1.879E+00	1.879E+00	0.390E+00	20.75	
TH-228	1.91Y	1.02	1.937E+00	1.970E+00	0.252E+00	12.79	
TH-230	4.47E+09Y	1.00	1.507E+00	1.507E+00	0.225E+00	14.96	
TH-232	1.41E+10Y	1.00	1.879E+00	1.879E+00	0.390E+00	20.75	
TH-234	4.47E+09Y	1.00	1.786E+00	1.786E+00	1.076E+00	60.28	
U-234	4.47E+09Y	1.00	1.507E+00	1.507E+00	0.225E+00	14.96	
NP-237	2.14E+06Y	1.00	1.345E+00	1.345E+00	0.408E+00	30.33	
U-238	4.47E+09Y	1.00	1.786E+00	1.786E+00	1.076E+00	60.28	
AM-243	7380.00Y	1.00	4.517E-01	4.517E-01	0.787E-01	17.42	
ANH-511	1.00E+09Y	1.00	1.096E-01	1.096E-01	0.898E-01	81.92	
	Total Activity :		7.454E+01	7.470E+01			

Grand Total Activity : 7.454E+01 7.470E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
2	84.21	205	518	1.49	169.39	164	30	2.85E-02	41.4	7.91E+00	T
2	89.97	257	350	1.14	180.92	164	30	3.57E-02	28.0	7.81E+00	T
0	186.22	281	446	1.35	373.39	366	15	3.90E-02	35.5	5.65E+00	T
0	210.46	74	377	1.61	421.87	413	12	1.02E-02	****	5.22E+00	T
0	270.22	132	181	1.86	541.35	536	11	1.84E-02	43.7	4.35E+00	T
0	328.88	34	198	1.41	658.65	651	11	4.78E-03	****	3.72E+00	T
0	463.10	81	84	1.33	926.98	921	11	1.13E-02	49.2	2.78E+00	T
1	665.89	56	54	2.01	1332.37	1317	25	7.80E-03	63.2	2.00E+00	T
0	727.43	79	81	1.19	1455.37	1450	12	1.09E-02	51.1	1.85E+00	T
0	768.43	52	67	1.34	1537.32	1532	11	7.27E-03	66.2	1.76E+00	
0	795.21	47	55	1.67	1590.84	1586	12	6.56E-03	68.8	1.71E+00	T
0	863.50	12	74	2.23	1727.32	1721	11	1.73E-03	****	1.58E+00	
1	962.04	33	18	2.19	1924.26	1920	37	4.60E-03	57.5	1.44E+00	T
1	964.72	66	27	2.19	1929.60	1920	37	9.20E-03	43.5	1.44E+00	T
0	1238.94	60	38	1.65	2477.55	2470	15	8.26E-03	51.8	1.15E+00	T
0	1588.81	25	12	1.67	3176.44	3169	12	3.47E-03	68.4	9.37E-01	
0	1731.41	28	6	1.34	3461.24	3455	14	3.94E-03	53.9	8.74E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 14:04:44.60

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243457001.CNF;1		
Acquisition date	: 4-JAN-2010 13:58:02.	Detector SN#	:
Detector ID	: GAM05	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:01.74	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243457001	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.11113E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 11-JUN-2009 16:41:00.5	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.225E+01	2.307E+00	7.937E-01	4.936E-02	28.039
CD-109	4.673E+00	1.038E+00	1.158E+00	8.816E-02	4.036
SN-126	4.580E-01	1.018E-01	1.133E-01	8.629E-03	4.042
BA-137M	3.282E-01	7.793E-02	8.176E-02	5.377E-03	4.014
CS-137	3.470E-01	8.240E-02	8.643E-02	5.702E-03	4.014
TL-208	5.872E-01	1.170E-01	7.196E-02	5.295E-03	8.160
BI-210	1.631E+00	1.109E+00	1.009E+00	7.873E-02	1.616
PB-210	1.631E+00	1.109E+00	1.009E+00	7.873E-02	1.616
PO-210	1.631E+00	1.107E+00	1.009E+00	6.788E-02	1.616
BI-211	4.873E+00	6.754E-01	4.254E-01	3.371E-02	11.455
PB-212	1.937E+00	2.478E-01	1.095E-01	1.181E-02	17.688
PO-212	1.937E+00	2.478E-01	1.095E-01	1.181E-02	17.688
BI-214	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
PB-214	1.695E+00	2.510E-01	1.451E-01	1.374E-02	11.680
PO-214	1.695E+00	2.510E-01	1.451E-01	1.374E-02	11.680
PO-216	1.937E+00	2.478E-01	1.095E-01	1.181E-02	17.688
PO-218	1.695E+00	2.510E-01	1.451E-01	1.374E-02	11.680
RA-224	6.278E+00	1.889E+00	1.246E+00	1.220E-01	5.036

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
AC-228	1.879E+00	3.899E-01	2.759E-01	3.414E-02	6.810
RA-228	1.879E+00	3.899E-01	2.759E-01	3.414E-02	6.810
TH-228	1.970E+00	2.521E-01	1.114E-01	1.201E-02	17.688
TH-230	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
TH-232	1.879E+00	3.899E-01	2.759E-01	3.414E-02	6.810
TH-234	1.786E+00	1.076E+00	1.219E+00	2.166E-01	1.465
U-234	1.507E+00	2.254E-01	1.452E-01	1.217E-02	10.380
NP-237	1.345E+00	4.078E-01	3.317E-01	7.298E-02	4.054
U-238	1.786E+00	1.076E+00	1.219E+00	2.166E-01	1.465
AM-243	4.517E-01	7.870E-02	7.051E-02	5.523E-03	6.406
ANH-511	1.096E-01	8.976E-02	6.145E-02	3.933E-03	1.783

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	4.158E-02		4.294E-01	7.058E-01	5.056E-02	0.059
NA-22	4.037E-02		5.636E-02	9.836E-02	5.729E-03	0.410
NA-24	3.775E-01		3.417E+00	Half-Life too short		
AL-26	1.612E-02		4.534E-02	7.910E-02	4.539E-03	0.204
TI-44	4.740E-01	+	5.758E-02	7.903E-02	6.132E-03	5.998
SC-46	1.964E-03		5.260E-02	8.732E-02	8.770E-03	0.022
V-48	4.461E-02		9.591E-02	1.588E-01	1.455E-02	0.281
CR-51	-1.835E-01		5.105E-01	8.084E-01	7.149E-02	-0.227
MN-52	1.030E-01		3.667E-01	6.361E-01	3.725E-02	0.162
MN-54	1.356E-03		5.192E-02	8.636E-02	7.912E-03	0.016
CO-56	2.116E-02		5.051E-02	8.692E-02	8.129E-03	0.243
CO-57	-2.574E-02		3.030E-02	4.719E-02	6.695E-03	-0.545
CO-58	-4.644E-02		5.243E-02	7.985E-02	7.028E-03	-0.582
FE-59	6.001E-02		1.123E-01	1.939E-01	1.571E-02	0.309
CO-60	8.457E-04		4.506E-02	7.294E-02	4.221E-03	0.012
ZN-65	-1.142E-01		1.423E-01	1.753E-01	1.225E-02	-0.652
GE-68	6.442E-01		1.581E+00	2.694E+00	2.069E-01	0.239
AS-73	-5.442E-02		2.889E-01	4.728E-01	3.559E-02	-0.115
AS-74	1.217E-01		1.295E-01	2.242E-01	1.475E-02	0.543
SE-75	-3.052E-03		6.179E-02	8.969E-02	8.563E-03	-0.034
BR-77	-3.084E+00		2.404E+01	3.869E+01	2.488E+00	-0.080
SR-82	-5.843E-01		5.450E-01	7.972E-01	6.578E-02	-0.733
RB-83	-5.887E-03		9.325E-02	1.467E-01	9.431E-03	-0.040
RB-84	-1.208E-02		8.620E-02	1.405E-01	1.394E-02	-0.086
KR-85	2.825E+01		1.094E+01	1.870E+01	1.198E+00	1.511
SR-85	1.479E-01		5.728E-02	9.787E-02	6.273E-03	1.511
RB-86	-2.882E-01		1.093E+00	1.738E+00	1.337E-01	-0.166
Y-88	2.266E-02		4.178E-02	7.631E-02	4.366E-03	0.297
ZR-88	-1.395E-02		4.409E-02	7.131E-02	4.152E-03	-0.196
Y-91	-1.817E+01		2.671E+01	4.056E+01	2.357E+00	-0.448
NB-94	-1.144E-02		4.570E-02	7.516E-02	5.378E-03	-0.152

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	1.024E-01		6.245E-02	1.052E-01	8.509E-03	0.973
NB-95M	3.244E-01		1.885E-01	2.963E-01	3.241E-02	1.095
ZR-95	1.534E-01		1.043E-01	1.908E-01	1.695E-02	0.804
NB-97	1.097E+00		5.119E-01	Half-Life too short		
ZR-97	1.670E+01		9.487E+00	Half-Life too short		
MO-99	1.684E+01		2.532E+01	4.431E+01	6.504E+00	0.380
TC-99M	3.338E+11		5.495E+12	Half-Life too short		
RH-101	-5.062E-02		4.525E-02	6.787E-02	6.777E-03	-0.746
RH-102	-8.922E-03		3.859E-02	6.197E-02	3.882E-03	-0.144
RU-103	-1.381E-02		5.627E-02	8.999E-02	1.162E-02	-0.153
RH-106	5.990E-01		4.707E-01	8.208E-01	9.971E-02	0.730
RU-106	5.990E-01		4.668E-01	8.208E-01	5.410E-02	0.730
AG-108M	-1.353E-02		4.144E-02	6.640E-02	4.345E-03	-0.204
AG-110M	5.385E-02		5.313E-02	8.224E-02	5.685E-03	0.655
IN-111	-8.719E-02		2.325E+00	3.390E+00	3.303E-01	-0.026
IN-113M	-2.927E-02		6.367E-02	1.021E-01	6.335E-03	-0.287
SN-113	-2.927E-02		6.367E-02	1.021E-01	6.335E-03	-0.287
IN-114M	-6.714E-03		2.725E-01	3.802E-01	3.797E-02	-0.018
CD-115	-1.168E+01		2.767E+01	4.237E+01	2.734E+00	-0.276
SN-117M	-6.943E-02		7.605E-02	1.172E-01	1.260E-02	-0.593
SB-122	3.585E+00		4.836E+00	8.236E+00	5.382E-01	0.435
I-123	-5.263E+01		4.314E+01	Half-Life too short		
TE-123M	-2.181E-02		3.576E-02	5.600E-02	6.017E-03	-0.390
I-124	3.574E-01		1.409E+00	2.015E+00	1.327E-01	0.177
SB-124	8.412E-02		1.005E-01	1.897E-01	1.201E-02	0.443
SB-125	-4.180E-03		1.297E-01	2.124E-01	1.332E-02	-0.020
TE-125M	-7.896E-01		1.113E+01	1.812E+01	2.329E+00	-0.044
I-126	5.898E-01	+	3.748E-01	5.035E-01	3.343E-02	1.171
SB-126	6.357E-02		2.295E-01	3.546E-01	2.629E-02	0.179
SB-127	-1.244E+00		2.634E+00	4.255E+00	4.599E-01	-0.292
XE-127	-3.870E-02		7.524E-02	1.013E-01	1.012E-02	-0.382
I-131	-6.770E-02		1.710E-01	2.755E-01	2.074E-02	-0.246
TE-132	-2.219E-01		1.305E+00	2.180E+00	3.664E-01	-0.102
BA-133	-8.329E-03		6.207E-02	8.805E-02	1.087E-02	-0.095
I-133	-2.427E-02		1.985E-02	Half-Life too short		
CS-134	1.236E-01	+	8.569E-02	1.207E-01	1.039E-02	1.024
CS-135	3.366E-01		2.284E-01	3.553E-01	3.801E-02	0.948
I-135	-4.440E+11		4.944E+11	Half-Life too short		
CS-136	3.387E-02		1.402E-01	2.359E-01	2.021E-02	0.144
CE-139	1.757E-02		3.678E-02	6.041E-02	5.998E-03	0.291
BA-140	1.106E-02		3.949E-01	6.422E-01	2.097E-01	0.017
LA-140	6.920E-02		1.443E-01	2.416E-01	1.420E-02	0.286
CE-141	3.024E-02		8.315E-02	1.330E-01	1.625E-02	0.227
CE-143	2.532E-03		4.203E-04	Half-Life too short		
CE-144	1.006E-01		2.553E-01	4.194E-01	7.765E-02	0.240
PM-144	3.466E-03		4.617E-02	7.781E-02	5.502E-03	0.045
PR-144	2.351E-01		3.132E+00	5.278E+00	3.730E-01	0.045
PM-146	-6.147E-03		5.756E-02	9.351E-02	8.298E-03	-0.066

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-7.875E-03		8.409E-01	1.365E+00	1.886E-01	-0.006
PM-149	-9.795E+01		2.123E+02	3.452E+02	5.472E+01	-0.284
EU-152	-9.471E-03		1.594E-01	2.151E-01	1.769E-02	-0.044
GD-153	-3.412E-03		9.562E-02	1.369E-01	1.269E-02	-0.025
EU-154	1.096E-01		1.571E-01	2.734E-01	2.556E-02	0.401
EU-155	-1.605E-02		1.210E-01	1.967E-01	2.130E-02	-0.082
TB-160	6.145E-02		1.732E-01	2.966E-01	2.930E-02	0.207
HO-166M	-5.356E-02		7.631E-02	1.201E-01	8.752E-03	-0.446
TM-171	-9.355E+00		2.106E+01	2.998E+01	2.410E+00	-0.312
LU-176	6.487E-03		3.241E-02	5.157E-02	4.491E-03	0.126
LU-177	2.691E+00		1.779E+00	2.991E+00	2.982E-01	0.900
LU-177M	-1.705E-01		2.378E-01	3.729E-01	2.220E-02	-0.457
HF-181	-2.496E-02		5.833E-02	9.221E-02	5.803E-03	-0.271
W-181	3.635E-02		2.678E-01	3.909E-01	3.160E-02	0.093
TA-182	-1.337E-01		2.670E-01	4.123E-01	2.397E-02	-0.324
RE-183	-1.262E-02		1.389E-01	2.229E-01	2.303E-02	-0.057
RE-184	-2.126E-01		2.996E-01	4.851E-01	4.687E-02	-0.438
OS-185	-2.901E-02		5.772E-02	8.854E-02	5.833E-03	-0.328
RE-188	1.118E-01		2.198E-01	3.616E-01	4.025E-02	0.309
W-188	5.999E+00		1.042E+01	1.572E+01	1.425E+00	0.382
IR-192	2.251E-03		4.499E-02	7.500E-02	6.366E-03	0.030
AU-195	3.905E-01		2.739E-01	4.172E-01	3.978E-02	0.936
TL-200	-6.314E-04		9.934E-04	Half-Life too short		
TL-201	4.031E+00		1.364E+01	2.223E+01	2.207E+00	0.181
TL-202	5.863E-03		1.004E-01	1.651E-01	1.007E-02	0.036
HG-203	6.486E-02		6.005E-02	9.311E-02	8.853E-03	0.697
BI-207	-1.898E-02		7.108E-02	1.132E-01	8.968E-03	-0.168
TL-207	-3.501E-01		9.696E-01	1.356E+00	2.379E-01	-0.258
PO-209	2.177E+00		9.716E+00	1.640E+01	1.667E+00	0.133
PB-211	-4.121E-01		1.292E+00	2.043E+00	1.274E+00	-0.202
BI-212	1.217E+00	+	6.312E-01	8.935E-01	8.105E-02	1.362
PO-215	-3.501E-01		9.696E-01	1.356E+00	2.379E-01	-0.258
RN-219	-1.279E-01		5.623E-01	9.126E-01	1.245E-01	-0.140
RN-220	-1.442E+01		3.565E+01	5.595E+01	3.640E+00	-0.258
RA-223	-3.501E-01		9.696E-01	1.356E+00	2.379E-01	-0.258
AC-227	1.845E-01		4.918E-01	8.367E-01	1.333E-01	0.221
TH-227	1.845E-01		4.922E-01	8.367E-01	1.553E-01	0.221
TH-229	2.514E-01		6.707E-01	1.054E+00	1.053E-01	0.238
PA-231	-5.853E-01		1.964E+00	3.140E+00	4.873E-01	-0.186
TH-231	-3.501E-01		9.696E-01	1.356E+00	2.379E-01	-0.258
U-231	-5.436E-02		1.777E+00	2.545E+00	2.288E-01	-0.021
PA-233	8.136E-03		7.880E-02	1.318E-01	1.164E-02	0.062
PA-234	9.300E-02		3.612E-01	6.106E-01	1.176E-01	0.152
PA-234M	-4.036E-01		6.642E+00	1.064E+01	1.088E+00	-0.038
U-235	3.529E-02		2.713E-01	4.306E-01	8.425E-02	0.082
NP-236	-2.215E-02		9.788E-02	1.562E-01	1.649E-02	-0.142
NP-239	-1.010E-02		2.242E-01	3.645E-01	4.775E-02	-0.028
AM-241	8.480E-02		8.314E-02	1.258E-01	1.126E-02	0.674

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-7.328E-02		1.077E-01	1.710E-01	1.787E-02	-0.428
AM-246	-3.657E-02		1.901E-01	3.048E-01	2.333E-02	-0.120
CM-247	-1.837E-02		4.967E-02	7.990E-02	4.702E-03	-0.230
CF-249	1.837E-02		5.561E-02	9.332E-02	5.582E-03	0.197
CF-251	5.858E-02		1.626E-01	2.651E-01	2.641E-02	0.221

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243457001		
Acquisition date	: 4-JAN-2010 13:58:02	Detector SN#	:
Detector ID	: GAM05	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.74	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243457001	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.1111E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 11-JUN-2009 16:41:00	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.225E+01	2.261E+00	3.950E-01	1.154E+00
CD-109	4.673E+00	1.018E+00	5.889E-01	5.192E-01
SN-126	4.580E-01	9.974E-02	5.764E-02	5.089E-02
BA-137M	3.282E-01	7.637E-02	4.095E-02	3.896E-02
CS-137	3.470E-01	8.075E-02	4.329E-02	4.120E-02
TL-208	5.872E-01	1.146E-01	3.607E-02	5.848E-02
BI-210	1.631E+00	1.087E+00	5.158E-01	5.546E-01
PB-210	1.631E+00	1.087E+00	5.158E-01	5.546E-01
PO-210	1.631E+00	1.085E+00	5.158E-01	5.536E-01
BI-211	4.873E+00	6.619E-01	2.141E-01	3.377E-01
PB-212	1.937E+00	2.429E-01	5.528E-02	1.239E-01
PO-212	1.937E+00	2.429E-01	5.528E-02	1.239E-01
BI-214	1.507E+00	2.209E-01	7.275E-02	1.127E-01
PB-214	1.695E+00	2.460E-01	7.304E-02	1.255E-01
PO-214	1.695E+00	2.460E-01	7.304E-02	1.255E-01
PO-216	1.937E+00	2.429E-01	5.528E-02	1.239E-01
PO-218	1.695E+00	2.460E-01	7.304E-02	1.255E-01
RA-224	6.278E+00	1.851E+00	6.291E-01	9.443E-01
RA-226	1.507E+00	2.209E-01	7.275E-02	1.127E-01
AC-228	1.879E+00	3.821E-01	1.378E-01	1.949E-01
RA-228	1.879E+00	3.821E-01	1.378E-01	1.949E-01
TH-228	1.970E+00	2.470E-01	5.623E-02	1.260E-01
TH-230	1.507E+00	2.209E-01	7.275E-02	1.127E-01
TH-232	1.879E+00	3.821E-01	1.378E-01	1.949E-01
TH-234	1.786E+00	1.055E+00	6.215E-01	5.381E-01
U-234	1.507E+00	2.209E-01	7.275E-02	1.127E-01
NP-237	1.345E+00	3.997E-01	1.687E-01	2.039E-01
U-238	1.786E+00	1.055E+00	6.215E-01	5.381E-01
AM-243	4.517E-01	7.713E-02	3.591E-02	3.935E-02
ANH-511	1.096E-01	8.796E-02	3.084E-02	4.488E-02

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	4.158E-02	4.208E-01	3.543E-01	2.147E-01	NOT IDENT.
NA-22	4.037E-02	5.523E-02	4.901E-02	2.818E-02	NOT IDENT.
NA-24	3.775E+05	6.697E+06	0.000E+00	3.417E+06	SHORT HLIF
AL-26	1.612E-02	4.444E-02	3.930E-02	2.267E-02	NOT IDENT.
TI-44	4.740E-01	5.643E-02	4.023E-02	2.879E-02	FAIL ABUN
SC-46	1.964E-03	5.155E-02	4.363E-02	2.630E-02	FAIL ABUN
V-48	4.461E-02	9.399E-02	7.929E-02	4.795E-02	NOT IDENT.
CR-51	-1.835E-01	5.003E-01	4.071E-01	2.553E-01	NOT IDENT.
MN-52	1.030E-01	3.594E-01	3.166E-01	1.833E-01	NOT IDENT.
MN-54	1.356E-03	5.088E-02	4.317E-02	2.596E-02	NOT IDENT.
CO-56	2.116E-02	4.950E-02	4.345E-02	2.526E-02	FAIL ABUN
CO-57	-2.574E-02	2.969E-02	2.394E-02	1.515E-02	NOT IDENT.
CO-58	-4.644E-02	5.138E-02	3.992E-02	2.621E-02	NOT IDENT.
FE-59	6.001E-02	1.101E-01	9.674E-02	5.616E-02	NOT IDENT.
CO-60	8.457E-04	4.416E-02	3.633E-02	2.253E-02	NOT IDENT.
ZN-65	-1.142E-01	1.394E-01	8.743E-02	7.113E-02	NOT IDENT.
GE-68	6.442E-01	1.549E+00	1.344E+00	7.905E-01	NOT IDENT.
AS-73	-5.442E-02	2.832E-01	2.414E-01	1.445E-01	NOT IDENT.
AS-74	1.217E-01	1.269E-01	1.124E-01	6.473E-02	NOT IDENT.
SE-75	-3.052E-03	6.055E-02	4.524E-02	3.089E-02	NOT IDENT.
BR-77	-3.084E+00	2.356E+01	1.941E+01	1.202E+01	FAIL ABUN
SR-82	-5.843E-01	5.341E-01	3.988E-01	2.725E-01	NOT IDENT.
RB-83	-5.887E-03	9.139E-02	7.360E-02	4.663E-02	NOT IDENT.
RB-84	-1.208E-02	8.448E-02	7.023E-02	4.310E-02	NOT IDENT.
KR-85	2.825E+01	1.072E+01	9.382E+00	5.471E+00	NOT IDENT.
SR-85	1.479E-01	5.613E-02	4.911E-02	2.864E-02	NOT IDENT.
RB-86	-2.882E-01	1.071E+00	8.669E-01	5.465E-01	NOT IDENT.
Y-88	2.266E-02	4.094E-02	3.791E-02	2.089E-02	NOT IDENT.
ZR-88	-1.395E-02	4.320E-02	3.585E-02	2.204E-02	NOT IDENT.
Y-91	-1.817E+01	2.618E+01	2.021E+01	1.335E+01	NOT IDENT.
NB-94	-1.144E-02	4.479E-02	3.762E-02	2.285E-02	NOT IDENT.
NB-95	1.024E-01	6.120E-02	5.262E-02	3.122E-02	NOT IDENT.
NB-95M	3.244E-01	1.847E-01	1.496E-01	9.426E-02	NOT IDENT.
ZR-95	1.534E-01	1.023E-01	9.547E-02	5.217E-02	NOT IDENT.
NB-97	1.097E+06	1.003E+06	0.000E+00	5.119E+05	SHORT HLIF
ZR-97	1.670E+07	1.859E+07	0.000E+00	9.487E+06	SHORT HLIF
MO-99	1.684E+01	2.481E+01	2.217E+01	1.266E+01	NOT IDENT.
TC-99M	3.338E+17	1.077E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-5.062E-02	4.434E-02	3.431E-02	2.262E-02	NOT IDENT.
RH-102	-8.922E-03	3.782E-02	3.112E-02	1.930E-02	NOT IDENT.
RU-103	-1.381E-02	5.515E-02	4.517E-02	2.814E-02	FAIL ABUN
RH-106	5.990E-01	4.613E-01	4.112E-01	2.354E-01	FAIL ABUN
RU-106	5.990E-01	4.574E-01	4.112E-01	2.334E-01	FAIL ABUN
AG-108M	-1.353E-02	4.061E-02	3.336E-02	2.072E-02	NOT IDENT.
AG-110M	5.385E-02	5.206E-02	4.119E-02	2.656E-02	NOT IDENT.
IN-111	-8.719E-02	2.279E+00	1.711E+00	1.163E+00	NOT IDENT.
IN-113M	-2.927E-02	6.240E-02	5.135E-02	3.183E-02	NOT IDENT.
SN-113	-2.927E-02	6.240E-02	5.135E-02	3.183E-02	NOT IDENT.
IN-114M	-6.714E-03	2.671E-01	1.923E-01	1.363E-01	NOT IDENT.
CD-115	-1.168E+01	2.712E+01	2.126E+01	1.384E+01	NOT IDENT.
SN-117M	-6.943E-02	7.453E-02	5.932E-02	3.802E-02	NOT IDENT.
SB-122	3.585E+00	4.740E+00	4.130E+00	2.418E+00	NOT IDENT.
I-123	-5.263E+07	8.456E+07	0.000E+00	4.314E+07	SHORT HLIF
TE-123M	-2.181E-02	3.504E-02	2.835E-02	1.788E-02	NOT IDENT.
I-124	3.574E-01	1.381E+00	1.010E+00	7.045E-01	NOT IDENT.
SB-124	8.412E-02	9.852E-02	9.431E-02	5.026E-02	FAIL ABUN
SB-125	-4.180E-03	1.271E-01	1.067E-01	6.485E-02	FAIL ABUN
TE-125M	-7.896E-01	1.091E+01	9.200E+00	5.567E+00	NOT IDENT.
I-126	5.898E-01	3.674E-01	2.521E-01	1.874E-01	FAIL ABUN
SB-126	6.357E-02	2.249E-01	1.775E-01	1.148E-01	FAIL ABUN
SB-127	-1.244E+00	2.581E+00	2.130E+00	1.317E+00	NOT IDENT.
XE-127	-3.870E-02	7.374E-02	5.122E-02	3.762E-02	NOT IDENT.
I-131	-6.770E-02	1.676E-01	1.386E-01	8.549E-02	NOT IDENT.
TE-132	-2.219E-01	1.279E+00	1.101E+00	6.525E-01	NOT IDENT.
BA-133	-8.329E-03	6.083E-02	4.431E-02	3.104E-02	FAIL ABUN
I-133	-2.427E+04	3.891E+04	0.000E+00	1.985E+04	SHORT HLIF
CS-134	1.236E-01	8.398E-02	6.034E-02	4.285E-02	FAIL ABUN
CS-135	3.366E-01	2.239E-01	1.792E-01	1.142E-01	NOT IDENT.
I-135	-4.440E+17	9.691E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.387E-02	1.374E-01	1.177E-01	7.010E-02	FAIL ABUN
CE-139	1.757E-02	3.605E-02	3.058E-02	1.839E-02	NOT IDENT.
BA-140	1.106E-02	3.870E-01	3.221E-01	1.974E-01	NOT IDENT.
LA-140	6.920E-02	1.414E-01	1.202E-01	7.216E-02	FAIL ABUN
CE-141	3.024E-02	8.148E-02	6.736E-02	4.157E-02	NOT IDENT.
CE-143	2.532E+03	8.237E+02	0.000E+00	4.203E+02	SHORT HLIF

CE-144	1.006E-01	2.502E-01	2.126E-01	1.277E-01 NOT IDENT.
PM-144	3.466E-03	4.525E-02	3.895E-02	2.309E-02 NOT IDENT.
PR-144	2.351E-01	3.070E+00	2.642E+00	1.566E+00 NOT IDENT.
PM-146	-6.147E-03	5.641E-02	4.697E-02	2.878E-02 NOT IDENT.
ND-147	-7.875E-03	8.241E-01	6.846E-01	4.205E-01 FAIL ABUN
PM-149	-9.795E+01	2.080E+02	1.740E+02	1.061E+02 NOT IDENT.
EU-152	-9.471E-03	1.562E-01	1.083E-01	7.970E-02 FAIL ABUN
GD-153	-3.412E-03	9.370E-02	6.957E-02	4.781E-02 FAIL ABUN
EU-154	1.096E-01	1.540E-01	1.362E-01	7.856E-02 NOT IDENT.
EU-155	-1.605E-02	1.186E-01	9.989E-02	6.051E-02 FAIL ABUN
TB-160	6.145E-02	1.697E-01	1.482E-01	8.659E-02 FAIL ABUN
HO-166M	-5.356E-02	7.478E-02	6.012E-02	3.815E-02 NOT IDENT.
TM-171	-9.355E+00	2.063E+01	1.528E+01	1.053E+01 NOT IDENT.
LU-176	6.487E-03	3.177E-02	2.598E-02	1.621E-02 FAIL ABUN
LU-177	2.691E+00	1.744E+00	1.511E+00	8.896E-01 NOT IDENT.
LU-177M	-1.705E-01	2.330E-01	1.875E-01	1.189E-01 FAIL ABUN
HF-181	-2.496E-02	5.717E-02	4.629E-02	2.917E-02 NOT IDENT.
W-181	3.635E-02	2.625E-01	1.993E-01	1.339E-01 NOT IDENT.
TA-182	-1.337E-01	2.616E-01	2.055E-01	1.335E-01 FAIL ABUN
RE-183	-1.262E-02	1.361E-01	1.129E-01	6.945E-02 NOT IDENT.
RE-184	-2.126E-01	2.936E-01	2.447E-01	1.498E-01 NOT IDENT.
OS-185	-2.901E-02	5.657E-02	4.435E-02	2.886E-02 NOT IDENT.
RE-188	1.118E-01	2.154E-01	1.831E-01	1.099E-01 NOT IDENT.
W-188	5.999E+00	1.021E+01	7.922E+00	5.210E+00 FAIL ABUN
IR-192	2.251E-03	4.409E-02	3.778E-02	2.250E-02 FAIL ABUN
AU-195	3.905E-01	2.684E-01	2.120E-01	1.370E-01 FAIL ABUN
TL-200	-6.314E+02	1.947E+03	0.000E+00	9.934E+02 SHORT HLIF
TL-201	4.031E+00	1.337E+01	1.125E+01	6.821E+00 NOT IDENT.
TL-202	5.863E-03	9.835E-02	8.296E-02	5.018E-02 NOT IDENT.
HG-203	6.486E-02	5.885E-02	4.694E-02	3.002E-02 NOT IDENT.
BI-207	-1.898E-02	6.966E-02	5.650E-02	3.554E-02 FAIL ABUN
TL-207	-3.501E-01	9.502E-01	6.831E-01	4.848E-01 FAIL ABUN
PO-209	2.177E+00	9.522E+00	8.192E+00	4.858E+00 NOT IDENT.
PB-211	-4.121E-01	1.266E+00	1.027E+00	6.461E-01 NOT IDENT.
BI-212	1.217E+00	6.186E-01	4.471E-01	3.156E-01 FAIL ABUN
PO-215	-3.501E-01	9.502E-01	6.831E-01	4.848E-01 FAIL ABUN
RN-219	-1.279E-01	5.511E-01	4.588E-01	2.812E-01 FAIL ABUN
RN-220	-1.442E+01	3.493E+01	2.806E+01	1.782E+01 NOT IDENT.
RA-223	-3.501E-01	9.502E-01	6.831E-01	4.848E-01 FAIL ABUN
AC-227	1.845E-01	4.820E-01	4.221E-01	2.459E-01 FAIL ABUN
TH-227	1.845E-01	4.823E-01	4.221E-01	2.461E-01 FAIL ABUN
TH-229	2.514E-01	6.573E-01	5.331E-01	3.353E-01 FAIL ABUN
PA-231	-5.853E-01	1.925E+00	1.583E+00	9.819E-01 FAIL ABUN
TH-231	-3.501E-01	9.502E-01	6.831E-01	4.848E-01 FAIL ABUN
U-231	-5.436E-02	1.741E+00	1.294E+00	8.883E-01 FAIL ABUN
PA-233	8.136E-03	7.722E-02	6.640E-02	3.940E-02 FAIL ABUN
PA-234	9.300E-02	3.539E-01	3.049E-01	1.806E-01 FAIL ABUN
PA-234M	-4.036E-01	6.510E+00	5.313E+00	3.321E+00 NOT IDENT.
U-235	3.529E-02	2.658E-01	2.182E-01	1.356E-01 FAIL ABUN
NP-236	-2.215E-02	9.593E-02	7.908E-02	4.894E-02 NOT IDENT.
NP-239	-1.010E-02	2.197E-01	1.850E-01	1.121E-01 FAIL ABUN
AM-241	8.480E-02	8.148E-02	6.418E-02	4.157E-02 NOT IDENT.
CM-243	-7.328E-02	1.056E-01	8.688E-02	5.385E-02 FAIL ABUN
AM-246	-3.657E-02	1.863E-01	1.521E-01	9.504E-02 NOT IDENT.
CM-247	-1.837E-02	4.868E-02	4.017E-02	2.484E-02 FAIL ABUN
CF-249	1.837E-02	5.449E-02	4.693E-02	2.780E-02 NOT IDENT.
CF-251	5.858E-02	1.593E-01	1.341E-01	8.128E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	393.0421
46.50	393.0421
46.50	393.0421
48.70	439.1156
49.72	461.2468
51.35	382.8514
52.39	422.9422
52.97	423.1994
53.15	423.3209
53.44	447.5258
54.07	450.8577
56.28	510.2934
56.28	510.2954
57.37	0.0000
57.53	463.9169
57.53	463.9178
57.60	463.9664
57.98	417.8112
57.98	417.8112
59.32	460.5213
59.32	460.5213
59.40	460.5766
59.54	460.6727
59.72	480.9664
60.01	481.1736
61.10	464.8488
61.14	464.8762
61.30	494.5333
63.00	565.1346
63.29	565.3708
63.29	565.3708
63.58	557.0259
64.28	576.3266
65.12	620.8002
65.20	620.8704
65.20	620.8704
66.05	590.3005
66.72	608.0924
66.83	584.6747
66.91	584.7408
67.20	584.9764
67.20	584.9764
67.75	594.4461
67.85	609.5724
68.90	552.1597
68.90	552.1597
69.30	566.2244
69.67	566.5122
70.82	622.5566
70.82	622.5566
70.83	622.5662
72.80	640.0107
72.87	640.0701
72.87	640.0701
74.67	566.9056
74.81	567.0083
74.81	567.0083
74.81	567.0083
74.81	567.0083
74.81	567.0083
74.81	567.0083
74.81	567.0083
74.97	567.1262
75.28	567.3556
75.70	567.6657
77.11	568.6967
77.11	568.6967

77.11	568.6967
77.11	568.6967
77.11	568.6967
77.11	568.6967
77.11	568.6967
78.38	529.2562
79.62	530.0862
79.80	530.2060
79.80	530.2060
80.11	530.4130
80.18	530.4597
80.30	530.5388
80.30	530.5388
80.57	530.7174
81.00	531.0015
81.07	531.0482
81.07	531.0482
81.07	531.0482
81.07	531.0482
82.60	532.0548
83.37	437.0261
83.78	437.2476
83.78	437.2476
83.78	437.2476
83.78	437.2476
84.21	437.4757
84.90	437.8421
85.43	438.1219
86.29	438.5749
86.50	438.6848
86.54	438.7065
86.59	438.7331
86.72	438.8014
86.79	438.8364
86.94	438.9163
87.30	439.1045
87.30	439.1045
87.30	439.1045
87.30	439.1045
87.30	439.1045
87.30	439.1045
87.30	439.1045
87.57	439.2444
87.88	439.4059
88.03	439.4842
88.36	439.6557
88.47	439.7124
89.95	440.4768
91.11	441.0730
92.29	441.6742
92.38	441.7191
92.38	441.7191
93.35	442.2104
94.00	442.5385
94.67	402.5262
94.67	402.5292
94.90	423.7395
94.90	423.7395
94.90	423.7395
94.90	423.7395
95.87	429.0789
95.87	429.0789
96.73	426.2409
97.43	397.2655
98.44	343.9220
98.44	343.9220
98.88	337.5664
99.55	342.7112
99.55	342.7112
99.86	330.0009
100.00	330.0515
100.10	330.0885
103.18	413.6968
103.76	390.3875
105.00	364.2290
105.31	377.6905
108.00	365.3814
109.28	389.5732

111.00	361.3568
111.00	361.3568
111.76	370.9377
112.95	387.9404
115.19	341.1249
116.30	334.2379
117.00	345.8973
117.00	345.8973
117.66	344.0446
121.11	335.8261
121.62	319.2979
121.78	339.1756
122.06	346.5759
122.32	347.7062
122.32	347.7062
122.32	347.7062
122.32	347.7062
123.07	330.1953
127.23	327.3123
129.76	354.3807
131.20	369.5955
133.02	379.7095
133.54	332.4044
135.34	347.7502
136.00	356.4196
136.25	369.1936
136.48	365.0385
140.51	355.7407
140.51	0.0000
142.18	341.3760
142.65	334.0706
143.76	335.4614
144.24	328.1429
144.24	328.1429
144.24	328.1429
144.24	328.1429
145.22	313.4965
145.44	310.3575
147.16	344.9987
152.43	310.0744
152.70	296.1938
153.22	300.6168
154.21	291.1960
154.21	291.1960
154.21	291.1960
154.21	291.1960
155.03	309.6760
156.02	311.0070
158.56	326.7597
159.00	0.0000
159.00	315.0108
160.31	299.1499
161.27	266.9602
162.32	300.7220
162.64	300.7983
163.35	307.4680
163.89	302.1869
165.85	272.2869
167.43	284.5796
171.28	302.8769
171.86	304.1047
172.10	285.6290
176.55	288.8024
176.60	286.6265
181.06	305.6045
184.41	288.7677
185.71	264.3732
186.00	264.4318
190.27	286.4881
192.34	256.8121
193.63	269.7156
197.04	316.5524
198.01	317.8835
198.60	293.5538
200.40	263.8694
201.83	290.4074
202.84	317.6361
205.31	318.1859

208.36	273.1820
208.81	273.2676
209.75	254.6172
209.75	254.6172
210.97	267.3924
215.65	274.5465
216.55	254.8986
218.09	234.4253
222.10	254.9429
223.80	253.4202
226.40	232.0953
227.00	239.4417
227.08	253.0600
227.20	253.0804
228.16	255.9618
228.18	255.9653
228.18	255.9653
231.56	0.0000
235.69	259.9442
236.00	259.9964
236.00	259.9964
238.63	220.2243
238.63	220.2243
238.63	220.2243
238.63	220.2243
239.00	220.2758
240.98	220.5509
241.98	220.6892
241.98	220.6892
241.98	220.6892
244.69	188.0422
245.39	206.4771
247.94	206.8039
248.90	194.6638
249.79	191.7038
252.40	223.0391
252.85	235.0859
252.85	235.0859
254.15	0.0000
256.20	215.2406
256.20	215.2406
260.50	217.6504
260.90	218.6284
262.80	227.7384
264.65	188.7883
268.24	176.7821
268.79	198.5547
269.46	189.3219
269.46	189.3219
269.46	189.3219
269.46	189.3219
271.23	205.0522
273.65	182.0056
276.40	215.0157
277.35	202.6621
277.60	206.8490
277.60	206.8490
278.00	204.9195
278.60	202.1836
279.20	177.9070
279.53	185.7438
280.46	179.5963
281.68	187.5342
283.67	190.8757
284.30	182.1781
285.00	187.8882
285.90	192.6830
286.10	188.9454
286.10	188.9454
287.40	191.9049
288.45	0.0000
290.67	166.4962
290.80	166.5070
291.72	172.8799
293.26	0.0000
293.70	184.0812
295.21	190.8496
295.21	190.8496

295.21	190.8496
295.96	190.9285
296.50	190.9852
297.23	191.0616
298.57	191.2022
299.80	191.3304
299.80	191.3304
300.09	191.3600
300.09	191.3600
300.09	191.3600
300.09	191.3600
300.12	191.3625
301.29	189.5898
302.84	161.2863
303.76	137.6367
303.91	137.6473
304.40	145.5974
304.40	145.5974
304.84	145.6311
306.84	159.2579
308.46	183.6633
311.98	154.4517
316.51	165.3341
318.01	180.7682
319.02	175.1211
319.41	167.4997
320.08	170.2170
323.87	174.2842
323.87	174.2842
323.87	174.2842
323.87	174.2842
325.23	158.4077
328.77	152.2837
333.44	163.8948
334.20	147.8828
334.20	147.8828
334.30	149.4978
338.28	181.6913
338.28	181.6913
338.28	181.6913
338.28	181.6913
338.32	181.6958
338.32	181.6958
338.32	181.6958
340.50	183.8306
340.57	183.8352
344.27	170.6053
345.85	180.4395
350.59	0.0000
351.07	152.3752
351.92	145.9515
351.92	145.9515
351.92	145.9515
355.39	0.0000
356.01	141.3679
364.48	136.0731
366.43	137.1802
367.43	131.3632
367.94	0.0000
369.80	138.3821
374.96	120.0267
383.85	152.1370
387.95	149.4554
388.63	153.4617
391.69	165.5730
391.69	165.5730
392.90	161.6967
398.62	140.2358
400.65	138.3722
401.10	147.3623
401.81	148.4052
402.60	146.4635
404.84	149.6027
410.95	125.0076
411.60	126.0431
413.65	146.1818
414.70	152.2598
415.30	142.2791

415.76	136.2955
417.63	0.0000
418.52	130.4396
423.70	144.8121
427.08	127.9023
427.89	137.0127
432.53	123.1527
433.93	112.1158
439.47	110.3545
439.56	110.3585
439.89	111.3857
443.98	113.6064
444.90	118.7239
445.03	118.7296
445.03	118.7296
445.03	118.7296
445.03	118.7296
453.90	113.0569
463.38	114.1775
468.07	78.5393
473.00	98.5406
475.06	107.8672
475.35	97.6058
476.78	84.2972
477.59	99.7494
477.96	100.7921
482.03	109.1961
484.57	87.6511
487.03	105.2834
490.36	0.0000
492.35	92.0561
497.08	103.6243
507.63	0.0000
510.53	0.0000
510.84	98.9637
511.00	98.9695
511.85	99.0009
511.85	99.0009
513.99	78.2222
513.99	78.2222
520.41	89.4469
520.65	90.9656
527.90	98.5508
528.96	0.0000
529.64	96.5169
529.87	0.0000
531.02	90.2685
537.32	95.7366
543.00	96.9908
546.56	0.0000
549.76	98.2857
552.65	89.9244
555.20	82.5951
563.23	96.6364
563.90	91.3477
568.70	102.1430
569.32	89.3956
569.50	89.3997
569.67	92.5989
573.80	102.3258
574.00	102.3328
574.64	98.0914
578.91	65.8475
579.30	0.0000
583.14	75.9246
585.48	65.9981
591.81	77.7605
592.07	77.7676
593.00	74.0369
595.88	69.8147
600.56	83.9109
602.52	0.0000
602.71	86.1250
602.71	86.1250
603.60	82.5608
604.41	75.4021
604.70	77.2044
609.31	86.3164

609.31	86.3164
609.31	86.3164
609.31	86.3164
610.33	82.7480
612.46	86.4082
614.37	73.8537
618.01	106.0462
621.84	75.8430
621.84	75.8430
631.29	84.7736
633.02	86.9961
633.10	87.0000
634.78	75.0779
635.90	84.9012
636.97	71.8652
645.85	79.7154
646.12	79.7226
656.30	73.0436
657.75	62.1161
657.90	0.0000
661.65	88.8983
661.65	88.8983
664.57	0.0000
666.33	89.0308
666.33	89.0308
675.00	86.9473
677.61	85.4846
685.20	86.6084
692.80	88.6582
695.00	102.5788
696.49	82.2859
696.49	82.2859
697.00	79.5245
697.49	76.7622
698.33	78.6326
698.50	78.6361
699.00	83.2745
702.63	89.8501
706.10	63.0541
706.58	0.0000
706.67	63.9926
709.31	82.6064
711.68	77.0931
713.82	61.3419
717.42	68.8511
720.50	68.4487
721.93	0.0000
722.20	67.0869
722.78	68.6962
722.78	68.6962
722.89	67.1001
722.95	67.1016
723.30	75.0980
724.18	83.1090
727.18	65.5854
733.00	72.1080
735.90	76.5431
739.58	61.8119
742.81	82.4946
744.21	82.5269
747.13	65.7033
751.79	92.1083
752.31	93.0623
753.82	76.1748
755.35	62.0952
756.15	62.1100
756.87	62.1234
763.93	53.3557
765.79	51.7667
766.42	50.1577
766.84	50.1642
776.49	80.5414
778.00	67.2327
778.57	67.2429
778.89	65.3557
783.80	51.2183
785.46	70.2211
792.07	61.9302

795.84	63.7626
796.30	68.5298
798.80	97.9667
801.93	73.5393
805.60	63.9343
810.29	79.3053
810.76	70.7149
815.85	66.9851
817.79	58.4037
818.51	67.9911
819.60	68.9692
826.30	70.0549
828.27	0.0000
831.60	68.2323
831.96	78.8102
834.83	74.0627
836.80	0.0000
846.75	50.1750
848.13	46.3330
856.28	0.0000
856.80	46.4395
860.37	87.9846
867.32	51.5567
867.82	54.8899
871.10	45.5539
873.19	51.4969
874.81	56.3787
875.33	0.0000
876.40	56.4011
879.36	43.7933
880.27	45.7502
880.51	45.7531
881.50	45.7646
883.24	56.5014
884.67	50.6744
889.25	54.6374
896.60	51.8074
898.02	59.6485
899.00	62.5977
903.28	58.7488
911.07	53.9594
911.07	53.9594
911.07	53.9594
919.63	47.1934
920.93	52.1255
925.00	43.3179
925.24	46.2742
926.50	44.3198
935.52	40.4703
937.48	62.2156
944.10	39.5662
946.00	41.5642
949.00	46.5468
962.29	40.8775
964.01	40.7523
966.15	40.7739
968.20	40.7940
969.11	40.8023
969.11	40.8023
969.11	40.8023
977.42	42.7359
980.50	44.4780
983.50	37.1485
989.30	47.0000
996.32	57.0939
1001.03	56.1549
1001.68	58.1687
1004.76	46.1675
1021.30	0.0000
1024.50	0.0000
1034.80	37.3944
1036.00	45.4926
1037.82	53.6017
1038.57	54.6218
1038.76	0.0000
1045.16	44.5747
1046.59	40.5355
1048.07	37.5074

1050.47	44.6284
1050.47	44.6284
1062.04	63.0495
1063.62	55.9511
1076.63	49.9909
1077.35	41.8375
1078.86	53.0791
1085.78	55.2041
1099.22	36.9126
1112.02	40.3801
1112.84	46.6209
1115.52	67.0328
1120.29	47.6775
1120.29	47.6775
1120.29	47.6775
1120.29	47.6775
1120.51	47.6794
1121.28	50.4834
1124.00	0.0000
1129.67	58.8323
1131.51	0.0000
1147.95	0.0000
1167.94	57.2312
1173.22	41.6683
1175.09	57.3163
1177.93	68.8198
1189.05	56.4368
1204.90	71.3009
1205.75	0.0000
1213.00	58.8164
1221.42	67.3333
1230.97	61.4400
1235.34	59.6859
1236.41	0.0000
1238.25	54.8945
1246.25	39.8765
1260.41	0.0000
1271.85	56.3254
1274.45	35.0880
1274.54	35.0880
1291.56	45.8730
1298.22	0.0000
1312.09	33.2037
1325.50	26.8453
1325.50	26.8453
1332.49	24.7304
1333.61	21.5096
1360.21	20.5369
1362.66	0.0000
1365.15	17.3099
1368.21	16.2372
1368.53	0.0000
1376.25	26.0186
1384.27	38.1558
1394.10	23.3076
1395.20	23.3119
1407.95	32.7136
1434.06	20.6595
1436.60	25.3671
1457.56	0.0000
1460.81	29.2506
1489.15	22.7586
1509.49	20.9358
1596.49	22.1245
1620.62	14.5438
1678.03	0.0000
1691.02	9.8064
1691.02	9.8064
1706.46	0.0000
1750.46	0.0000
1764.49	21.8220
1764.49	21.8220
1764.49	21.8220
1764.49	21.8220
1770.23	12.1616
1771.40	15.6390
1791.20	0.0000
1808.65	13.9805

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243457001

Total Uranium Activity	5.3285E+00	ug/g
Total Uranium Counting Unc.	3.1403E+00	ug/g
Total Uranium Tpu	1.6022E-06	ug/g
Total Uranium Mda	1.8516E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243457001
ANALYST	: MXR1	DETECTOR	: GAM05
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 13:58:02.37	SAMPLE ALQT:	111.113 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 1.062E+01
GROSS GAMMA ERROR (pCi/GRAM)	: 1.742E+00
GROSS GAMMA MDA (pCi/GRAM)	: 6.349E+00
GROSS GAMMA DLC (pCi/GRAM)	: 3.097E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:12:55.76

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492001.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 13:59:59.
Sample ID : G243492001 Sample quantity : 1.28660E+02 GRAM
Detector name : GAM12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.48 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.30*	94	540	1.20	126.08	122	9	1.31E-02	46.6	
2	3	74.60*	455	416	1.22	148.69	142	19	6.32E-02	8.8	3.12E+00
3	3	76.99	632	336	0.92	153.47	142	19	8.78E-02	6.1	
4	0	87.10*	237	324	1.31	173.70	171	6	3.29E-02	13.8	
5	0	89.08	74	369	1.09	177.67	177	6	1.03E-02	42.2	
6	0	92.63*	288	375	1.34	184.76	182	7	4.00E-02	13.4	
7	0	128.42	123	406	1.36	256.38	251	11	1.70E-02	33.0	
8	0	185.68*	187	352	1.15	370.96	366	10	2.60E-02	21.0	
9	0	209.25*	87	297	0.99	418.12	414	10	1.21E-02	38.8	
10	5	238.40*	1179	193	1.11	476.45	470	20	1.64E-01	3.6	1.67E+00
11	5	241.50*	288	274	1.78	482.65	470	20	4.01E-02	15.4	
12	0	270.46	105	206	1.29	540.60	535	11	1.46E-02	28.3	
13	0	295.04*	388	184	1.09	589.77	584	10	5.39E-02	8.4	
14	0	299.95	56	184	0.96	599.61	595	10	7.79E-03	47.2	
15	0	338.19*	241	163	1.13	676.12	671	12	3.35E-02	12.6	
16	0	351.59*	702	118	1.21	702.92	697	10	9.75E-02	4.8	
17	0	462.59	95	97	1.45	925.00	918	13	1.32E-02	23.7	
18	0	510.51*	168	128	1.43	1020.87	1013	16	2.33E-02	19.2	
19	0	582.86*	323	123	1.36	1165.62	1160	14	4.49E-02	9.4	
20	0	608.95*	538	77	1.41	1217.82	1212	14	7.47E-02	5.7	
21	0	661.09	139	88	1.23	1322.11	1318	10	1.93E-02	15.1	
22	0	726.85*	67	54	1.20	1453.68	1449	8	9.35E-03	23.1	
23	0	767.28	41	83	1.52	1534.54	1529	12	5.67E-03	46.9	
24	0	794.82	30	42	1.71	1589.64	1585	9	4.11E-03	43.8	
25	0	910.68*	279	26	1.49	1821.40	1816	13	3.88E-02	7.3	
26	3	963.89	61	41	2.29	1927.83	1921	24	8.44E-03	28.5	2.78E+00
27	3	968.38*	113	58	2.42	1936.80	1921	24	1.56E-02	17.9	
28	0	1119.81	116	58	1.99	2239.67	2230	18	1.61E-02	18.1	
29	0	1237.94	73	59	1.45	2475.95	2468	15	1.01E-02	26.0	
30	0	1378.00	34	32	2.29	2756.03	2746	16	4.73E-03	40.9	
31	0	1459.98*	886	13	2.04	2919.98	2911	16	1.23E-01	3.5	
32	0	1763.59*	99	4	2.33	3527.06	3518	17	1.38E-02	11.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 12:12:58

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 13:59:59
Sample ID : G243492001 Sample quantity : 128.66 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.48 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.130E+01	2.131E+00	3.971E-01	2.831E-02	53.638
NB-95	+	765.79	*	7.249E-02	6.819E-02	5.649E-02	4.132E-03	1.283
CD-109	+	88.03	*	3.375E+00	9.694E-01	1.150E+00	8.801E-02	2.934
SN-126	+	64.28		8.938E-01	8.422E-01	7.567E-01	1.063E-01	1.181
	+	86.94		1.375E+00	6.822E-01	5.250E-01	2.161E-01	2.619
	+	87.57	*	3.308E-01	9.500E-02	1.133E-01	8.631E-03	2.921
BA-137M	+	661.65	*	2.006E-01	6.178E-02	5.878E-02	3.811E-03	3.412
CS-137	+	661.65	*	2.120E-01	6.531E-02	6.214E-02	4.042E-03	3.412
TL-208		277.35		2.286E-01	3.464E-01	5.976E-01	6.259E-02	0.383
	+	510.84		8.097E-01	3.219E-01	1.864E-01	1.924E-02	4.345
	+	583.14	*	4.470E-01	8.986E-02	5.173E-02	3.701E-03	8.642
		860.37		4.301E-01	3.160E-01	5.674E-01	4.958E-02	0.758
BI-211		72.87		7.084E+00	2.941E+00	5.229E+00	3.508E-01	1.355
	+	351.07	*	4.207E+00	4.839E-01	3.049E-01	1.917E-02	13.799
PB-212	+	74.81		2.711E+00	5.727E-01	4.937E-01	5.707E-02	5.491
	+	77.11		2.129E+00	2.993E-01	2.802E-01	1.940E-02	7.598
	+	87.30		1.530E+00	4.652E-01	5.752E-01	7.225E-02	2.660
	+	238.63	*	1.537E+00	1.549E-01	8.996E-02	6.388E-03	17.087
	+	300.09		1.129E+00	1.071E+00	1.137E+00	9.283E-02	0.993
PO-212	+	74.81		2.711E+00	5.727E-01	4.937E-01	5.707E-02	5.491
	+	77.11		2.129E+00	2.993E-01	2.802E-01	1.940E-02	7.598
	+	87.30		1.530E+00	4.652E-01	5.752E-01	7.225E-02	2.660
		115.19		-1.992E+00	3.373E+00	5.393E+00	3.421E-01	-0.369
	+	238.63	*	1.537E+00	1.549E-01	8.996E-02	6.388E-03	17.087
	+	300.09		1.129E+00	1.071E+00	1.137E+00	9.283E-02	0.993
BI-214	+	609.31	*	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
	+	1120.29		1.570E+00	5.854E-01	4.580E-01	4.160E-02	3.428
	+	1764.49		1.849E+00	4.516E-01	2.255E-01	1.336E-02	8.200
PB-214	+	74.81		4.671E+00	9.502E-01	8.507E-01	8.555E-02	5.491
	+	77.11		3.649E+00	5.837E-01	4.803E-01	4.944E-02	7.598
	+	87.30		2.621E+00	7.793E-01	9.854E-01	1.067E-01	2.660
	+	241.98		2.260E+00	7.183E-01	5.418E-01	4.264E-02	4.171
	+	295.21		1.370E+00	2.569E-01	1.996E-01	1.684E-02	6.867
	+	351.92	*	1.463E+00	1.848E-01	1.086E-01	8.875E-03	13.471

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.671E+00	9.502E-01	8.507E-01	8.555E-02	5.491
	+	77.11		3.649E+00	5.837E-01	4.803E-01	4.944E-02	7.598
	+	87.30		2.621E+00	7.793E-01	9.854E-01	1.067E-01	2.660
	+	241.98		2.260E+00	7.183E-01	5.418E-01	4.264E-02	4.171
	+	295.21		1.370E+00	2.569E-01	1.996E-01	1.684E-02	6.867
	+	351.92	*	1.463E+00	1.848E-01	1.086E-01	8.875E-03	13.471
PO-216	+	74.81		2.711E+00	5.727E-01	4.937E-01	5.707E-02	5.491
	+	77.11		2.129E+00	2.993E-01	2.802E-01	1.940E-02	7.598
	+	87.30		1.530E+00	4.652E-01	5.752E-01	7.225E-02	2.660
	+	238.63	*	1.537E+00	1.549E-01	8.996E-02	6.388E-03	17.087
	+	300.09		1.129E+00	1.071E+00	1.137E+00	9.283E-02	0.993
PO-218	+	74.81		4.671E+00	9.502E-01	8.507E-01	8.555E-02	5.491
	+	77.11		3.649E+00	5.837E-01	4.803E-01	4.944E-02	7.598
	+	87.30		2.621E+00	7.793E-01	9.854E-01	1.067E-01	2.660
	+	241.98		2.260E+00	7.183E-01	5.418E-01	4.264E-02	4.171
	+	295.21		1.370E+00	2.569E-01	1.996E-01	1.684E-02	6.867
	+	351.92	*	1.463E+00	1.848E-01	1.086E-01	8.875E-03	13.471
RA-224	+	240.98	*	4.285E+00	1.341E+00	1.024E+00	5.648E-02	4.185
RA-226	+	609.31	*	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
	+	1120.29		1.570E+00	5.854E-01	4.580E-01	4.160E-02	3.428
	+	1764.49		1.849E+00	4.516E-01	2.255E-01	1.336E-02	8.200
AC-228	+	338.32		1.591E+00	7.627E-01	3.359E-01	1.369E-01	4.737
	+	911.07	*	1.724E+00	3.141E-01	1.829E-01	2.008E-02	9.430
	+	969.11		1.224E+00	5.222E-01	3.169E-01	7.307E-02	3.862
RA-228	+	338.32		1.591E+00	7.627E-01	3.359E-01	1.369E-01	4.737
	+	911.07	*	1.724E+00	3.141E-01	1.829E-01	2.008E-02	9.430
	+	969.11		1.224E+00	5.222E-01	3.169E-01	7.307E-02	3.862
TH-228	+	74.81		2.758E+00	5.233E-01	5.022E-01	3.462E-02	5.491
	+	77.11		2.165E+00	3.045E-01	2.850E-01	1.973E-02	7.598
	+	87.30		1.556E+00	4.469E-01	5.851E-01	4.447E-02	2.660
	+	238.63	*	1.563E+00	1.576E-01	9.150E-02	6.497E-03	17.087
	+	300.09		1.149E+00	1.279E+00	1.157E+00	6.815E-01	0.993
TH-230	+	609.31	*	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
	+	1120.29		1.570E+00	5.854E-01	4.579E-01	4.160E-02	3.428
	+	1764.49		1.849E+00	4.516E-01	2.255E-01	1.336E-02	8.200
TH-232	+	338.32		1.591E+00	4.116E-01	3.359E-01	1.903E-02	4.737
	+	911.07	*	1.724E+00	3.141E-01	1.829E-01	2.008E-02	9.430
	+	969.11		1.224E+00	5.222E-01	3.169E-01	7.307E-02	3.862
TH-234	+	63.29	*	2.258E+00	2.139E+00	2.007E+00	3.417E-01	1.125
	+	92.38		2.605E+00	8.314E-01	6.620E-01	1.157E-01	3.935
U-234	+	609.31	*	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
	+	1120.29		1.570E+00	5.854E-01	4.579E-01	4.160E-02	3.428
	+	1764.49		1.849E+00	4.516E-01	2.255E-01	1.336E-02	8.200
NP-237	+	86.50	*	9.713E-01	3.435E-01	3.885E-01	8.534E-02	2.500
		95.87		3.189E-01	1.007E+00	1.517E+00	3.661E-01	0.210
U-238	+	63.29	*	2.258E+00	2.139E+00	2.007E+00	3.417E-01	1.125
	+	92.38		2.605E+00	7.210E-01	6.620E-01	4.819E-02	3.935
AM-243	+	74.67	*	4.395E-01	8.327E-02	8.028E-02	5.455E-03	5.475
	+	86.72		3.643E+01	1.046E+01	1.463E+01	1.106E+00	2.489

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-3.871E-01	3.530E+00	5.764E+00	3.631E-01	-0.067
		142.18		7.621E+00	1.668E+01	2.763E+01	1.564E+00	0.276
ANH-511	+	511.00	*	1.749E-01	6.800E-02	4.026E-02	2.454E-03	4.344

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-2.940E-01	3.633E-01	5.336E-01	3.672E-02	-0.551
NA-22		1274.54	*	-1.372E-02	4.108E-02	6.491E-02	4.180E-03	-0.211
NA-24		1368.53	*	-7.426E-01	4.108E-02	Half-Life too short		
AL-26		1129.67		-2.785E-01	1.589E+00	2.593E+00	1.580E-01	-0.107
		1808.65	*	-3.817E-03	2.545E-02	4.062E-02	2.331E-03	-0.094
TI-44		67.85		-1.893E-02	4.699E-02	6.977E-02	4.541E-03	-0.271
	+	78.38	*	3.929E-01	5.525E-02	7.167E-02	5.013E-03	5.482
SC-46		889.25	*	2.428E-02	3.688E-02	6.387E-02	5.294E-03	0.380
	+	1120.51		2.732E-01	1.002E-01	1.334E-01	8.291E-03	2.047
V-48		944.10		9.457E-01	9.303E-01	1.656E+00	1.330E-01	0.571
		983.50	*	-2.122E-02	7.614E-02	1.184E-01	9.121E-03	-0.179
		1312.09		-1.810E-03	7.892E-02	1.290E-01	8.755E-03	-0.014
CR-51		320.08	*	-2.406E-01	3.817E-01	6.090E-01	3.872E-02	-0.395
MN-52		744.21		-3.953E-02	2.698E-01	4.373E-01	3.123E-02	-0.090
		848.13		-3.698E+00	8.395E+00	1.300E+01	1.036E+00	-0.284
		935.52		2.553E-01	3.575E-01	6.129E-01	4.963E-02	0.416
		1246.25		-2.574E+00	9.438E+00	1.436E+01	8.847E-01	-0.179
		1333.61		4.621E+00	6.730E+00	1.187E+01	8.290E-01	0.389
		1434.06	*	1.121E-01	2.726E-01	4.717E-01	3.240E-02	0.238
MN-54		834.83	*	1.399E-03	3.839E-02	6.273E-02	4.931E-03	0.022
CO-56		846.75	*	-2.004E-02	3.767E-02	5.762E-02	4.584E-03	-0.348
		977.42		6.705E-01	3.041E+00	4.872E+00	3.779E-01	0.138
		1037.82		-2.993E-01	3.038E-01	4.552E-01	3.516E-02	-0.657
		1175.09		-3.210E-01	2.348E+00	3.839E+00	2.116E-01	-0.084
	+	1238.25		2.819E-01	1.478E-01	1.963E-01	1.263E-02	1.436
		1360.21		-1.428E-01	9.117E-01	1.452E+00	1.011E-01	-0.098
		1771.40		-5.700E-01	3.161E-01	3.705E-01	2.185E-02	-1.538
CO-57		122.06	*	-2.208E-02	2.365E-02	3.623E-02	2.265E-03	-0.609
		136.48		-3.509E-02	1.927E-01	3.108E-01	2.090E-02	-0.113
CO-58		810.76	*	-3.229E-02	3.850E-02	5.733E-02	4.411E-03	-0.563
FE-59		142.65		1.414E+00	2.701E+00	4.474E+00	2.528E-01	0.316
		192.34		4.770E-02	9.072E-01	1.450E+00	1.675E-01	0.033
		1099.22	*	-1.652E-02	8.882E-02	1.451E-01	1.072E-02	-0.114
		1291.56		-4.370E-02	1.141E-01	1.782E-01	1.435E-02	-0.245
CO-60		1173.22		1.908E-02	4.632E-02	7.947E-02	4.368E-03	0.240
		1332.49	*	2.617E-02	4.080E-02	7.167E-02	5.006E-03	0.365
ZN-65		1115.52	*	5.192E-02	1.007E-01	1.540E-01	9.685E-03	0.337
GE-68		1077.35	*	1.680E-02	1.285E+00	2.145E+00	1.446E-01	0.008
AS-73		53.44	*	-4.210E-01	7.964E-01	1.310E+00	8.457E-02	-0.321
AS-74		595.88	*	-1.428E-03	9.751E-02	1.630E-01	1.038E-02	-0.009
		634.78		-1.106E-01	3.737E-01	6.073E-01	3.914E-02	-0.182

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-2.647E+00	5.068E+00	7.464E+00	6.516E-01	-0.355
		96.73		4.718E-02	8.318E-01	1.239E+00	1.569E-01	0.038
		121.11		-1.214E-01	1.307E-01	2.003E-01	1.907E-02	-0.606
		136.00		-1.227E-02	3.672E-02	5.881E-02	3.473E-03	-0.209
		198.60		-3.388E-02	1.726E+00	2.742E+00	1.843E-01	-0.012
		264.65	*	-2.552E-02	4.404E-02	6.214E-02	3.522E-03	-0.411
		279.53		1.942E-03	1.029E-01	1.722E-01	1.056E-02	0.011
		303.91		1.954E-01	2.072E+00	3.056E+00	2.894E-01	0.064
		400.65		-3.017E-02	2.386E-01	3.857E-01	3.447E-02	-0.078
BR-77	+	87.88		1.290E+03	3.705E+02	5.892E+02	4.505E+01	2.190
		200.40		1.208E+02	2.815E+02	4.570E+02	2.424E+01	0.264
	+	239.00		4.380E+02	3.953E+01	6.602E+01	3.636E+00	6.634
		249.79		-2.450E+01	1.084E+02	1.792E+02	9.952E+00	-0.137
		281.68		-6.532E+01	1.537E+02	2.513E+02	1.420E+01	-0.260
		297.23		1.549E+02	1.394E+02	1.681E+02	9.539E+00	0.922
		303.76		4.442E+01	3.106E+02	4.599E+02	2.613E+01	0.097
		439.47		2.188E+02	2.447E+02	4.219E+02	2.430E+01	0.519
		484.57		-1.992E+02	4.090E+02	6.317E+02	3.779E+01	-0.315
		520.65	*	1.318E+01	1.810E+01	3.067E+01	1.881E+00	0.430
		574.64		3.200E+01	3.682E+02	6.217E+02	3.923E+01	0.051
		578.91		-1.136E+02	1.766E+02	2.404E+02	1.520E+01	-0.472
		585.48		1.032E+03	3.348E+02	6.148E+02	3.897E+01	1.679
		755.35		1.270E+02	2.841E+02	4.849E+02	3.507E+01	0.262
		817.79		2.487E+01	2.236E+02	3.690E+02	2.851E+01	0.067
SR-82		698.33		-4.186E+01	3.524E+01	5.156E+01	3.494E+00	-0.812
		776.49	*	-9.405E-02	3.625E-01	5.784E-01	4.280E-02	-0.163
		1395.20		-1.039E+01	1.191E+01	1.692E+01	1.172E+00	-0.614
RB-83		520.41	*	1.308E-02	6.992E-02	1.135E-01	6.961E-03	0.115
		529.64		3.608E-02	1.170E-01	1.912E-01	1.179E-02	0.189
		552.65		-1.852E-02	1.866E-01	3.117E-01	1.946E-02	-0.059
RB-84		881.50	*	7.433E-03	6.641E-02	1.090E-01	8.968E-03	0.068
KR-85		513.99	*	8.611E+00	7.421E+00	1.164E+01	7.110E-01	0.740
SR-85		513.99	*	4.507E-02	3.884E-02	6.095E-02	3.722E-03	0.740
RB-86		1076.63	*	-3.067E-01	8.640E-01	1.392E+00	9.399E-02	-0.220
Y-88		898.02		6.641E-03	4.125E-02	6.787E-02	5.701E-03	0.098
		1836.01	*	5.601E-03	3.260E-02	5.572E-02	3.137E-03	0.101
ZR-88		392.90	*	-2.944E-02	3.016E-02	4.580E-02	2.512E-03	-0.643
Y-91		1204.90	*	-8.406E+00	1.961E+01	3.112E+01	1.799E+00	-0.270
NB-94		702.63	*	1.452E-02	3.389E-02	5.784E-02	3.939E-03	0.251
		871.10		1.320E-02	3.196E-02	5.410E-02	4.407E-03	0.244
NB-95M		235.69	*	1.361E-01	1.355E-01	2.134E-01	1.556E-02	0.638
ZR-95		724.18		1.432E-01	1.117E-01	1.806E-01	1.424E-02	0.793
		756.15	*	1.256E-02	6.890E-02	1.150E-01	9.500E-03	0.109
NB-97		657.90	*	9.582E-01	6.890E-02	Half-Life too short		
		1024.50		-9.231E+00	6.890E-02	Half-Life too short		
ZR-97		254.15		-3.769E+01	6.890E-02	Half-Life too short		
		355.39		-3.049E+00	6.890E-02	Half-Life too short		
		507.63	*	2.910E+01	6.890E-02	Half-Life too short		
		602.52		-2.899E+01	6.890E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1021.30		-3.080E+01	6.890E-02	Half-Life too short		
		1147.95		-1.296E+01	6.890E-02	Half-Life too short		
		1362.66		-2.217E+00	6.890E-02	Half-Life too short		
		1750.46		-3.642E+00	6.890E-02	Half-Life too short		
MO-99		140.51		-5.002E+01	4.412E+01	6.460E+01	1.739E+01	-0.774
		181.06		2.364E+01	2.922E+01	4.343E+01	7.359E+00	0.544
		366.43		1.366E+02	1.289E+02	2.261E+02	1.264E+01	0.604
		739.58	*	-4.273E+00	1.843E+01	2.967E+01	4.266E+00	-0.144
		778.00		-1.989E+00	4.931E+01	8.047E+01	5.965E+00	-0.025
TC-99M		140.51	*	-1.015E+13	4.931E+01	Half-Life too short		
RH-101	+	127.23		8.012E-02	5.310E-02	5.135E-02	3.116E-03	1.560
		198.01	*	8.606E-03	3.068E-02	4.951E-02	2.619E-03	0.174
		325.23		-1.763E-01	2.278E-01	3.609E-01	2.050E-02	-0.489
RH-102		418.52		-4.083E-02	2.891E-01	4.655E-01	2.626E-02	-0.088
		475.06	*	-5.609E-03	2.982E-02	4.734E-02	2.811E-03	-0.118
		631.29		2.557E-02	4.856E-02	8.452E-02	5.442E-03	0.302
		697.49		-4.702E-02	7.432E-02	1.150E-01	7.783E-03	-0.409
	+	766.84		1.788E-01	1.682E-01	2.155E-01	1.578E-02	0.830
		1046.59		-4.755E-02	1.181E-01	1.900E-01	1.346E-02	-0.250
		1112.84		-3.854E-02	2.634E-01	3.697E-01	2.333E-02	-0.104
RU-103		497.08	*	-4.508E-02	4.133E-02	5.934E-02	7.570E-03	-0.760
	+	610.33		1.569E+01	3.031E+00	3.194E+00	4.999E-01	4.912
RH-106	+	511.85		8.768E-01	3.409E-01	4.470E-01	2.726E-02	1.962
		621.84	*	1.299E-01	3.090E-01	5.317E-01	6.410E-02	0.244
		1050.47		5.425E-01	2.257E+00	3.858E+00	2.718E-01	0.141
RU-106	+	511.85		8.768E-01	3.409E-01	4.470E-01	2.726E-02	1.962
		621.84	*	1.299E-01	3.087E-01	5.317E-01	3.414E-02	0.244
		1050.47		5.425E-01	2.257E+00	3.858E+00	2.718E-01	0.141
AG-108M		433.93	*	2.013E-03	3.151E-02	5.135E-02	3.200E-03	0.039
		614.37		1.166E-02	4.034E-02	6.046E-02	4.145E-03	0.193
		722.95		-3.280E-03	4.534E-02	6.418E-02	4.741E-03	-0.051
AG-110M		657.75	*	4.708E-02	3.514E-02	5.868E-02	3.999E-03	0.802
		677.61		2.990E-02	3.089E-01	5.158E-01	3.572E-02	0.058
		706.67		8.458E-02	2.244E-01	3.808E-01	2.719E-02	0.222
		763.93		1.646E-01	1.616E-01	2.603E-01	1.974E-02	0.632
		884.67		-2.687E-02	4.815E-02	7.319E-02	6.252E-03	-0.367
		937.48		-4.328E-02	1.231E-01	1.917E-01	1.613E-02	-0.226
		1384.27		7.228E-02	2.014E-01	2.997E-01	2.169E-02	0.241
IN-111		171.28		6.083E-01	1.597E+00	2.610E+00	1.343E-01	0.233
		245.39	*	5.394E-01	1.689E+00	2.572E+00	1.423E-01	0.210
IN-113M		391.69	*	-4.756E-02	4.382E-02	6.601E-02	3.886E-03	-0.720
SN-113		391.69	*	-4.756E-02	4.382E-02	6.601E-02	3.886E-03	-0.720
IN-114M		190.27	*	-8.757E-04	1.981E-01	2.808E-01	1.473E-02	-0.003
CD-115		260.90		-5.560E+01	2.134E+02	3.535E+02	1.977E+01	-0.157
		492.35		1.910E+01	6.208E+01	1.023E+02	6.156E+00	0.187
		527.90	*	3.777E+00	2.070E+01	3.354E+01	2.066E+00	0.113
SN-117M		156.02		-1.188E+00	2.316E+00	3.645E+00	1.946E-01	-0.326
		158.56	*	1.137E-02	5.391E-02	8.789E-02	4.643E-03	0.129
SB-122		563.90	*	1.452E+00	3.452E+00	5.966E+00	3.746E-01	0.243

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		692.80		9.384E+00	7.185E+01	1.201E+02	8.084E+00	0.078
I-123		159.00	*	2.427E+00	7.185E+01	Half-Life too short		
		528.96		2.239E+03	7.185E+01	Half-Life too short		
TE-123M		159.00	*	1.004E-03	2.512E-02	4.059E-02	2.175E-03	0.025
I-124		602.71	*	-5.672E-01	1.008E+00	1.374E+00	8.765E-02	-0.413
		722.78		-5.585E-01	6.555E+00	9.264E+00	6.459E-01	-0.060
		1325.50		-2.338E+01	4.149E+01	6.223E+01	4.304E+00	-0.376
		1376.25		7.002E+01	4.916E+01	9.142E+01	6.350E+00	0.766
		1509.49		3.026E+01	2.298E+01	4.353E+01	2.929E+00	0.695
		1691.02		8.045E-01	4.556E+00	7.851E+00	4.873E-01	0.102
SB-124		602.71		-2.434E-02	4.325E-02	5.894E-02	3.762E-03	-0.413
		645.85		1.887E-01	5.247E-01	8.919E-01	6.365E-02	0.212
		709.31		-1.865E+00	3.001E+00	4.706E+00	3.230E-01	-0.396
		713.82		-3.016E-01	1.665E+00	2.706E+00	2.942E-01	-0.111
		722.78		-3.474E-02	4.077E-01	5.762E-01	4.149E-02	-0.060
	+	968.20		1.289E+01	4.735E+00	7.111E+00	5.573E-01	1.812
		1045.16		1.425E+00	2.502E+00	4.400E+00	3.124E-01	0.324
		1325.50		-1.553E+00	2.756E+00	4.134E+00	2.860E-01	-0.376
		1368.21		-4.538E-01	1.810E+00	2.503E+00	3.123E-01	-0.181
		1436.60		-2.077E-01	3.413E+00	5.494E+00	3.772E-01	-0.038
		1691.02	*	1.180E-02	6.685E-02	1.152E-01	7.686E-03	0.102
SB-125		427.89	*	-2.567E-02	8.943E-02	1.421E-01	8.446E-03	-0.181
	+	463.38		8.961E-01	4.293E-01	5.144E-01	3.515E-02	1.742
		600.56		3.312E-03	1.652E-01	2.768E-01	1.996E-02	0.012
		635.90		7.672E-02	2.598E-01	4.429E-01	3.256E-02	0.173
TE-125M		109.28	*	5.259E+00	8.558E+00	1.446E+01	1.248E+00	0.364
I-126		388.63		1.866E-01	2.133E-01	3.689E-01	2.026E-02	0.506
		666.33	*	1.689E-02	2.290E-01	3.325E-01	2.168E-02	0.051
		753.82		5.294E-01	1.559E+00	2.638E+00	1.905E-01	0.201
SB-126		223.80		-1.202E+00	4.228E+00	7.081E+00	3.847E-01	-0.170
		278.60		3.090E+00	2.518E+00	4.464E+00	2.520E-01	0.692
	+	296.50		1.523E+01	2.692E+00	3.856E+00	2.188E-01	3.949
		414.70		1.246E-01	8.126E-02	1.454E-01	8.171E-03	0.857
		415.30		7.072E+00	6.772E+00	1.179E+01	6.628E-01	0.600
		555.20		5.317E-01	4.400E+00	7.466E+00	4.668E-01	0.071
		573.80		2.732E-01	1.141E+00	1.948E+00	1.229E-01	0.140
		593.00		2.994E-01	9.641E-01	1.653E+00	1.051E-01	0.181
		656.30		2.509E+00	3.743E+00	5.848E+00	3.787E-01	0.429
		666.33		7.091E-03	9.611E-02	1.396E-01	9.100E-03	0.051
		675.00		6.162E-01	2.254E+00	3.816E+00	2.514E-01	0.161
		695.00		1.357E-02	8.389E-02	1.405E-01	9.487E-03	0.097
		697.00		8.069E-03	2.776E-01	4.601E-01	3.113E-02	0.018
		720.50	*	1.468E-02	1.663E-01	2.515E-01	1.749E-02	0.058
		856.80		-4.097E-01	5.579E-01	8.431E-01	6.773E-02	-0.486
		989.30		2.589E-02	1.355E+00	2.180E+00	1.668E-01	0.012
		1034.80		1.372E+00	8.909E+00	1.515E+01	1.092E+00	0.091
		1213.00		-4.967E+00	4.996E+00	7.354E+00	4.306E-01	-0.675
SB-127		61.10		2.825E+01	8.125E+01	1.258E+02	1.283E+01	0.224
		252.40		3.300E+00	5.739E+00	9.662E+00	4.027E+00	0.341

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		290.80		-1.658E+01	3.217E+01	4.530E+01	4.444E+00	-0.366
		411.60		-1.175E+01	1.729E+01	2.669E+01	3.943E+00	-0.440
		444.90		-1.934E-01	1.351E+01	2.185E+01	2.492E+00	-0.009
		473.00		1.048E+00	2.338E+00	3.894E+00	4.611E-01	0.269
		543.00		8.144E+00	2.188E+01	3.784E+01	5.152E+00	0.215
		603.60		-1.341E+00	1.727E+01	2.490E+01	2.912E+00	-0.054
		685.20	*	7.708E-02	2.002E+00	3.325E+00	3.545E-01	0.023
		698.50		-2.456E+01	2.149E+01	3.116E+01	4.784E+00	-0.788
		722.20		-9.320E+00	4.591E+01	6.388E+01	6.781E+00	-0.146
		783.80		4.411E+00	4.990E+00	8.758E+00	1.070E+00	0.504
XE-127		57.60		-2.859E+00	5.845E+00	9.725E+00	6.146E-01	-0.294
		145.22		1.069E-02	6.703E-01	1.084E+00	6.058E-02	0.010
		172.10		6.427E-02	1.214E-01	1.997E-01	1.028E-02	0.322
		202.84	*	2.703E-02	4.676E-02	7.643E-02	4.064E-03	0.354
		374.96		-3.815E-02	1.942E-01	3.142E-01	1.746E-02	-0.121
I-131		80.18		5.360E-01	5.305E+00	8.005E+00	5.754E-01	0.067
		284.30		8.965E-01	1.702E+00	2.921E+00	1.852E-01	0.307
		364.48	*	-2.209E-02	1.315E-01	2.136E-01	1.349E-02	-0.103
		636.97		9.160E-01	1.767E+00	3.061E+00	2.173E-01	0.299
		722.89		-6.953E-01	9.043E+00	1.279E+01	9.031E-01	-0.054
TE-132		49.72		1.182E+01	2.622E+01	4.551E+01	4.513E+00	0.260
		111.76		1.461E+01	4.282E+01	7.144E+01	7.025E+00	0.205
		116.30		-3.647E+01	4.010E+01	6.291E+01	6.149E+00	-0.580
		228.16	*	-1.476E-01	9.410E-01	1.582E+00	2.317E-01	-0.093
BA-133		53.15		-2.114E+00	3.387E+00	5.550E+00	3.588E-01	-0.381
		79.62		8.110E-01	1.246E+00	1.925E+00	2.772E-01	0.421
		81.00		-1.120E-01	9.783E-02	1.359E-01	2.057E-02	-0.824
		276.40		1.832E-01	3.467E-01	5.770E-01	7.439E-02	0.318
		302.84		1.014E-01	1.387E-01	2.146E-01	2.489E-02	0.472
		356.01	*	-9.799E-03	4.677E-02	6.622E-02	7.598E-03	-0.148
		383.85		-3.147E-02	2.680E-01	4.349E-01	4.664E-02	-0.072
I-133	+	510.53		8.575E+00	2.680E-01	Half-Life too short		
		529.87	*	3.687E-03	2.680E-01	Half-Life too short		
		706.58		8.600E-01	2.680E-01	Half-Life too short		
		856.28		-4.732E+00	2.680E-01	Half-Life too short		
		875.33		-2.809E-01	2.680E-01	Half-Life too short		
		1236.41		6.157E+00	2.680E-01	Half-Life too short		
		1298.22		8.889E-01	2.680E-01	Half-Life too short		
CS-134		475.35		1.837E-01	1.935E+00	3.139E+00	1.864E-01	0.059
		563.23		2.282E-01	3.659E-01	6.402E-01	4.091E-02	0.356
		569.32		1.417E-02	1.996E-01	3.308E-01	2.135E-02	0.043
		604.70		1.895E-03	3.323E-02	4.864E-02	3.120E-03	0.039
	+	795.84	*	5.933E-02	5.220E-02	8.498E-02	6.479E-03	0.698
		801.93		-5.318E-01	4.206E-01	5.888E-01	4.508E-02	-0.903
		1038.57		-2.163E+00	3.731E+00	5.873E+00	4.211E-01	-0.368
		1167.94		-6.330E-01	2.489E+00	4.023E+00	2.242E-01	-0.157
		1365.15		-5.945E-01	1.085E+00	1.615E+00	1.201E-01	-0.368
CS-135		268.24	*	2.200E-01	1.593E-01	2.570E-01	1.933E-02	0.856
I-135		288.45		-3.927E+12	1.593E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		417.63		-7.463E+11	1.593E-01	Half-Life too short		
		546.56		9.963E+11	1.593E-01	Half-Life too short		
		836.80		2.108E+12	1.593E-01	Half-Life too short		
		1038.76		-1.356E+12	1.593E-01	Half-Life too short		
		1124.00		1.198E+12	1.593E-01	Half-Life too short		
		1131.51		2.514E+11	1.593E-01	Half-Life too short		
		1260.41	*	-1.449E+10	1.593E-01	Half-Life too short		
		1457.56		1.089E+14	1.593E-01	Half-Life too short		
		1678.03		4.537E+11	1.593E-01	Half-Life too short		
		1706.46		-3.025E+12	1.593E-01	Half-Life too short		
		1791.20		7.599E+11	1.593E-01	Half-Life too short		
CS-136		66.91		-4.898E-01	8.878E-01	1.301E+00	1.868E-01	-0.376
	+	86.29		4.788E+00	1.449E+00	2.176E+00	2.642E-01	2.200
		153.22		5.684E-01	6.857E-01	1.149E+00	7.940E-02	0.495
		163.89		3.784E-01	1.102E+00	1.803E+00	1.219E-01	0.210
		176.55		-2.060E-01	3.850E-01	5.997E-01	3.578E-02	-0.344
		273.65		-7.059E-01	5.215E-01	6.885E-01	4.455E-02	-1.025
		340.57		2.756E-01	1.330E-01	2.248E-01	1.358E-02	1.226
		818.51		-8.047E-03	8.027E-02	1.297E-01	1.004E-02	-0.062
		1048.07	*	-6.044E-02	1.188E-01	1.888E-01	1.419E-02	-0.320
		1235.34		1.205E+00	8.317E-01	1.347E+00	1.366E-01	0.895
CE-139		165.85	*	1.125E-03	2.901E-02	4.676E-02	2.396E-03	0.024
BA-140		162.64		1.975E-01	7.605E-01	1.241E+00	7.430E-02	0.159
		304.84		5.005E-02	1.392E+00	2.043E+00	5.569E-01	0.025
		423.70		-9.168E-01	2.120E+00	3.304E+00	1.049E+00	-0.277
		537.32	*	-1.761E-01	2.667E-01	4.159E-01	1.356E-01	-0.423
LA-140		328.77		3.495E-01	3.321E-01	5.784E-01	3.694E-02	0.604
		432.53		1.968E+00	2.154E+00	3.726E+00	2.361E-01	0.528
		487.03		1.862E-01	1.434E-01	2.539E-01	1.710E-02	0.733
		751.79		3.372E-01	1.884E+00	3.144E+00	2.604E-01	0.107
		815.85		-5.159E-02	3.399E-01	5.461E-01	4.809E-02	-0.094
		867.82		-5.829E-01	1.519E+00	2.366E+00	2.035E-01	-0.246
		919.63		4.699E-01	2.760E+00	4.546E+00	4.691E-01	0.103
		925.24		6.638E-01	1.106E+00	1.908E+00	1.668E-01	0.348
		1596.49	*	-3.207E-02	8.404E-02	1.317E-01	8.574E-03	-0.244
CE-141		145.44	*	-5.951E-03	6.042E-02	9.720E-02	5.659E-03	-0.061
CE-143		57.37		-1.355E-03	6.042E-02	Half-Life too short		
		231.56		2.391E-03	6.042E-02	Half-Life too short		
		293.26	*	2.365E-03	6.042E-02	Half-Life too short		
	+	350.59		8.986E-02	6.042E-02	Half-Life too short		
		490.36		-4.430E-03	6.042E-02	Half-Life too short		
		664.57		2.237E-03	6.042E-02	Half-Life too short		
		721.93		-8.221E-04	6.042E-02	Half-Life too short		
CE-144		80.11		3.084E-01	2.075E+00	3.139E+00	2.228E-01	0.098
		133.54	*	1.360E-01	1.937E-01	3.106E-01	4.421E-02	0.438
PM-144		476.78		-1.579E-02	7.202E-02	1.141E-01	8.061E-03	-0.138
		618.01		2.320E-02	3.138E-02	5.521E-02	3.717E-03	0.420
		696.49	*	1.431E-03	3.282E-02	5.447E-02	3.685E-03	0.026
		778.57		-1.330E-01	2.047E+00	3.331E+00	2.472E-01	-0.040

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PR-144		696.49	*	9.705E-02	2.227E+00	3.695E+00	2.498E-01	0.026
		1489.15		-8.669E+00	1.272E+01	1.835E+01	1.243E+00	-0.472
PM-146		453.90	*	1.324E-02	4.076E-02	6.753E-02	5.839E-03	0.196
		633.02		-6.603E-02	1.301E+00	2.158E+00	7.969E-01	-0.031
		735.90		2.138E-01	1.578E-01	2.694E-01	7.590E-02	0.794
		747.13		1.679E-02	8.490E-02	1.421E-01	1.875E-02	0.118
ND-147		91.11		1.593E+00	3.926E-01	5.699E-01	4.673E-02	2.796
		319.41		-1.316E+00	3.566E+00	5.781E+00	3.288E-01	-0.228
		439.89		3.820E+00	6.327E+00	1.071E+01	6.171E-01	0.357
		531.02	*	3.413E-02	6.801E-01	1.090E+00	1.492E-01	0.031
PM-149		285.90	*	1.929E+01	1.610E+02	2.707E+02	3.823E+01	0.071
EU-152		121.78		-8.198E-02	6.939E-02	1.047E-01	8.331E-03	-0.783
		244.69		-2.354E-02	3.270E-01	4.847E-01	2.681E-02	-0.049
		344.27	*	-3.843E-03	1.013E-01	1.461E-01	9.365E-03	-0.026
		443.98		1.450E-01	9.181E-01	1.504E+00	8.699E-02	0.096
		778.89		-1.820E-02	2.399E-01	3.901E-01	2.894E-02	-0.047
		867.32		-4.712E-01	8.154E-01	1.242E+00	1.008E-01	-0.379
	+	964.01		7.601E-01	4.377E-01	6.035E-01	4.750E-02	1.259
		1085.78		-2.732E-01	3.939E-01	6.104E-01	4.055E-02	-0.448
		1112.02		-8.855E-02	3.698E-01	5.122E-01	3.238E-02	-0.173
		1407.95		2.857E-01	2.053E-01	3.844E-01	2.655E-02	0.743
GD-153		69.67		8.821E-01	1.659E+00	2.559E+00	1.683E-01	0.345
		83.37		1.089E+01	1.642E+01	2.328E+01	1.703E+00	0.468
		97.43	*	-4.920E-02	8.230E-02	1.256E-01	8.736E-03	-0.392
		103.18		4.019E-02	9.967E-02	1.674E-01	1.119E-02	0.240
EU-154		123.07		-2.587E-03	5.189E-02	7.566E-02	7.311E-03	-0.034
		247.94		-2.160E-01	3.570E-01	5.371E-01	5.043E-02	-0.402
		591.81		8.976E-02	5.680E-01	9.630E-01	9.740E-02	0.093
		723.30		-6.939E-03	1.902E-01	2.704E-01	2.183E-02	-0.026
		756.87		1.156E-01	7.074E-01	1.180E+00	1.301E-01	0.098
		873.19		7.343E-03	2.812E-01	4.575E-01	5.456E-02	0.016
		996.32		-4.119E-01	3.834E-01	5.685E-01	9.828E-02	-0.725
		1004.76		-2.645E-01	2.184E-01	3.214E-01	3.484E-02	-0.823
		1274.45	*	-3.478E-02	1.151E-01	1.825E-01	1.778E-02	-0.191
EU-155		48.70		-1.178E-01	2.122E+00	3.615E+00	2.362E-01	-0.033
		60.01		1.309E+00	4.988E+00	7.704E+00	4.841E-01	0.170
	+	86.54		3.987E-01	1.146E-01	1.848E-01	1.412E-02	2.158
		105.31	*	9.141E-02	1.023E-01	1.749E-01	1.179E-02	0.523
TB-160	+	86.79		1.084E+00	3.114E-01	5.028E-01	3.802E-02	2.157
		197.04		-1.065E-01	5.305E-01	8.350E-01	4.413E-02	-0.128
		215.65		3.594E-01	7.554E-01	1.224E+00	6.598E-02	0.294
	+	298.57		1.675E-01	1.585E-01	1.903E-01	1.081E-02	0.880
		879.36	*	7.065E-03	1.252E-01	2.044E-01	1.678E-02	0.035
		962.29		1.090E+00	6.435E-01	1.067E+00	8.413E-02	1.022
		966.15		1.262E+00	2.816E-01	5.517E-01	4.333E-02	2.287
		1177.93		2.479E-01	3.618E-01	6.359E-01	3.522E-02	0.390
		1271.85		9.668E-02	6.561E-01	1.097E+00	7.023E-02	0.088
HO-166M		80.57		-6.126E-02	2.606E-01	3.864E-01	2.754E-02	-0.159
	+	184.41		1.295E-01	5.470E-02	6.794E-02	3.542E-03	1.906

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		280.46		-6.925E-02	8.171E-02	1.305E-01	7.370E-03	-0.531
		410.95		-1.114E-01	2.391E-01	3.768E-01	2.109E-02	-0.296
		711.68	*	-9.726E-05	6.127E-02	1.011E-01	6.960E-03	-0.001
		752.31		7.502E-02	2.691E-01	4.530E-01	3.265E-02	0.166
		810.29		-8.323E-02	5.851E-02	8.093E-02	6.205E-03	-1.028
TM-171		51.35		1.171E+01	2.821E+01	4.885E+01	3.184E+00	0.240
		52.39		-5.334E+00	1.494E+01	2.477E+01	1.608E+00	-0.215
		59.40		3.410E+00	2.684E+01	4.121E+01	2.585E+00	0.083
		66.72	*	-2.203E+01	2.936E+01	4.271E+01	2.764E+00	-0.516
LU-176	+	88.36		2.409E-01	2.041E-01	3.518E-01	2.681E-02	0.685
		201.83		-2.983E-03	2.807E-02	4.435E-02	2.356E-03	-0.067
		306.84	*	-1.420E-02	2.188E-02	3.488E-02	1.983E-03	-0.407
		401.10		-9.639E-01	6.184E+00	9.975E+00	5.523E-01	-0.097
LU-177		112.95		1.028E+00	1.905E+00	3.201E+00	2.045E-01	0.321
	+	208.36	*	2.475E+00	1.924E+00	2.225E+00	1.190E-01	1.112
LU-177M		52.97		-9.158E-01	1.548E+00	2.540E+00	1.644E-01	-0.361
		54.07		-1.679E-01	8.104E-01	1.351E+00	8.691E-02	-0.124
		61.30		9.195E-01	1.500E+00	2.352E+00	1.486E-01	0.391
		121.62		-4.137E-01	3.586E-01	5.433E-01	3.392E-02	-0.761
		147.16		-3.426E-01	5.859E-01	9.213E-01	5.105E-02	-0.372
		171.86		2.769E-01	4.764E-01	7.855E-01	4.043E-02	0.352
		218.09		-7.494E-01	8.594E-01	1.292E+00	6.979E-02	-0.580
		268.79		1.447E+00	8.426E-01	1.382E+00	7.765E-02	1.047
		319.02		-1.359E-03	2.478E-01	4.108E-01	2.335E-02	-0.003
		367.43		-9.075E-02	8.672E-01	1.414E+00	7.898E-02	-0.064
		413.65	*	2.994E-04	1.768E-01	2.878E-01	1.615E-02	0.001
HF-181		56.28		9.995E-02	8.985E-01	1.533E+00	9.748E-02	0.065
		57.53		-2.422E-01	4.892E-01	8.138E-01	5.144E-02	-0.298
		65.20		7.608E-01	1.001E+00	1.567E+00	1.007E-01	0.485
		133.02		2.551E-02	6.679E-02	9.956E-02	5.872E-03	0.256
		136.25		-2.420E-01	4.406E-01	6.982E-01	4.057E-02	-0.347
		345.85		1.924E-01	2.035E-01	3.186E-01	1.800E-02	0.604
		482.03	*	9.136E-03	4.492E-02	7.338E-02	4.381E-03	0.125
W-181		56.28		3.836E-02	3.445E-01	5.875E-01	3.737E-02	0.065
		57.53		-9.297E-02	1.877E-01	3.122E-01	1.974E-02	-0.298
		65.20	*	2.896E-01	3.811E-01	5.966E-01	3.833E-02	0.485
TA-182		67.75		-4.288E-02	1.136E-01	1.689E-01	1.099E-02	-0.254
		100.10		-6.150E-02	1.685E-01	2.745E-01	1.871E-02	-0.224
		152.43		2.636E-01	3.158E-01	5.300E-01	2.873E-02	0.497
		222.10		3.267E-01	3.213E-01	5.683E-01	3.082E-02	0.575
		1001.68		1.217E+00	2.291E+00	3.840E+00	2.894E-01	0.317
	+	1121.28		7.511E-01	2.756E-01	3.505E-01	2.175E-02	2.143
		1189.05		-8.605E-02	2.886E-01	4.629E-01	2.610E-02	-0.186
		1221.42	*	6.046E-02	1.725E-01	2.946E-01	1.748E-02	0.205
		1230.97		4.835E-01	5.109E-01	8.143E-01	4.902E-02	0.594
RE-183		57.98		-2.663E-02	1.874E-01	3.161E-01	1.994E-02	-0.084
		59.32		3.216E-02	1.113E-01	1.722E-01	1.081E-02	0.187
		67.20		-7.133E-02	2.057E-01	3.054E-01	1.981E-02	-0.234
		162.32	*	9.347E-04	1.024E-01	1.650E-01	8.579E-03	0.006

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	208.81		1.851E+00	1.439E+00	1.694E+00	9.068E-02	1.093
		291.72		-5.312E-01	1.014E+00	1.428E+00	8.094E-02	-0.372
RE-184		57.98		-9.700E-02	6.826E-01	1.152E+00	7.265E-02	-0.084
		59.32		1.171E-01	4.050E-01	6.269E-01	3.933E-02	0.187
		67.20		-2.598E-01	7.492E-01	1.112E+00	7.215E-02	-0.234
		161.27		-2.318E-01	3.255E-01	5.050E-01	2.637E-02	-0.459
		216.55		1.801E-01	2.607E-01	4.272E-01	2.304E-02	0.422
		252.85	*	4.855E-02	2.150E-01	3.659E-01	2.037E-02	0.133
		318.01		4.121E-02	4.323E-01	7.209E-01	4.098E-02	0.057
		792.07		5.466E-01	1.118E+00	1.680E+00	1.264E-01	0.325
		903.28		5.659E-01	1.087E+00	1.751E+00	1.458E-01	0.323
		920.93		-3.527E-01	4.157E-01	6.005E-01	4.926E-02	-0.587
OS-185		59.72		5.962E-02	3.007E-01	4.632E-01	2.907E-02	0.129
		61.14		6.096E-02	1.646E-01	2.554E-01	1.612E-02	0.239
		69.30		1.008E-01	3.032E-01	4.635E-01	3.041E-02	0.217
		592.07		4.987E-01	2.378E+00	4.047E+00	2.573E-01	0.123
		646.12	*	1.871E-02	4.353E-02	7.478E-02	4.832E-03	0.250
		717.42		-1.586E-01	8.915E-01	1.448E+00	1.003E-01	-0.110
		874.81		-2.993E-01	5.668E-01	8.654E-01	7.075E-02	-0.346
		880.27		9.855E-02	7.019E-01	1.156E+00	9.501E-02	0.085
RE-188		155.03	*	3.729E-02	1.630E-01	2.662E-01	1.427E-02	0.140
		477.96		-1.913E+00	3.381E+00	5.061E+00	3.013E-01	-0.378
		633.10		-1.548E-01	2.678E+00	4.440E+00	2.860E-01	-0.035
W-188	+	63.58		9.256E+01	8.644E+01	9.795E+01	6.248E+00	0.945
		227.08		9.606E-01	1.176E+01	2.000E+01	1.090E+00	0.048
		290.67	*	-1.920E+00	7.808E+00	1.124E+01	6.373E-01	-0.171
IR-192	+	295.96		1.064E+00	1.885E-01	2.930E-01	1.690E-02	3.633
		308.46		-9.575E-03	8.760E-02	1.446E-01	8.318E-03	-0.066
		316.51	*	-1.955E-02	3.391E-02	5.433E-02	3.105E-03	-0.360
		468.07		3.090E-02	7.197E-02	1.061E-01	7.194E-03	0.291
		604.41		2.357E-01	4.423E-01	6.822E-01	7.954E-02	0.345
		612.46		4.433E-01	7.796E-01	1.198E+00	9.636E-02	0.370
AU-195		65.12		1.461E-01	1.767E-01	2.774E-01	1.782E-02	0.527
		66.83		-7.167E-02	9.762E-02	1.421E-01	9.202E-03	-0.504
	+	75.70		1.433E+00	2.715E-01	4.563E-01	3.125E-02	3.140
		98.88	*	2.628E-03	2.192E-01	3.599E-01	2.475E-02	0.007
	+	129.76		7.106E+00	4.710E+00	4.867E+00	2.916E-01	1.460
TL-200		367.94	*	-9.052E-04	4.710E+00	Half-Life too short		
		579.30		-2.795E-03	4.710E+00	Half-Life too short		
		828.27		-4.159E-03	4.710E+00	Half-Life too short		
		1205.75		5.820E-04	4.710E+00	Half-Life too short		
TL-201		68.90		2.040E+00	7.528E+00	1.148E+01	7.515E-01	0.178
		70.82		-1.167E+00	4.283E+00	6.366E+00	4.215E-01	-0.183
		80.30		1.450E-01	7.610E+00	1.144E+01	8.131E-01	0.013
		135.34		-2.859E+01	3.716E+01	5.825E+01	3.399E+00	-0.491
		167.43	*	2.942E+00	1.057E+01	1.722E+01	8.824E-01	0.171
TL-202		68.90		1.311E-01	4.837E-01	7.376E-01	4.829E-02	0.178
		70.82		-7.480E-02	2.744E-01	4.079E-01	2.701E-02	-0.183
		80.30		9.297E-03	4.878E-01	7.330E-01	5.212E-02	0.013

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		439.56	*	6.386E-02	7.440E-02	1.280E-01	7.374E-03	0.499
HG-203		70.83		-2.951E-01	1.096E+00	1.629E+00	2.025E-01	-0.181
		72.87		1.451E+00	6.196E-01	1.071E+00	1.290E-01	1.355
		82.60		-5.041E-01	1.256E+00	1.678E+00	2.171E-01	-0.300
		279.20	*	2.356E-02	3.902E-02	6.725E-02	4.044E-03	0.350
BI-207		72.80		3.618E-01	1.694E-01	2.997E-01	2.010E-02	1.207
	+	74.97		7.891E-01	1.495E-01	2.254E-01	1.535E-02	3.501
		84.90		2.865E-01	1.910E-01	3.018E-01	2.240E-02	0.949
		569.67		6.865E-03	3.112E-02	5.212E-02	3.281E-03	0.132
		1063.62	*	4.476E-02	4.823E-02	8.767E-02	6.048E-03	0.511
		1770.23		-2.474E-01	4.792E-01	5.616E-01	3.314E-02	-0.441
TL-207		81.07		-2.465E-01	2.133E-01	2.999E-01	2.147E-02	-0.822
		83.78		1.271E-01	1.281E-01	1.986E-01	1.458E-02	0.640
		94.90		1.692E-01	2.425E-01	3.728E-01	2.649E-02	0.454
		122.32		-1.385E+00	1.633E+00	2.513E+00	1.779E-01	-0.551
		144.24		1.905E-01	6.581E-01	1.079E+00	7.642E-02	0.177
		154.21		8.663E-02	3.748E-01	6.121E-01	4.083E-02	0.142
	+	269.46		4.914E-01	2.798E-01	3.318E-01	1.955E-02	1.481
		323.87	*	-1.678E-01	6.632E-01	1.082E+00	1.783E-01	-0.155
	+	338.28		6.645E+00	1.815E+00	2.406E+00	2.516E-01	2.762
		445.03		-8.552E-02	2.205E+00	3.559E+00	3.653E-01	-0.024
PO-209		260.50		-6.269E+00	8.689E+00	1.403E+01	7.846E-01	-0.447
		262.80		4.272E+00	2.310E+01	3.919E+01	2.195E+00	0.109
		896.60	*	-1.675E+00	7.351E+00	1.161E+01	9.692E-01	-0.144
BI-210		46.50	*	-3.663E+00	2.975E+00	4.719E+00	3.555E-01	-0.776
PB-210		46.50	*	-3.663E+00	2.975E+00	4.719E+00	3.555E-01	-0.776
PO-210		46.50	*	-3.663E+00	2.971E+00	4.719E+00	3.026E-01	-0.776
PB-211		404.84	*	-5.857E-01	9.621E-01	1.383E+00	8.621E-01	-0.423
		427.08		4.224E-01	2.003E+00	3.275E+00	2.024E+00	0.129
		831.96		-7.647E-01	1.270E+00	1.793E+00	1.122E+00	-0.426
BI-212	+	727.18	*	8.013E-01	3.768E-01	6.665E-01	5.770E-02	1.202
		785.46		2.308E+00	1.668E+00	3.049E+00	2.277E-01	0.757
		1620.62		-3.781E-01	1.086E+00	1.700E+00	1.095E-01	-0.222
PO-215		81.07		-2.465E-01	2.133E-01	2.999E-01	2.147E-02	-0.822
		83.78		1.271E-01	1.281E-01	1.986E-01	1.458E-02	0.640
		94.90		1.692E-01	2.425E-01	3.728E-01	2.649E-02	0.454
		122.32		-1.385E+00	1.633E+00	2.513E+00	1.779E-01	-0.551
		144.24		1.905E-01	6.581E-01	1.079E+00	7.642E-02	0.177
		154.21		8.663E-02	3.748E-01	6.121E-01	4.083E-02	0.142
	+	269.46		4.914E-01	2.798E-01	3.318E-01	1.955E-02	1.481
		323.87	*	-1.678E-01	6.632E-01	1.082E+00	1.783E-01	-0.155
	+	338.28		6.645E+00	1.815E+00	2.406E+00	2.516E-01	2.762
		445.03		-8.552E-02	2.205E+00	3.559E+00	3.653E-01	-0.024
RN-219	+	271.23		6.305E-01	3.606E-01	4.287E-01	3.421E-02	1.471
		401.81	*	-2.446E-01	3.871E-01	6.002E-01	8.101E-02	-0.408
RN-220		549.76	*	-1.756E+01	2.403E+01	3.810E+01	2.376E+00	-0.461
RA-223		81.07		-2.465E-01	2.133E-01	2.999E-01	2.147E-02	-0.822
		83.78		1.271E-01	1.281E-01	1.986E-01	1.458E-02	0.640
		94.90		1.692E-01	2.425E-01	3.728E-01	2.649E-02	0.454

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		-1.385E+00	1.633E+00	2.513E+00	1.779E-01	-0.551
		144.24		1.905E-01	6.581E-01	1.079E+00	7.642E-02	0.177
		154.21		8.663E-02	3.748E-01	6.121E-01	4.083E-02	0.142
	+	269.46		4.914E-01	2.798E-01	3.318E-01	1.955E-02	1.481
		323.87	*	-1.678E-01	6.632E-01	1.082E+00	1.783E-01	-0.155
	+	338.28		6.645E+00	1.815E+00	2.406E+00	2.516E-01	2.762
		445.03		-8.552E-02	2.205E+00	3.559E+00	3.653E-01	-0.024
AC-227		79.80		1.058E+00	1.589E+00	2.443E+00	5.114E-01	0.433
		236.00		7.282E-01	2.764E-01	4.519E-01	4.648E-02	1.611
		256.20	*	1.734E-01	3.418E-01	5.884E-01	8.161E-02	0.295
		286.10		3.293E-01	1.458E+00	2.463E+00	2.831E-01	0.134
	+	299.80		2.093E+00	2.007E+00	2.434E+00	3.953E-01	0.860
		304.40		-4.057E-02	1.837E+00	2.682E+00	4.629E-01	-0.015
		334.20		-1.705E+00	2.518E+00	3.419E+00	6.255E-01	-0.499
TH-227		79.80		1.058E+00	1.590E+00	2.443E+00	5.183E-01	0.433
	+	94.00		1.007E+01	3.437E+00	3.746E+00	7.958E-01	2.687
		236.00		7.282E-01	2.738E-01	4.519E-01	4.006E-02	1.611
		256.20	*	1.734E-01	3.422E-01	5.884E-01	9.899E-02	0.295
		286.10		3.293E-01	1.494E+00	2.463E+00	2.467E+00	0.134
	+	299.80		2.093E+00	2.007E+00	2.434E+00	3.953E-01	0.860
		304.40		-4.057E-02	1.837E+00	2.682E+00	4.629E-01	-0.015
		334.20		-1.705E+00	2.518E+00	3.419E+00	6.255E-01	-0.499
TH-229		85.43		1.844E-01	1.988E-01	3.067E-01	2.288E-02	0.601
	+	88.47		1.387E-01	1.175E-01	2.014E-01	1.533E-02	0.689
		100.00		-6.324E-02	1.723E-01	2.805E-01	1.913E-02	-0.225
		193.63	*	-1.131E-01	4.758E-01	7.484E-01	3.940E-02	-0.151
		210.97		4.471E-01	8.427E-01	1.227E+00	6.579E-02	0.364
PA-231		283.67	*	7.671E-01	1.479E+00	2.531E+00	3.472E-01	0.303
	+	301.29		8.372E-01	7.959E-01	9.371E-01	9.733E-02	0.893
TH-231		81.07		-2.465E-01	2.133E-01	2.999E-01	2.147E-02	-0.822
		83.78		1.271E-01	1.281E-01	1.986E-01	1.458E-02	0.640
		94.90		1.692E-01	2.425E-01	3.728E-01	2.649E-02	0.454
		122.32		-1.385E+00	1.633E+00	2.513E+00	1.779E-01	-0.551
		144.24		1.905E-01	6.581E-01	1.079E+00	7.642E-02	0.177
		154.21		8.663E-02	3.748E-01	6.121E-01	4.083E-02	0.142
	+	269.46		4.914E-01	2.798E-01	3.318E-01	1.955E-02	1.481
		323.87	*	-1.678E-01	6.632E-01	1.082E+00	1.783E-01	-0.155
	+	338.28		6.645E+00	1.815E+00	2.406E+00	2.516E-01	2.762
		445.03		-8.552E-02	2.205E+00	3.559E+00	3.653E-01	-0.024
U-231		84.21		9.692E+00	7.525E+00	1.181E+01	8.702E-01	0.821
	+	92.29		1.375E+01	3.806E+00	5.869E+00	4.276E-01	2.343
		95.87	*	5.000E-01	1.575E+00	2.379E+00	1.676E-01	0.210
		108.00		-1.684E+00	2.611E+00	4.176E+00	2.721E-01	-0.403
PA-233	+	75.28		2.302E+01	5.251E+00	6.883E+00	9.923E-01	3.345
	+	86.59		6.476E+00	2.483E+00	3.012E+00	7.979E-01	2.150
	+	300.12		5.835E-01	5.569E-01	6.768E-01	9.059E-02	0.862
		311.98	*	4.873E-02	6.063E-02	1.052E-01	6.363E-03	0.463
		340.50		1.292E+00	6.529E-01	9.990E-01	2.291E-01	1.293
		398.62		-1.170E+00	2.024E+00	3.131E+00	8.077E-01	-0.374

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		1.057E+00	1.647E+00	2.774E+00	5.697E-01	0.381
PA-234	+	63.00		2.632E+00	2.481E+00	2.820E+00	4.053E-01	0.933
		94.67		2.290E-01	1.788E-01	2.795E-01	3.189E-02	0.820
		98.44		3.328E-03	8.845E-02	1.454E-01	8.076E-02	0.023
		99.86		-1.343E-01	4.357E-01	7.114E-01	4.857E-02	-0.189
		111.00		-1.079E-01	1.744E-01	2.786E-01	2.964E-02	-0.387
		131.20		2.115E-02	1.079E-01	1.591E-01	9.467E-03	0.133
		152.70		2.461E-01	3.064E-01	5.098E-01	7.989E-02	0.483
	+	186.00		4.661E+00	2.415E+00	2.614E+00	7.959E-01	1.783
		226.40		-7.030E-02	3.661E-01	6.150E-01	7.003E-02	-0.114
		227.20		-2.124E-02	3.910E-01	6.610E-01	3.602E-02	-0.032
		248.90		-5.020E-01	7.592E-01	1.214E+00	2.601E-01	-0.413
	+	293.70		6.578E+00	1.525E+00	1.759E+00	2.821E-01	3.740
		369.80		-2.512E-01	8.010E-01	1.283E+00	2.665E-01	-0.196
		568.70		-5.723E-01	1.002E+00	1.581E+00	9.949E-02	-0.362
		569.50		4.200E-02	2.774E-01	4.624E-01	2.911E-02	0.091
		574.00		3.055E-01	1.465E+00	2.495E+00	1.574E-01	0.122
		699.00		-7.664E-01	7.036E-01	1.019E+00	1.866E-01	-0.752
		706.10		5.342E-01	1.153E+00	1.929E+00	8.542E-01	0.277
		733.00		-2.406E-01	3.910E-01	5.847E-01	1.265E-01	-0.411
		742.81		-7.444E-01	1.342E+00	1.928E+00	1.293E+00	-0.386
	+	796.30		1.151E+00	1.055E+00	1.603E+00	4.285E-01	0.718
		805.60		8.410E-01	9.978E-01	1.703E+00	5.173E-01	0.494
		819.60		-6.552E-01	1.236E+00	1.868E+00	7.067E-01	-0.351
		826.30		1.917E-01	7.688E-01	1.278E+00	5.697E-01	0.150
		831.60		-3.948E-01	6.202E-01	9.286E-01	2.751E-01	-0.425
		876.40		-3.229E-01	8.315E-01	1.177E+00	1.209E+00	-0.274
		880.51		7.968E-02	2.486E-01	4.176E-01	3.433E-02	0.191
		883.24		-1.734E-01	2.844E-01	3.875E-01	2.603E-01	-0.447
		899.00		-1.761E-01	8.630E-01	1.363E+00	5.949E-01	-0.129
		925.00		4.982E-01	1.019E+00	1.739E+00	1.421E-01	0.287
		926.50		1.020E-01	1.629E-01	2.779E-01	6.982E-02	0.367
		946.00	*	1.689E-02	2.916E-01	4.729E-01	8.745E-02	0.036
		949.00		-3.131E-01	4.166E-01	6.101E-01	4.877E-02	-0.513
		980.50		2.231E-01	7.137E-01	1.185E+00	9.164E-02	0.188
		1394.10		-6.990E-01	1.280E+00	1.787E+00	1.160E+00	-0.391
PA-234M	+	766.42		1.878E+01	2.001E+01	2.224E+01	1.124E+01	0.844
		1001.03	*	4.743E+00	5.121E+00	8.827E+00	7.989E-01	0.537
U-235	+	89.95		1.392E+00	1.249E+00	1.790E+00	5.471E-01	0.778
	+	93.35		3.131E+00	1.204E+00	1.324E+00	3.658E-01	2.365
		105.00		1.226E+00	1.065E+00	1.739E+00	5.099E-01	0.705
		143.76	*	1.304E-01	2.022E-01	3.351E-01	5.442E-02	0.389
		163.35		-5.776E-02	4.385E-01	7.013E-01	1.248E-01	-0.082
	+	185.71		1.726E-01	7.293E-02	9.712E-02	5.070E-03	1.777
		205.31		-5.054E-03	5.517E-01	7.752E-01	1.383E-01	-0.007
NP-236		94.67		1.755E-01	1.348E-01	2.122E-01	1.511E-02	0.827
		98.44		2.547E-03	6.685E-02	1.099E-01	7.583E-03	0.023
		111.00		-8.162E-02	1.317E-01	2.107E-01	1.356E-02	-0.387
		160.31	*	-5.620E-02	7.262E-02	1.123E-01	5.891E-03	-0.500

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		-5.372E-02	1.488E-01	2.403E-01	1.644E-02	-0.224
		117.00	*	-7.516E-02	1.766E-01	2.841E-01	1.793E-02	-0.265
	+	209.75		1.432E+00	1.114E+00	1.341E+00	7.184E-02	1.068
		228.18		2.979E-02	1.998E-01	3.408E-01	1.859E-02	0.087
		277.60		1.467E-01	1.663E-01	2.903E-01	1.638E-02	0.505
		334.30		-9.955E-01	1.415E+00	1.932E+00	1.095E-01	-0.515
AM-241		59.54	*	2.651E-02	1.558E-01	2.397E-01	1.703E-02	0.111
CM-243		99.55		-5.529E-02	1.532E-01	2.473E-01	1.692E-02	-0.224
		103.76	*	1.077E-01	9.118E-02	1.576E-01	1.049E-02	0.684
		117.00		-7.734E-02	1.817E-01	2.923E-01	1.845E-02	-0.265
	+	209.75		1.412E+00	1.098E+00	1.322E+00	7.083E-02	1.068
		228.18		3.010E-02	2.019E-01	3.444E-01	1.879E-02	0.087
		277.60		1.480E-01	1.677E-01	2.927E-01	1.651E-02	0.505
AM-246		798.80		-1.428E-01	1.563E-01	1.914E-01	1.450E-02	-0.746
		1036.00		-1.027E-02	2.699E-01	4.499E-01	3.238E-02	-0.023
		1062.04		9.343E-03	2.149E-01	3.604E-01	2.493E-02	0.026
		1078.86	*	8.016E-02	1.462E-01	2.557E-01	1.719E-02	0.314
CM-247		278.00		9.458E-01	6.837E-01	1.220E+00	6.886E-02	0.775
		287.40		-4.671E-01	1.161E+00	1.895E+00	1.073E-01	-0.246
		402.60	*	4.058E-03	3.381E-02	5.562E-02	3.085E-03	0.073
CF-249		252.85		1.807E-01	8.001E-01	1.362E+00	7.581E-02	0.133
		333.44		4.926E-03	1.827E-01	2.659E-01	1.508E-02	0.019
		387.95	*	5.174E-02	3.670E-02	6.556E-02	3.604E-03	0.789
CF-251		176.60	*	-6.379E-02	1.197E-01	1.865E-01	9.644E-03	-0.342
		227.00		2.973E-02	3.460E-01	5.886E-01	3.208E-02	0.051
		285.00		3.512E-01	1.673E+00	2.826E+00	1.599E-01	0.124

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492001		
Acquisition date	: 4-JAN-2010 13:59:59	Detector SN#	:
Detector ID	: GAM12	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.48	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492001	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.2866E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 10-FEB-2009 09:20:24	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.130E+01	2.088E+00	3.972E-01	0.000E+00
NB-95	7.249E-02	6.682E-02	5.709E-02	0.000E+00
CD-109	3.375E+00	9.500E-01	1.201E+00	0.000E+00
SN-126	3.308E-01	9.310E-02	1.183E-01	0.000E+00
BA-137M	2.006E-01	6.054E-02	5.954E-02	0.000E+00
CS-137	2.120E-01	6.401E-02	6.294E-02	0.000E+00
TL-208	4.470E-01	8.807E-02	5.250E-02	0.000E+00
BI-211	4.207E+00	4.742E-01	3.119E-01	0.000E+00
PB-212	1.537E+00	1.518E-01	9.257E-02	0.000E+00
PO-212	1.537E+00	1.518E-01	9.257E-02	0.000E+00
BI-214	1.403E+00	1.926E-01	1.004E-01	0.000E+00
PB-214	1.463E+00	1.811E-01	1.111E-01	0.000E+00
PO-214	1.463E+00	1.811E-01	1.111E-01	0.000E+00
PO-216	1.537E+00	1.518E-01	9.257E-02	0.000E+00
PO-218	1.463E+00	1.811E-01	1.111E-01	0.000E+00
RA-224	4.285E+00	1.314E+00	1.053E+00	0.000E+00
RA-226	1.403E+00	1.926E-01	1.004E-01	0.000E+00
AC-228	1.724E+00	3.078E-01	1.843E-01	0.000E+00
RA-228	1.724E+00	3.078E-01	1.843E-01	0.000E+00
TH-228	1.563E+00	1.544E-01	9.416E-02	0.000E+00
TH-230	1.403E+00	1.926E-01	1.004E-01	0.000E+00
TH-232	1.724E+00	3.078E-01	1.843E-01	0.000E+00
TH-234	2.258E+00	2.096E+00	2.106E+00	0.000E+00
U-234	1.403E+00	1.926E-01	1.004E-01	0.000E+00
NP-237	9.713E-01	3.366E-01	4.059E-01	0.000E+00
U-238	2.258E+00	2.096E+00	2.106E+00	0.000E+00
AM-243	4.395E-01	8.160E-02	8.406E-02	0.000E+00
ANH-511	1.749E-01	6.664E-02	4.095E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM)

BE-7	-2.940E-01	3.560E-01	5.432E-01	0.000E+00 NOT IDENT.
NA-22	-1.372E-02	4.026E-02	6.507E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	6.587E+06	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-3.817E-03	2.494E-02	4.049E-02	0.000E+00 NOT IDENT.
TI-44	0.000E+00	5.414E-02	7.499E-02	0.000E+00 FAIL ABUN
SC-46	2.428E-02	3.614E-02	6.440E-02	0.000E+00 FAIL ABUN
V-48	-2.122E-02	7.462E-02	1.192E-01	0.000E+00 NOT IDENT.
CR-51	-2.406E-01	3.740E-01	6.239E-01	0.000E+00 NOT IDENT.
MN-52	1.121E-01	2.671E-01	4.719E-01	0.000E+00 NOT IDENT.
MN-54	1.399E-03	3.762E-02	6.331E-02	0.000E+00 NOT IDENT.
CO-56	-2.004E-02	3.691E-02	5.814E-02	0.000E+00 FAIL ABUN
CO-57	-2.208E-02	2.318E-02	3.766E-02	0.000E+00 NOT IDENT.
CO-58	-3.229E-02	3.773E-02	5.788E-02	0.000E+00 NOT IDENT.
FE-59	-1.652E-02	8.704E-02	1.458E-01	0.000E+00 NOT IDENT.
CO-60	2.617E-02	3.999E-02	7.180E-02	0.000E+00 NOT IDENT.
ZN-65	5.192E-02	9.866E-02	1.547E-01	0.000E+00 NOT IDENT.
GE-68	1.680E-02	1.259E+00	2.156E+00	0.000E+00 NOT IDENT.
AS-73	-4.210E-01	7.804E-01	1.378E+00	0.000E+00 NOT IDENT.
AS-74	-1.428E-03	9.556E-02	1.654E-01	0.000E+00 NOT IDENT.
SE-75	-2.552E-02	4.315E-02	6.384E-02	0.000E+00 NOT IDENT.
BR-77	1.318E+01	1.774E+01	3.119E+01	0.000E+00 FAIL ABUN
SR-82	-9.405E-02	3.552E-01	5.844E-01	0.000E+00 NOT IDENT.
RB-83	1.308E-02	6.852E-02	1.154E-01	0.000E+00 NOT IDENT.
RB-84	7.433E-03	6.508E-02	1.099E-01	0.000E+00 NOT IDENT.
KR-85	8.611E+00	7.272E+00	1.184E+01	0.000E+00 NOT IDENT.
SR-85	4.507E-02	3.807E-02	6.198E-02	0.000E+00 NOT IDENT.
RB-86	-3.067E-01	8.468E-01	1.400E+00	0.000E+00 NOT IDENT.
Y-88	5.601E-03	3.195E-02	5.553E-02	0.000E+00 NOT IDENT.
ZR-88	-2.944E-02	2.955E-02	4.678E-02	0.000E+00 NOT IDENT.
Y-91	-8.406E+00	1.922E+01	3.123E+01	0.000E+00 NOT IDENT.
NB-94	1.452E-02	3.321E-02	5.853E-02	0.000E+00 NOT IDENT.
NB-95M	1.361E-01	1.328E-01	2.196E-01	0.000E+00 NOT IDENT.
ZR-95	1.256E-02	6.752E-02	1.163E-01	0.000E+00 NOT IDENT.
NB-97	0.000E+00	6.659E+05	0.000E+00	0.000E+00 SHORT HLIF
ZR-97	0.000E+00	1.337E+07	0.000E+00	0.000E+00 SHORT HLIF
MO-99	-4.273E+00	1.806E+01	3.000E+01	0.000E+00 NOT IDENT.
TC-99M	0.000E+00	8.935E+18	0.000E+00	0.000E+00 SHORT HLIF
RH-101	8.606E-03	3.006E-02	5.109E-02	0.000E+00 FAIL ABUN
RH-102	-5.609E-03	2.923E-02	4.820E-02	0.000E+00 FAIL ABUN
RU-103	-4.508E-02	4.050E-02	6.038E-02	0.000E+00 FAIL ABUN
RH-106	1.299E-01	3.028E-01	5.391E-01	0.000E+00 FAIL ABUN
RU-106	1.299E-01	3.025E-01	5.391E-01	0.000E+00 FAIL ABUN
AG-108M	2.013E-03	3.088E-02	5.235E-02	0.000E+00 NOT IDENT.
AG-110M	4.708E-02	3.444E-02	5.945E-02	0.000E+00 NOT IDENT.
IN-111	5.394E-01	1.655E+00	2.645E+00	0.000E+00 NOT IDENT.
IN-113M	-4.756E-02	4.294E-02	6.741E-02	0.000E+00 NOT IDENT.
SN-113	-4.756E-02	4.294E-02	6.741E-02	0.000E+00 NOT IDENT.
IN-114M	-8.757E-04	1.941E-01	2.900E-01	0.000E+00 NOT IDENT.
CD-115	3.777E+00	2.028E+01	3.410E+01	0.000E+00 NOT IDENT.
SN-117M	1.137E-02	5.283E-02	9.100E-02	0.000E+00 NOT IDENT.
SB-122	1.452E+00	3.383E+00	6.058E+00	0.000E+00 NOT IDENT.
I-123	0.000E+00	5.950E+07	0.000E+00	0.000E+00 SHORT HLIF
TE-123M	1.004E-03	2.461E-02	4.203E-02	0.000E+00 NOT IDENT.
I-124	-5.672E-01	9.877E-01	1.393E+00	0.000E+00 NOT IDENT.
SB-124	1.180E-02	6.551E-02	1.149E-01	0.000E+00 FAIL ABUN
SB-125	-2.567E-02	8.764E-02	1.449E-01	0.000E+00 FAIL ABUN
TE-125M	5.259E+00	8.387E+00	1.506E+01	0.000E+00 NOT IDENT.
I-126	1.689E-02	2.244E-01	3.368E-01	0.000E+00 NOT IDENT.
SB-126	1.468E-02	1.630E-01	2.544E-01	0.000E+00 FAIL ABUN
SB-127	7.708E-02	1.962E+00	3.366E+00	0.000E+00 NOT IDENT.
XE-127	2.703E-02	4.583E-02	7.885E-02	0.000E+00 NOT IDENT.
I-131	-2.209E-02	1.288E-01	2.183E-01	0.000E+00 NOT IDENT.
TE-132	-1.476E-01	9.221E-01	1.629E+00	0.000E+00 NOT IDENT.
BA-133	-9.799E-03	4.584E-02	6.773E-02	0.000E+00 NOT IDENT.
I-133	0.000E+00	3.072E+04	0.000E+00	0.000E+00 SHORT HLIF
CS-134	5.933E-02	5.116E-02	8.583E-02	0.000E+00 FAIL ABUN
CS-135	2.200E-01	1.562E-01	2.640E-01	0.000E+00 NOT IDENT.
I-135	0.000E+00	7.034E+17	0.000E+00	0.000E+00 SHORT HLIF
CS-136	-6.044E-02	1.165E-01	1.898E-01	0.000E+00 FAIL ABUN
CE-139	1.125E-03	2.843E-02	4.838E-02	0.000E+00 NOT IDENT.
BA-140	-1.761E-01	2.613E-01	4.227E-01	0.000E+00 NOT IDENT.
LA-140	-3.207E-02	8.236E-02	1.315E-01	0.000E+00 NOT IDENT.
CE-141	-5.951E-03	5.922E-02	1.008E-01	0.000E+00 NOT IDENT.
CE-143	0.000E+00	6.822E+02	0.000E+00	0.000E+00 SHORT HLIF
CE-144	1.360E-01	1.898E-01	3.224E-01	0.000E+00 NOT IDENT.
PM-144	1.431E-03	3.217E-02	5.513E-02	0.000E+00 NOT IDENT.
PR-144	9.705E-02	2.182E+00	3.740E+00	0.000E+00 NOT IDENT.

PM-146	1.324E-02	3.994E-02	6.881E-02	0.000E+00	NOT IDENT.
ND-147	3.413E-02	6.665E-01	1.108E+00	0.000E+00	NOT IDENT.
PM-149	1.929E+01	1.578E+02	2.778E+02	0.000E+00	NOT IDENT.
EU-152	-3.843E-03	9.925E-02	1.495E-01	0.000E+00	FAIL ABUN
GD-153	-4.920E-02	8.065E-02	1.310E-01	0.000E+00	NOT IDENT.
EU-154	-3.478E-02	1.127E-01	1.829E-01	0.000E+00	NOT IDENT.
EU-155	9.141E-02	1.003E-01	1.822E-01	0.000E+00	FAIL ABUN
TB-160	7.065E-03	1.227E-01	2.061E-01	0.000E+00	FAIL ABUN
HO-166M	-9.726E-05	6.005E-02	1.023E-01	0.000E+00	FAIL ABUN
TM-171	-2.203E+01	2.878E+01	4.479E+01	0.000E+00	NOT IDENT.
LU-176	-1.420E-02	2.144E-02	3.576E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.886E+00	2.294E+00	0.000E+00	FAIL ABUN
LU-177M	2.994E-04	1.733E-01	2.937E-01	0.000E+00	NOT IDENT.
HF-181	9.136E-03	4.402E-02	7.470E-02	0.000E+00	NOT IDENT.
W-181	2.896E-01	3.735E-01	6.259E-01	0.000E+00	NOT IDENT.
TA-182	6.046E-02	1.690E-01	2.956E-01	0.000E+00	FAIL ABUN
RE-183	9.347E-04	1.004E-01	1.708E-01	0.000E+00	FAIL ABUN
RE-184	4.855E-02	2.107E-01	3.762E-01	0.000E+00	NOT IDENT.
OS-185	1.871E-02	4.266E-02	7.577E-02	0.000E+00	NOT IDENT.
RE-188	3.729E-02	1.598E-01	2.757E-01	0.000E+00	NOT IDENT.
W-188	-1.920E+00	7.651E+00	1.154E+01	0.000E+00	FAIL ABUN
IR-192	-1.955E-02	3.323E-02	5.567E-02	0.000E+00	FAIL ABUN
AU-195	2.628E-03	2.148E-01	3.753E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.525E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	2.942E+00	1.036E+01	1.781E+01	0.000E+00	NOT IDENT.
TL-202	6.386E-02	7.292E-02	1.305E-01	0.000E+00	NOT IDENT.
HG-203	2.356E-02	3.824E-02	6.904E-02	0.000E+00	NOT IDENT.
BI-207	4.476E-02	4.726E-02	8.814E-02	0.000E+00	FAIL ABUN
TL-207	-1.678E-01	6.500E-01	1.109E+00	0.000E+00	FAIL ABUN
PO-209	-1.675E+00	7.204E+00	1.171E+01	0.000E+00	NOT IDENT.
BI-210	-3.663E+00	2.915E+00	4.975E+00	0.000E+00	NOT IDENT.
PB-210	-3.663E+00	2.915E+00	4.975E+00	0.000E+00	NOT IDENT.
PO-210	-3.663E+00	2.912E+00	4.975E+00	0.000E+00	NOT IDENT.
PB-211	-5.857E-01	9.428E-01	1.412E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.693E-01	6.741E-01	0.000E+00	FAIL ABUN
PO-215	-1.678E-01	6.500E-01	1.109E+00	0.000E+00	FAIL ABUN
RN-219	-2.446E-01	3.793E-01	6.127E-01	0.000E+00	FAIL ABUN
RN-220	-1.756E+01	2.355E+01	3.871E+01	0.000E+00	NOT IDENT.
RA-223	-1.678E-01	6.500E-01	1.109E+00	0.000E+00	FAIL ABUN
AC-227	1.734E-01	3.349E-01	6.048E-01	0.000E+00	FAIL ABUN
TH-227	1.734E-01	3.353E-01	6.048E-01	0.000E+00	FAIL ABUN
TH-229	-1.131E-01	4.663E-01	7.725E-01	0.000E+00	FAIL ABUN
PA-231	7.671E-01	1.449E+00	2.597E+00	0.000E+00	FAIL ABUN
TH-231	-1.678E-01	6.500E-01	1.109E+00	0.000E+00	FAIL ABUN
U-231	5.000E-01	1.544E+00	2.482E+00	0.000E+00	FAIL ABUN
PA-233	4.873E-02	5.942E-02	1.078E-01	0.000E+00	FAIL ABUN
PA-234	1.689E-02	2.858E-01	4.763E-01	0.000E+00	FAIL ABUN
PA-234M	4.743E+00	5.019E+00	8.883E+00	0.000E+00	FAIL ABUN
U-235	1.304E-01	1.982E-01	3.474E-01	0.000E+00	FAIL ABUN
NP-236	-5.620E-02	7.117E-02	1.163E-01	0.000E+00	NOT IDENT.
NP-239	-7.516E-02	1.731E-01	2.955E-01	0.000E+00	FAIL ABUN
AM-241	2.651E-02	1.527E-01	2.518E-01	0.000E+00	NOT IDENT.
CM-243	1.077E-01	8.936E-02	1.642E-01	0.000E+00	FAIL ABUN
AM-246	8.016E-02	1.433E-01	2.570E-01	0.000E+00	NOT IDENT.
CM-247	4.058E-03	3.314E-02	5.678E-02	0.000E+00	NOT IDENT.
CF-249	5.174E-02	3.597E-02	6.696E-02	0.000E+00	NOT IDENT.
CF-251	-6.379E-02	1.173E-01	1.928E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:12:56.80

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492001.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 13:59:59.
Sample ID : G243492001 Sample quantity : 1.28660E+02 GRAM
Detector name : GAM12 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.48 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	886	10.67*	1.138E+00	2.130E+01	2.130E+01	10.01
NB-95	765.79	41	99.81*	1.983E+00	6.022E-02	7.249E-02	94.06
CD-109	88.03	237	3.72*	5.643E+00	3.290E+00	3.375E+00	28.72
SN-126	64.28	94	9.60	3.208E+00	8.938E-01	8.938E-01	94.22
	86.94	237	8.90	5.643E+00	1.375E+00	1.375E+00	49.61
	87.57	237	37.00*	5.643E+00	3.308E-01	3.308E-01	28.72
BA-137M	661.65	139	89.98*	2.254E+00	2.004E-01	2.006E-01	30.80
CS-137	661.65	139	85.12*	2.254E+00	2.118E-01	2.120E-01	30.80
TL-208	277.35	------	6.80	4.505E+00	------ Line Not Found		------
	510.84	168	21.60	2.795E+00	8.097E-01	8.097E-01	39.76
	583.14	323	84.20*	2.505E+00	4.470E-01	4.470E-01	20.10
	860.37	------	12.46	1.795E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	4.387E+00	------ Line Not Found		------
	351.07	702	12.94*	3.764E+00	4.207E+00	4.207E+00	11.50
PB-212	74.81	455	10.70	4.573E+00	2.711E+00	2.711E+00	21.12
	77.11	632	18.00	4.815E+00	2.129E+00	2.129E+00	14.06
	87.30	237	8.00	5.643E+00	1.530E+00	1.530E+00	30.41
	238.63	1179	44.60*	5.017E+00	1.537E+00	1.537E+00	10.08
	300.09	56	3.41	4.250E+00	1.129E+00	1.129E+00	94.84
PO-212	74.81	455	10.70	4.573E+00	2.711E+00	2.711E+00	21.12
	77.11	632	18.00	4.815E+00	2.129E+00	2.129E+00	14.06
	87.30	237	8.00	5.643E+00	1.530E+00	1.530E+00	30.41
	115.19	------	0.60	6.604E+00	------ Line Not Found		------
	238.63	1179	44.60*	5.017E+00	1.537E+00	1.537E+00	10.08
	300.09	56	3.41	4.250E+00	1.129E+00	1.129E+00	94.84
BI-214	609.31	538	46.30*	2.415E+00	1.403E+00	1.403E+00	14.00
	1120.29	116	15.10	1.423E+00	1.570E+00	1.570E+00	37.29
	1764.49	99	15.80	9.905E-01	1.849E+00	1.849E+00	24.42
PB-214	74.81	455	6.21	4.573E+00	4.671E+00	4.671E+00	20.34
	77.11	632	10.50	4.815E+00	3.649E+00	3.649E+00	15.99
	87.30	237	4.67	5.643E+00	2.621E+00	2.621E+00	29.74
	241.98	288	7.49	4.973E+00	2.260E+00	2.260E+00	31.78

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	388	19.20	4.303E+00	1.370E+00	1.370E+00	18.75
	351.92	702	37.20*	3.764E+00	1.463E+00	1.463E+00	12.63
PO-214	74.81	455	6.21	4.573E+00	4.671E+00	4.671E+00	20.34
	77.11	632	10.50	4.815E+00	3.649E+00	3.649E+00	15.99
	87.30	237	4.67	5.643E+00	2.621E+00	2.621E+00	29.74
	241.98	288	7.49	4.973E+00	2.260E+00	2.260E+00	31.78
	295.21	388	19.20	4.303E+00	1.370E+00	1.370E+00	18.75
	351.92	702	37.20*	3.764E+00	1.463E+00	1.463E+00	12.63
PO-216	74.81	455	10.70	4.573E+00	2.711E+00	2.711E+00	21.12
	77.11	632	18.00	4.815E+00	2.129E+00	2.129E+00	14.06
	87.30	237	8.00	5.643E+00	1.530E+00	1.530E+00	30.41
	238.63	1179	44.60*	5.017E+00	1.537E+00	1.537E+00	10.08
	300.09	56	3.41	4.250E+00	1.129E+00	1.129E+00	94.84
PO-218	74.81	455	6.21	4.573E+00	4.671E+00	4.671E+00	20.34
	77.11	632	10.50	4.815E+00	3.649E+00	3.649E+00	15.99
	87.30	237	4.67	5.643E+00	2.621E+00	2.621E+00	29.74
	241.98	288	7.49	4.973E+00	2.260E+00	2.260E+00	31.78
	295.21	388	19.20	4.303E+00	1.370E+00	1.370E+00	18.75
	351.92	702	37.20*	3.764E+00	1.463E+00	1.463E+00	12.63
RA-224	240.98	288	3.95*	4.973E+00	4.285E+00	4.285E+00	31.29
RA-226	609.31	538	46.30*	2.415E+00	1.403E+00	1.403E+00	14.00
	1120.29	116	15.10	1.423E+00	1.570E+00	1.570E+00	37.29
	1764.49	99	15.80	9.905E-01	1.849E+00	1.849E+00	24.42
AC-228	338.32	241	11.40	3.879E+00	1.591E+00	1.591E+00	47.93
	911.07	279	27.70*	1.707E+00	1.724E+00	1.724E+00	18.21
	969.11	113	16.60	1.617E+00	1.224E+00	1.224E+00	42.67
RA-228	338.32	241	11.40	3.879E+00	1.591E+00	1.591E+00	47.93
	911.07	279	27.70*	1.707E+00	1.724E+00	1.724E+00	18.21
	969.11	113	16.60	1.617E+00	1.224E+00	1.224E+00	42.67
TH-228	74.81	455	10.70	4.573E+00	2.711E+00	2.758E+00	18.98
	77.11	632	18.00	4.815E+00	2.129E+00	2.165E+00	14.06
	87.30	237	8.00	5.643E+00	1.530E+00	1.556E+00	28.72
	238.63	1179	44.60*	5.017E+00	1.537E+00	1.563E+00	10.08
	300.09	56	3.41	4.250E+00	1.129E+00	1.149E+00	111.36
TH-230	609.31	538	46.30*	2.415E+00	1.403E+00	1.403E+00	14.00
	1120.29	116	15.10	1.423E+00	1.570E+00	1.570E+00	37.29
	1764.49	99	15.80	9.905E-01	1.849E+00	1.849E+00	24.42
TH-232	338.32	241	11.40	3.879E+00	1.591E+00	1.591E+00	25.87
	911.07	279	27.70*	1.707E+00	1.724E+00	1.724E+00	18.21
	969.11	113	16.60	1.617E+00	1.224E+00	1.224E+00	42.67
TH-234	63.29	94	3.80*	3.208E+00	2.258E+00	2.258E+00	94.72
	92.38	288	5.41	5.970E+00	2.605E+00	2.605E+00	31.92
U-234	609.31	538	46.30*	2.415E+00	1.403E+00	1.403E+00	14.00
	1120.29	116	15.10	1.423E+00	1.570E+00	1.570E+00	37.29
	1764.49	99	15.80	9.905E-01	1.849E+00	1.849E+00	24.42
NP-237	86.50	237	12.60*	5.643E+00	9.713E-01	9.713E-01	35.36
	95.87	------	2.60	6.124E+00	------ Line Not Found		------
U-238	63.29	94	3.80*	3.208E+00	2.258E+00	2.258E+00	94.72
	92.38	288	5.41	5.970E+00	2.605E+00	2.605E+00	27.68

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	455	66.00*	4.573E+00	4.395E-01	4.395E-01	18.94
	86.72	237	0.34	5.643E+00	3.643E+01	3.643E+01	28.72
	117.66	------	0.55	6.624E+00	------ Line Not Found		------
	142.18	------	0.13	6.534E+00	------ Line Not Found		------
ANH-511	511.00	168	100.00*	2.795E+00	1.749E-01	1.749E-01	38.88

Flag: "*" = Keyline

Sample ID : G243492001 Acquisition date : 4-JAN-2010 13:59:59

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.130E+01	2.130E+01	0.213E+01	10.01	
NB-95	64.02D	1.20	6.022E-02	7.249E-02	6.819E-02	94.06	
CD-109	464.00D	1.03	3.290E+00	3.375E+00	0.969E+00	28.72	
SN-126	1.00E+05Y	1.00	3.308E-01	3.308E-01	0.950E-01	28.72	
BA-137M	30.17Y	1.00	2.004E-01	2.006E-01	0.618E-01	30.80	
CS-137	30.17Y	1.00	2.118E-01	2.120E-01	0.653E-01	30.80	
TL-208	1.41E+10Y	1.00	4.470E-01	4.470E-01	0.899E-01	20.10	
BI-211	7.04E+08Y	1.00	4.207E+00	4.207E+00	0.484E+00	11.50	
PB-212	1.41E+10Y	1.00	1.537E+00	1.537E+00	0.155E+00	10.08	
PO-212	1.41E+10Y	1.00	1.537E+00	1.537E+00	0.155E+00	10.08	
BI-214	1600.00Y	1.00	1.403E+00	1.403E+00	0.197E+00	14.00	
PB-214	1600.00Y	1.00	1.463E+00	1.463E+00	0.185E+00	12.63	
PO-214	1600.00Y	1.00	1.463E+00	1.463E+00	0.185E+00	12.63	
PO-216	1.41E+10Y	1.00	1.537E+00	1.537E+00	0.155E+00	10.08	
PO-218	1600.00Y	1.00	1.463E+00	1.463E+00	0.185E+00	12.63	
RA-224	1.41E+10Y	1.00	4.285E+00	4.285E+00	1.341E+00	31.29	
RA-226	1600.00Y	1.00	1.403E+00	1.403E+00	0.197E+00	14.00	
AC-228	1.41E+10Y	1.00	1.724E+00	1.724E+00	0.314E+00	18.21	
RA-228	1.41E+10Y	1.00	1.724E+00	1.724E+00	0.314E+00	18.21	
TH-228	1.91Y	1.02	1.537E+00	1.563E+00	0.158E+00	10.08	
TH-230	4.47E+09Y	1.00	1.403E+00	1.403E+00	0.197E+00	14.00	
TH-232	1.41E+10Y	1.00	1.724E+00	1.724E+00	0.314E+00	18.21	
TH-234	4.47E+09Y	1.00	2.258E+00	2.258E+00	2.139E+00	94.72	
U-234	4.47E+09Y	1.00	1.403E+00	1.403E+00	0.197E+00	14.00	
NP-237	2.14E+06Y	1.00	9.713E-01	9.713E-01	3.435E-01	35.36	
U-238	4.47E+09Y	1.00	2.258E+00	2.258E+00	2.139E+00	94.72	
AM-243	7380.00Y	1.00	4.395E-01	4.395E-01	0.833E-01	18.94	
ANH-511	1.00E+09Y	1.00	1.749E-01	1.749E-01	0.680E-01	38.88	
	Total Activity :		6.176E+01	6.188E+01			

Grand Total Activity : 6.176E+01 6.188E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G243492001 Acquisition date : 4-JAN-2010 13:59:59

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	89.08	74	369	1.09	177.67	177	6	1.03E-02	84.4	5.77E+00	T
0	128.42	123	406	1.36	256.38	251	11	1.70E-02	66.0	6.64E+00	T
0	185.68	187	352	1.15	370.96	366	10	2.60E-02	41.9	5.86E+00	T
0	209.25	87	297	0.99	418.12	414	10	1.21E-02	77.6	5.47E+00	T
0	270.46	105	206	1.29	540.60	535	11	1.46E-02	56.6	4.59E+00	T
0	462.59	95	97	1.45	925.00	918	13	1.32E-02	47.4	3.03E+00	T
0	726.85	67	54	1.20	1453.68	1449	8	9.35E-03	46.2	2.08E+00	T
0	794.82	30	42	1.71	1589.64	1585	9	4.11E-03	87.7	1.92E+00	T
3	963.89	61	41	2.29	1927.83	1921	24	8.44E-03	57.0	1.62E+00	T
0	1237.94	73	59	1.45	2475.95	2468	15	1.01E-02	52.0	1.30E+00	T
0	1378.00	34	32	2.29	2756.03	2746	16	4.73E-03	81.7	1.19E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:13:01.91

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492001.CNF;1		
Acquisition date	: 4-JAN-2010 13:59:59.	Detector SN#	:
Detector ID	: GAM12	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:01.48	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492001	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.28660E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 10-FEB-2009 09:20:24.5	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.130E+01	2.131E+00	3.971E-01	2.831E-02	53.638
NB-95	7.249E-02	6.819E-02	5.649E-02	4.132E-03	1.283
CD-109	3.375E+00	9.694E-01	1.150E+00	8.801E-02	2.934
SN-126	3.308E-01	9.500E-02	1.133E-01	8.631E-03	2.921
BA-137M	2.006E-01	6.178E-02	5.878E-02	3.811E-03	3.412
CS-137	2.120E-01	6.531E-02	6.214E-02	4.042E-03	3.412
TL-208	4.470E-01	8.986E-02	5.173E-02	3.701E-03	8.642
BI-211	4.207E+00	4.839E-01	3.049E-01	1.917E-02	13.799
PB-212	1.537E+00	1.549E-01	8.996E-02	6.388E-03	17.087
PO-212	1.537E+00	1.549E-01	8.996E-02	6.388E-03	17.087
BI-214	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
PB-214	1.463E+00	1.848E-01	1.086E-01	8.875E-03	13.471
PO-214	1.463E+00	1.848E-01	1.086E-01	8.875E-03	13.471
PO-216	1.537E+00	1.549E-01	8.996E-02	6.388E-03	17.087
PO-218	1.463E+00	1.848E-01	1.086E-01	8.875E-03	13.471
RA-224	4.285E+00	1.341E+00	1.024E+00	5.648E-02	4.185
RA-226	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
AC-228	1.724E+00	3.141E-01	1.829E-01	2.008E-02	9.430

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.724E+00	3.141E-01	1.829E-01	2.008E-02	9.430
TH-228	1.563E+00	1.576E-01	9.150E-02	6.497E-03	17.087
TH-230	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
TH-232	1.724E+00	3.141E-01	1.829E-01	2.008E-02	9.430
TH-234	2.258E+00	2.139E+00	2.007E+00	3.417E-01	1.125
U-234	1.403E+00	1.965E-01	9.897E-02	8.148E-03	14.181
NP-237	9.713E-01	3.435E-01	3.885E-01	8.534E-02	2.500
U-238	2.258E+00	2.139E+00	2.007E+00	3.417E-01	1.125
AM-243	4.395E-01	8.327E-02	8.028E-02	5.455E-03	5.475
ANH-511	1.749E-01	6.800E-02	4.026E-02	2.454E-03	4.344

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-2.940E-01		3.633E-01	5.336E-01	3.672E-02	-0.551
NA-22	-1.372E-02		4.108E-02	6.491E-02	4.180E-03	-0.211
NA-24	-7.426E-01		3.361E+00	Half-Life too short		
AL-26	-3.817E-03		2.545E-02	4.062E-02	2.331E-03	-0.094
TI-44	3.929E-01	+	5.525E-02	7.167E-02	5.013E-03	5.482
SC-46	2.428E-02		3.688E-02	6.387E-02	5.294E-03	0.380
V-48	-2.122E-02		7.614E-02	1.184E-01	9.121E-03	-0.179
CR-51	-2.406E-01		3.817E-01	6.090E-01	3.872E-02	-0.395
MN-52	1.121E-01		2.726E-01	4.717E-01	3.240E-02	0.238
MN-54	1.399E-03		3.839E-02	6.273E-02	4.931E-03	0.022
CO-56	-2.004E-02		3.767E-02	5.762E-02	4.584E-03	-0.348
CO-57	-2.208E-02		2.365E-02	3.623E-02	2.265E-03	-0.609
CO-58	-3.229E-02		3.850E-02	5.733E-02	4.411E-03	-0.563
FE-59	-1.652E-02		8.882E-02	1.451E-01	1.072E-02	-0.114
CO-60	2.617E-02		4.080E-02	7.167E-02	5.006E-03	0.365
ZN-65	5.192E-02		1.007E-01	1.540E-01	9.685E-03	0.337
GE-68	1.680E-02		1.285E+00	2.145E+00	1.446E-01	0.008
AS-73	-4.210E-01		7.964E-01	1.310E+00	8.457E-02	-0.321
AS-74	-1.428E-03		9.751E-02	1.630E-01	1.038E-02	-0.009
SE-75	-2.552E-02		4.404E-02	6.214E-02	3.522E-03	-0.411
BR-77	1.318E+01		1.810E+01	3.067E+01	1.881E+00	0.430
SR-82	-9.405E-02		3.625E-01	5.784E-01	4.280E-02	-0.163
RB-83	1.308E-02		6.992E-02	1.135E-01	6.961E-03	0.115
RB-84	7.433E-03		6.641E-02	1.090E-01	8.968E-03	0.068
KR-85	8.611E+00		7.421E+00	1.164E+01	7.110E-01	0.740
SR-85	4.507E-02		3.884E-02	6.095E-02	3.722E-03	0.740
RB-86	-3.067E-01		8.640E-01	1.392E+00	9.399E-02	-0.220
Y-88	5.601E-03		3.260E-02	5.572E-02	3.137E-03	0.101
ZR-88	-2.944E-02		3.016E-02	4.580E-02	2.512E-03	-0.643
Y-91	-8.406E+00		1.961E+01	3.112E+01	1.799E+00	-0.270
NB-94	1.452E-02		3.389E-02	5.784E-02	3.939E-03	0.251
NB-95M	1.361E-01		1.355E-01	2.134E-01	1.556E-02	0.638
ZR-95	1.256E-02		6.890E-02	1.150E-01	9.500E-03	0.109

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-97	9.582E-01		3.398E-01	Half-Life too short		
ZR-97	2.910E+01		6.823E+00	Half-Life too short		
MO-99	-4.273E+00		1.843E+01	2.967E+01	4.266E+00	-0.144
TC-99M	-1.015E+13		4.558E+12	Half-Life too short		
RH-101	8.606E-03		3.068E-02	4.951E-02	2.619E-03	0.174
RH-102	-5.609E-03		2.982E-02	4.734E-02	2.811E-03	-0.118
RU-103	-4.508E-02		4.133E-02	5.934E-02	7.570E-03	-0.760
RH-106	1.299E-01		3.090E-01	5.317E-01	6.410E-02	0.244
RU-106	1.299E-01		3.087E-01	5.317E-01	3.414E-02	0.244
AG-108M	2.013E-03		3.151E-02	5.135E-02	3.200E-03	0.039
AG-110M	4.708E-02		3.514E-02	5.868E-02	3.999E-03	0.802
IN-111	5.394E-01		1.689E+00	2.572E+00	1.423E-01	0.210
IN-113M	-4.756E-02		4.382E-02	6.601E-02	3.886E-03	-0.720
SN-113	-4.756E-02		4.382E-02	6.601E-02	3.886E-03	-0.720
IN-114M	-8.757E-04		1.981E-01	2.808E-01	1.473E-02	-0.003
CD-115	3.777E+00		2.070E+01	3.354E+01	2.066E+00	0.113
SN-117M	1.137E-02		5.391E-02	8.789E-02	4.643E-03	0.129
SB-122	1.452E+00		3.452E+00	5.966E+00	3.746E-01	0.243
I-123	2.427E+00		3.036E+01	Half-Life too short		
TE-123M	1.004E-03		2.512E-02	4.059E-02	2.175E-03	0.025
I-124	-5.672E-01		1.008E+00	1.374E+00	8.765E-02	-0.413
SB-124	1.180E-02		6.685E-02	1.152E-01	7.686E-03	0.102
SB-125	-2.567E-02		8.943E-02	1.421E-01	8.446E-03	-0.181
TE-125M	5.259E+00		8.558E+00	1.446E+01	1.248E+00	0.364
I-126	1.689E-02		2.290E-01	3.325E-01	2.168E-02	0.051
SB-126	1.468E-02		1.663E-01	2.515E-01	1.749E-02	0.058
SB-127	7.708E-02		2.002E+00	3.325E+00	3.545E-01	0.023
XE-127	2.703E-02		4.676E-02	7.643E-02	4.064E-03	0.354
I-131	-2.209E-02		1.315E-01	2.136E-01	1.349E-02	-0.103
TE-132	-1.476E-01		9.410E-01	1.582E+00	2.317E-01	-0.093
BA-133	-9.799E-03		4.677E-02	6.622E-02	7.598E-03	-0.148
I-133	3.687E-03		1.568E-02	Half-Life too short		
CS-134	5.933E-02	+	5.220E-02	8.498E-02	6.479E-03	0.698
CS-135	2.200E-01		1.593E-01	2.570E-01	1.933E-02	0.856
I-135	-1.449E+10		3.589E+11	Half-Life too short		
CS-136	-6.044E-02		1.188E-01	1.888E-01	1.419E-02	-0.320
CE-139	1.125E-03		2.901E-02	4.676E-02	2.396E-03	0.024
BA-140	-1.761E-01		2.667E-01	4.159E-01	1.356E-01	-0.423
LA-140	-3.207E-02		8.404E-02	1.317E-01	8.574E-03	-0.244
CE-141	-5.951E-03		6.042E-02	9.720E-02	5.659E-03	-0.061
CE-143	2.365E-03		3.481E-04	Half-Life too short		
CE-144	1.360E-01		1.937E-01	3.106E-01	4.421E-02	0.438
PM-144	1.431E-03		3.282E-02	5.447E-02	3.685E-03	0.026
PR-144	9.705E-02		2.227E+00	3.695E+00	2.498E-01	0.026
PM-146	1.324E-02		4.076E-02	6.753E-02	5.839E-03	0.196
ND-147	3.413E-02		6.801E-01	1.090E+00	1.492E-01	0.031
PM-149	1.929E+01		1.610E+02	2.707E+02	3.823E+01	0.071
EU-152	-3.843E-03		1.013E-01	1.461E-01	9.365E-03	-0.026

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-4.920E-02		8.230E-02	1.256E-01	8.736E-03	-0.392
EU-154	-3.478E-02		1.151E-01	1.825E-01	1.778E-02	-0.191
EU-155	9.141E-02		1.023E-01	1.749E-01	1.179E-02	0.523
TB-160	7.065E-03		1.252E-01	2.044E-01	1.678E-02	0.035
HO-166M	-9.726E-05		6.127E-02	1.011E-01	6.960E-03	-0.001
TM-171	-2.203E+01		2.936E+01	4.271E+01	2.764E+00	-0.516
LU-176	-1.420E-02		2.188E-02	3.488E-02	1.983E-03	-0.407
LU-177	2.475E+00	+	1.924E+00	2.225E+00	1.190E-01	1.112
LU-177M	2.994E-04		1.768E-01	2.878E-01	1.615E-02	0.001
HF-181	9.136E-03		4.492E-02	7.338E-02	4.381E-03	0.125
W-181	2.896E-01		3.811E-01	5.966E-01	3.833E-02	0.485
TA-182	6.046E-02		1.725E-01	2.946E-01	1.748E-02	0.205
RE-183	9.347E-04		1.024E-01	1.650E-01	8.579E-03	0.006
RE-184	4.855E-02		2.150E-01	3.659E-01	2.037E-02	0.133
OS-185	1.871E-02		4.353E-02	7.478E-02	4.832E-03	0.250
RE-188	3.729E-02		1.630E-01	2.662E-01	1.427E-02	0.140
W-188	-1.920E+00		7.808E+00	1.124E+01	6.373E-01	-0.171
IR-192	-1.955E-02		3.391E-02	5.433E-02	3.105E-03	-0.360
AU-195	2.628E-03		2.192E-01	3.599E-01	2.475E-02	0.007
TL-200	-9.052E-04		7.780E-04	Half-Life too short		
TL-201	2.942E+00		1.057E+01	1.722E+01	8.824E-01	0.171
TL-202	6.386E-02		7.440E-02	1.280E-01	7.374E-03	0.499
HG-203	2.356E-02		3.902E-02	6.725E-02	4.044E-03	0.350
BI-207	4.476E-02		4.823E-02	8.767E-02	6.048E-03	0.511
TL-207	-1.678E-01		6.632E-01	1.082E+00	1.783E-01	-0.155
PO-209	-1.675E+00		7.351E+00	1.161E+01	9.692E-01	-0.144
BI-210	-3.663E+00		2.975E+00	4.719E+00	3.555E-01	-0.776
PB-210	-3.663E+00		2.975E+00	4.719E+00	3.555E-01	-0.776
PO-210	-3.663E+00		2.971E+00	4.719E+00	3.026E-01	-0.776
PB-211	-5.857E-01		9.621E-01	1.383E+00	8.621E-01	-0.423
BI-212	8.013E-01	+	3.768E-01	6.665E-01	5.770E-02	1.202
PO-215	-1.678E-01		6.632E-01	1.082E+00	1.783E-01	-0.155
RN-219	-2.446E-01		3.871E-01	6.002E-01	8.101E-02	-0.408
RN-220	-1.756E+01		2.403E+01	3.810E+01	2.376E+00	-0.461
RA-223	-1.678E-01		6.632E-01	1.082E+00	1.783E-01	-0.155
AC-227	1.734E-01		3.418E-01	5.884E-01	8.161E-02	0.295
TH-227	1.734E-01		3.422E-01	5.884E-01	9.899E-02	0.295
TH-229	-1.131E-01		4.758E-01	7.484E-01	3.940E-02	-0.151
PA-231	7.671E-01		1.479E+00	2.531E+00	3.472E-01	0.303
TH-231	-1.678E-01		6.632E-01	1.082E+00	1.783E-01	-0.155
U-231	5.000E-01		1.575E+00	2.379E+00	1.676E-01	0.210
PA-233	4.873E-02		6.063E-02	1.052E-01	6.363E-03	0.463
PA-234	1.689E-02		2.916E-01	4.729E-01	8.745E-02	0.036
PA-234M	4.743E+00		5.121E+00	8.827E+00	7.989E-01	0.537
U-235	1.304E-01		2.022E-01	3.351E-01	5.442E-02	0.389
NP-236	-5.620E-02		7.262E-02	1.123E-01	5.891E-03	-0.500
NP-239	-7.516E-02		1.766E-01	2.841E-01	1.793E-02	-0.265
AM-241	2.651E-02		1.558E-01	2.397E-01	1.703E-02	0.111

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.077E-01		9.118E-02	1.576E-01	1.049E-02	0.684
AM-246	8.016E-02		1.462E-01	2.557E-01	1.719E-02	0.314
CM-247	4.058E-03		3.381E-02	5.562E-02	3.085E-03	0.073
CF-249	5.174E-02		3.670E-02	6.556E-02	3.604E-03	0.789
CF-251	-6.379E-02		1.197E-01	1.865E-01	9.644E-03	-0.342

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492001		
Acquisition date	: 4-JAN-2010 13:59:59	Detector SN#	:
Detector ID	: GAM12	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.48	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492001	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.2866E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 10-FEB-2009 09:20:24	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.130E+01	2.088E+00	1.987E-01	1.066E+00
NB-95	7.249E-02	6.682E-02	2.856E-02	3.409E-02
CD-109	3.375E+00	9.500E-01	6.011E-01	4.847E-01
SN-126	3.308E-01	9.310E-02	5.919E-02	4.750E-02
BA-137M	2.006E-01	6.054E-02	2.979E-02	3.089E-02
CS-137	2.120E-01	6.401E-02	3.149E-02	3.266E-02
TL-208	4.470E-01	8.807E-02	2.627E-02	4.493E-02
BI-211	4.207E+00	4.742E-01	1.560E-01	2.420E-01
PB-212	1.537E+00	1.518E-01	4.631E-02	7.745E-02
PO-212	1.537E+00	1.518E-01	4.631E-02	7.745E-02
BI-214	1.403E+00	1.926E-01	5.022E-02	9.826E-02
PB-214	1.463E+00	1.811E-01	5.560E-02	9.242E-02
PO-214	1.463E+00	1.811E-01	5.560E-02	9.242E-02
PO-216	1.537E+00	1.518E-01	4.631E-02	7.745E-02
PO-218	1.463E+00	1.811E-01	5.560E-02	9.242E-02
RA-224	4.285E+00	1.314E+00	5.270E-01	6.703E-01
RA-226	1.403E+00	1.926E-01	5.022E-02	9.826E-02
AC-228	1.724E+00	3.078E-01	9.220E-02	1.570E-01
RA-228	1.724E+00	3.078E-01	9.220E-02	1.570E-01
TH-228	1.563E+00	1.544E-01	4.711E-02	7.878E-02
TH-230	1.403E+00	1.926E-01	5.022E-02	9.826E-02
TH-232	1.724E+00	3.078E-01	9.220E-02	1.570E-01
TH-234	2.258E+00	2.096E+00	1.054E+00	1.069E+00
U-234	1.403E+00	1.926E-01	5.022E-02	9.826E-02
NP-237	9.713E-01	3.366E-01	2.031E-01	1.718E-01
U-238	2.258E+00	2.096E+00	1.054E+00	1.069E+00
AM-243	4.395E-01	8.160E-02	4.206E-02	4.163E-02
ANH-511	1.749E-01	6.664E-02	2.049E-02	3.400E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-2.940E-01	3.560E-01	2.718E-01	1.816E-01	NOT IDENT.
NA-22	-1.372E-02	4.026E-02	3.255E-02	2.054E-02	NOT IDENT.
NA-24	-7.426E+05	6.587E+06	0.000E+00	3.361E+06	SHORT HLIF
AL-26	-3.817E-03	2.494E-02	2.026E-02	1.272E-02	NOT IDENT.
TI-44	3.929E-01	5.414E-02	3.752E-02	2.762E-02	FAIL ABUN
SC-46	2.428E-02	3.614E-02	3.222E-02	1.844E-02	FAIL ABUN
V-48	-2.122E-02	7.462E-02	5.962E-02	3.807E-02	NOT IDENT.
CR-51	-2.406E-01	3.740E-01	3.121E-01	1.908E-01	NOT IDENT.
MN-52	1.121E-01	2.671E-01	2.361E-01	1.363E-01	NOT IDENT.
MN-54	1.399E-03	3.762E-02	3.167E-02	1.919E-02	NOT IDENT.
CO-56	-2.004E-02	3.691E-02	2.909E-02	1.883E-02	FAIL ABUN
CO-57	-2.208E-02	2.318E-02	1.884E-02	1.183E-02	NOT IDENT.
CO-58	-3.229E-02	3.773E-02	2.896E-02	1.925E-02	NOT IDENT.
FE-59	-1.652E-02	8.704E-02	7.295E-02	4.441E-02	NOT IDENT.
CO-60	2.617E-02	3.999E-02	3.592E-02	2.040E-02	NOT IDENT.
ZN-65	5.192E-02	9.866E-02	7.738E-02	5.034E-02	NOT IDENT.
GE-68	1.680E-02	1.259E+00	1.079E+00	6.423E-01	NOT IDENT.
AS-73	-4.210E-01	7.804E-01	6.896E-01	3.982E-01	NOT IDENT.
AS-74	-1.428E-03	9.556E-02	8.275E-02	4.875E-02	NOT IDENT.
SE-75	-2.552E-02	4.315E-02	3.194E-02	2.202E-02	NOT IDENT.
BR-77	1.318E+01	1.774E+01	1.560E+01	9.050E+00	FAIL ABUN
SR-82	-9.405E-02	3.552E-01	2.924E-01	1.812E-01	NOT IDENT.
RB-83	1.308E-02	6.852E-02	5.775E-02	3.496E-02	NOT IDENT.
RB-84	7.433E-03	6.508E-02	5.499E-02	3.320E-02	NOT IDENT.
KR-85	8.611E+00	7.272E+00	5.924E+00	3.710E+00	NOT IDENT.
SR-85	4.507E-02	3.807E-02	3.101E-02	1.942E-02	NOT IDENT.
RB-86	-3.067E-01	8.468E-01	7.002E-01	4.320E-01	NOT IDENT.
Y-88	5.601E-03	3.195E-02	2.778E-02	1.630E-02	NOT IDENT.
ZR-88	-2.944E-02	2.955E-02	2.340E-02	1.508E-02	NOT IDENT.
Y-91	-8.406E+00	1.922E+01	1.562E+01	9.806E+00	NOT IDENT.
NB-94	1.452E-02	3.321E-02	2.928E-02	1.695E-02	NOT IDENT.
NB-95M	1.361E-01	1.328E-01	1.099E-01	6.776E-02	NOT IDENT.
ZR-95	1.256E-02	6.752E-02	5.817E-02	3.445E-02	NOT IDENT.
NB-97	9.582E+05	6.659E+05	0.000E+00	3.398E+05	SHORT HLIF
ZR-97	2.910E+07	1.337E+07	0.000E+00	6.823E+06	SHORT HLIF
MO-99	-4.273E+00	1.806E+01	1.501E+01	9.216E+00	NOT IDENT.
TC-99M	-1.015E+19	8.935E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.606E-03	3.006E-02	2.556E-02	1.534E-02	FAIL ABUN
RH-102	-5.609E-03	2.923E-02	2.411E-02	1.491E-02	FAIL ABUN
RU-103	-4.508E-02	4.050E-02	3.021E-02	2.066E-02	FAIL ABUN
RH-106	1.299E-01	3.028E-01	2.697E-01	1.545E-01	FAIL ABUN
RU-106	1.299E-01	3.025E-01	2.697E-01	1.544E-01	FAIL ABUN
AG-108M	2.013E-03	3.088E-02	2.619E-02	1.575E-02	NOT IDENT.
AG-110M	4.708E-02	3.444E-02	2.974E-02	1.757E-02	NOT IDENT.
IN-111	5.394E-01	1.655E+00	1.323E+00	8.445E-01	NOT IDENT.
IN-113M	-4.756E-02	4.294E-02	3.373E-02	2.191E-02	NOT IDENT.
SN-113	-4.756E-02	4.294E-02	3.373E-02	2.191E-02	NOT IDENT.
IN-114M	-8.757E-04	1.941E-01	1.451E-01	9.905E-02	NOT IDENT.
CD-115	3.777E+00	2.028E+01	1.706E+01	1.035E+01	NOT IDENT.
SN-117M	1.137E-02	5.283E-02	4.553E-02	2.695E-02	NOT IDENT.
SB-122	1.452E+00	3.383E+00	3.031E+00	1.726E+00	NOT IDENT.
I-123	2.427E+06	5.950E+07	0.000E+00	3.036E+07	SHORT HLIF
TE-123M	1.004E-03	2.461E-02	2.103E-02	1.256E-02	NOT IDENT.
I-124	-5.672E-01	9.877E-01	6.971E-01	5.039E-01	NOT IDENT.
SB-124	1.180E-02	6.551E-02	5.750E-02	3.342E-02	FAIL ABUN
SB-125	-2.567E-02	8.764E-02	7.249E-02	4.472E-02	FAIL ABUN
TE-125M	5.259E+00	8.387E+00	7.534E+00	4.279E+00	NOT IDENT.
I-126	1.689E-02	2.244E-01	1.685E-01	1.145E-01	NOT IDENT.
SB-126	1.468E-02	1.630E-01	1.273E-01	8.317E-02	FAIL ABUN
SB-127	7.708E-02	1.962E+00	1.684E+00	1.001E+00	NOT IDENT.
XE-127	2.703E-02	4.583E-02	3.945E-02	2.338E-02	NOT IDENT.
I-131	-2.209E-02	1.288E-01	1.092E-01	6.573E-02	NOT IDENT.
TE-132	-1.476E-01	9.221E-01	8.151E-01	4.705E-01	NOT IDENT.
BA-133	-9.799E-03	4.584E-02	3.389E-02	2.339E-02	NOT IDENT.
I-133	3.687E+03	3.072E+04	0.000E+00	1.568E+04	SHORT HLIF
CS-134	5.933E-02	5.116E-02	4.294E-02	2.610E-02	FAIL ABUN
CS-135	2.200E-01	1.562E-01	1.321E-01	7.967E-02	NOT IDENT.
I-135	-1.449E+16	7.034E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-6.044E-02	1.165E-01	9.497E-02	5.942E-02	FAIL ABUN
CE-139	1.125E-03	2.843E-02	2.420E-02	1.451E-02	NOT IDENT.
BA-140	-1.761E-01	2.613E-01	2.115E-01	1.333E-01	NOT IDENT.
LA-140	-3.207E-02	8.236E-02	6.579E-02	4.202E-02	NOT IDENT.
CE-141	-5.951E-03	5.922E-02	5.042E-02	3.021E-02	NOT IDENT.
CE-143	2.365E+03	6.822E+02	0.000E+00	3.481E+02	SHORT HLIF
CE-144	1.360E-01	1.898E-01	1.613E-01	9.685E-02	NOT IDENT.
PM-144	1.431E-03	3.217E-02	2.758E-02	1.641E-02	NOT IDENT.
PR-144	9.705E-02	2.182E+00	1.871E+00	1.113E+00	NOT IDENT.

PM-146	1.324E-02	3.994E-02	3.443E-02	2.038E-02 NOT IDENT.
ND-147	3.413E-02	6.665E-01	5.543E-01	3.401E-01 NOT IDENT.
PM-149	1.929E+01	1.578E+02	1.390E+02	8.052E+01 NOT IDENT.
EU-152	-3.843E-03	9.925E-02	7.481E-02	5.064E-02 FAIL ABUN
GD-153	-4.920E-02	8.065E-02	6.556E-02	4.115E-02 NOT IDENT.
EU-154	-3.478E-02	1.127E-01	9.152E-02	5.753E-02 NOT IDENT.
EU-155	9.141E-02	1.003E-01	9.115E-02	5.117E-02 FAIL ABUN
TB-160	7.065E-03	1.227E-01	1.031E-01	6.261E-02 FAIL ABUN
HO-166M	-9.726E-05	6.005E-02	5.118E-02	3.064E-02 FAIL ABUN
TM-171	-2.203E+01	2.878E+01	2.241E+01	1.468E+01 NOT IDENT.
LU-176	-1.420E-02	2.144E-02	1.789E-02	1.094E-02 FAIL ABUN
LU-177	2.475E+00	1.886E+00	1.148E+00	9.620E-01 FAIL ABUN
LU-177M	2.994E-04	1.733E-01	1.469E-01	8.840E-02 NOT IDENT.
HF-181	9.136E-03	4.402E-02	3.737E-02	2.246E-02 NOT IDENT.
W-181	2.896E-01	3.735E-01	3.131E-01	1.905E-01 NOT IDENT.
TA-182	6.046E-02	1.690E-01	1.479E-01	8.623E-02 FAIL ABUN
RE-183	9.347E-04	1.004E-01	8.545E-02	5.120E-02 FAIL ABUN
RE-184	4.855E-02	2.107E-01	1.882E-01	1.075E-01 NOT IDENT.
OS-185	1.871E-02	4.266E-02	3.791E-02	2.176E-02 NOT IDENT.
RE-188	3.729E-02	1.598E-01	1.379E-01	8.151E-02 NOT IDENT.
W-188	-1.920E+00	7.651E+00	5.772E+00	3.904E+00 FAIL ABUN
IR-192	-1.955E-02	3.323E-02	2.785E-02	1.696E-02 FAIL ABUN
AU-195	2.628E-03	2.148E-01	1.878E-01	1.096E-01 FAIL ABUN
TL-200	-9.052E+02	1.525E+03	0.000E+00	7.780E+02 SHORT HLIF
TL-201	2.942E+00	1.036E+01	8.910E+00	5.284E+00 NOT IDENT.
TL-202	6.386E-02	7.292E-02	6.530E-02	3.720E-02 NOT IDENT.
HG-203	2.356E-02	3.824E-02	3.454E-02	1.951E-02 NOT IDENT.
BI-207	4.476E-02	4.726E-02	4.409E-02	2.411E-02 FAIL ABUN
TL-207	-1.678E-01	6.500E-01	5.546E-01	3.316E-01 FAIL ABUN
PO-209	-1.675E+00	7.204E+00	5.857E+00	3.676E+00 NOT IDENT.
BI-210	-3.663E+00	2.915E+00	2.489E+00	1.487E+00 NOT IDENT.
PB-210	-3.663E+00	2.915E+00	2.489E+00	1.487E+00 NOT IDENT.
PO-210	-3.663E+00	2.912E+00	2.489E+00	1.486E+00 NOT IDENT.
PB-211	-5.857E-01	9.428E-01	7.065E-01	4.810E-01 NOT IDENT.
BI-212	8.013E-01	3.693E-01	3.373E-01	1.884E-01 FAIL ABUN
PO-215	-1.678E-01	6.500E-01	5.546E-01	3.316E-01 FAIL ABUN
RN-219	-2.446E-01	3.793E-01	3.065E-01	1.935E-01 FAIL ABUN
RN-220	-1.756E+01	2.355E+01	1.936E+01	1.202E+01 NOT IDENT.
RA-223	-1.678E-01	6.500E-01	5.546E-01	3.316E-01 FAIL ABUN
AC-227	1.734E-01	3.349E-01	3.026E-01	1.709E-01 FAIL ABUN
TH-227	1.734E-01	3.353E-01	3.026E-01	1.711E-01 FAIL ABUN
TH-229	-1.131E-01	4.663E-01	3.865E-01	2.379E-01 FAIL ABUN
PA-231	7.671E-01	1.449E+00	1.300E+00	7.393E-01 FAIL ABUN
TH-231	-1.678E-01	6.500E-01	5.546E-01	3.316E-01 FAIL ABUN
U-231	5.000E-01	1.544E+00	1.242E+00	7.875E-01 FAIL ABUN
PA-233	4.873E-02	5.942E-02	5.392E-02	3.031E-02 FAIL ABUN
PA-234	1.689E-02	2.858E-01	2.383E-01	1.458E-01 FAIL ABUN
PA-234M	4.743E+00	5.019E+00	4.444E+00	2.561E+00 FAIL ABUN
U-235	1.304E-01	1.982E-01	1.738E-01	1.011E-01 FAIL ABUN
NP-236	-5.620E-02	7.117E-02	5.819E-02	3.631E-02 NOT IDENT.
NP-239	-7.516E-02	1.731E-01	1.478E-01	8.829E-02 FAIL ABUN
AM-241	2.651E-02	1.527E-01	1.260E-01	7.790E-02 NOT IDENT.
CM-243	1.077E-01	8.936E-02	8.215E-02	4.559E-02 FAIL ABUN
AM-246	8.016E-02	1.433E-01	1.286E-01	7.310E-02 NOT IDENT.
CM-247	4.058E-03	3.314E-02	2.841E-02	1.691E-02 NOT IDENT.
CF-249	5.174E-02	3.597E-02	3.350E-02	1.835E-02 NOT IDENT.
CF-251	-6.379E-02	1.173E-01	9.646E-02	5.986E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	236.2343
46.50	236.2343
46.50	236.2343
48.70	235.4531
49.72	231.9754
51.35	246.1260
52.39	267.6747
52.97	274.2253
53.15	274.3817
53.44	272.0341
54.07	264.7613
56.28	266.5725
56.28	266.5748
57.37	0.0000
57.53	293.0272
57.53	293.0289
57.60	293.0892
57.98	284.6379
57.98	284.6379
59.32	273.8638
59.32	273.8638
59.40	283.1910
59.54	283.3077
59.72	284.7817
60.01	285.0236
61.10	289.9159
61.14	289.9496
61.30	290.0826
63.00	324.4749
63.29	324.7397
63.29	324.7397
63.58	325.0049
64.28	319.3799
65.12	309.3643
65.20	308.0874
65.20	308.0874
66.05	347.9138
66.72	351.2495
66.83	351.3567
66.91	340.6207
67.20	327.3606
67.20	327.3606
67.75	344.1011
67.85	344.1960
68.90	316.6259
68.90	316.6259
69.30	316.9619
69.67	306.3795
70.82	345.5452
70.82	345.5452
70.83	345.5549
72.80	318.4885
72.87	318.5469
72.87	318.5469
74.67	320.0036
74.81	320.1169
74.81	320.1169
74.81	320.1169
74.81	320.1169
74.81	320.1169
74.81	320.1169
74.81	320.1169
74.97	320.2452
75.28	320.4939
75.70	320.8302
77.11	321.9524
77.11	321.9524

77.11	321.9524
77.11	321.9524
77.11	321.9524
77.11	321.9524
77.11	321.9524
78.38	322.9542
79.62	297.3959
79.80	297.5243
79.80	297.5243
80.11	320.1129
80.18	320.1653
80.30	320.2579
80.30	320.2579
80.57	320.4641
81.00	357.2144
81.07	357.2747
81.07	357.2747
81.07	357.2747
81.07	357.2747
82.60	352.4732
83.37	311.7853
83.78	304.5657
83.78	304.5657
83.78	304.5657
83.78	304.5657
84.21	290.7547
84.90	288.3909
85.43	348.1897
86.29	395.6729
86.50	408.6321
86.54	408.6694
86.59	414.3922
86.72	414.5147
86.79	414.5793
86.94	376.3743
87.30	368.1510
87.30	368.1510
87.30	368.1510
87.30	368.1510
87.30	368.1510
87.30	368.1510
87.30	368.1510
87.57	307.2173
87.88	307.4315
88.03	307.5353
88.36	307.7628
88.47	307.8386
89.95	400.3638
91.11	246.5676
92.29	247.2028
92.38	247.2513
92.38	247.2513
93.35	324.1173
94.00	324.5705
94.67	310.5864
94.67	310.5896
94.90	310.7422
94.90	310.7422
94.90	310.7422
94.90	310.7422
95.87	299.7956
95.87	299.7956
96.73	298.8911
97.43	313.8585
98.44	276.6591
98.44	276.6606
98.88	276.9128
99.55	274.3766
99.55	274.3766
99.86	274.5515
100.00	276.5782
100.10	278.5855
103.18	258.7659
103.76	237.4778
105.00	242.9836
105.31	250.0235
108.00	270.1465
109.28	230.1450

111.00	280.6689
111.00	280.6689
111.76	264.1306
112.95	261.7281
115.19	276.8704
116.30	284.4768
117.00	255.6536
117.00	255.6536
117.66	247.9019
121.11	256.5516
121.62	258.8158
121.78	258.8897
122.06	246.8302
122.32	246.9440
122.32	246.9440
122.32	246.9440
122.32	246.9440
123.07	225.9035
127.23	241.9039
129.76	236.2657
131.20	241.4886
133.02	215.8322
133.54	213.8431
135.34	266.0261
136.00	249.6704
136.25	258.1012
136.48	242.5803
140.51	308.1013
140.51	0.0000
142.18	255.3374
142.65	243.9606
143.76	234.9118
144.24	247.7392
144.24	247.7392
144.24	247.7392
144.24	247.7392
145.22	246.0100
145.44	242.9267
147.16	241.4637
152.43	224.2081
152.70	230.7085
153.22	230.8887
154.21	247.2915
154.21	247.2915
154.21	247.2915
154.21	247.2915
155.03	239.0222
156.02	249.0370
158.56	209.0319
159.00	0.0000
159.00	204.8534
160.31	239.8157
161.27	236.9069
162.32	225.3503
162.64	217.8665
163.35	235.4498
163.89	224.7743
165.85	246.0955
167.43	239.0099
171.28	238.1097
171.86	231.7128
172.10	231.7901
176.55	237.6320
176.60	237.6484
181.06	208.5018
184.41	254.6677
185.71	252.8637
186.00	252.9603
190.27	224.5410
192.34	212.1598
193.63	220.4204
197.04	219.1021
198.01	210.2742
198.60	225.2153
200.40	221.1609
201.83	236.3979
202.84	212.6804
205.31	211.6014

208.36	207.2040
208.81	203.8604
209.75	204.0909
209.75	204.0909
210.97	230.3695
215.65	211.3280
216.55	197.6018
218.09	237.5476
222.10	187.7627
223.80	224.1697
226.40	207.1992
227.00	197.6338
227.08	197.6526
227.20	202.0907
228.16	198.7753
228.18	187.2953
228.18	187.2953
231.56	0.0000
235.69	223.7825
236.00	229.5626
236.00	229.5626
238.63	219.8557
238.63	219.8557
238.63	219.8557
238.63	219.8557
239.00	219.9421
240.98	220.4150
241.98	220.6515
241.98	220.6515
241.98	220.6515
244.69	161.2010
245.39	146.9176
247.94	185.3470
248.90	178.9088
249.79	170.9366
252.40	153.2646
252.85	166.0392
252.85	166.0392
254.15	0.0000
256.20	152.0471
256.20	152.0471
260.50	173.7502
260.90	159.1823
262.80	142.0747
264.65	155.7470
268.24	140.0856
268.79	147.5391
269.46	148.5594
269.46	148.5594
269.46	148.5594
269.46	148.5594
271.23	141.9797
273.65	197.1686
276.40	155.0130
277.35	158.0806
277.60	152.5363
277.60	152.5363
278.00	139.5699
278.60	141.5120
279.20	155.5687
279.53	167.7310
280.46	190.2664
281.68	179.2822
283.67	156.2338
284.30	154.4559
285.00	158.3060
285.90	157.5026
286.10	155.6579
286.10	155.6579
287.40	164.2975
288.45	0.0000
290.67	156.7033
290.80	167.2723
291.72	170.4325
293.26	0.0000
293.70	158.6561
295.21	147.5306
295.21	147.5306

295.21	147.5306
295.96	158.9894
296.50	159.0663
297.23	159.1740
298.57	159.3688
299.80	147.3922
299.80	147.3922
300.09	147.4324
300.09	147.4324
300.09	147.4324
300.09	147.4324
300.12	147.4348
301.29	139.9855
302.84	114.2780
303.76	125.0480
303.91	125.0640
304.40	126.6459
304.40	126.6459
304.84	125.1701
306.84	135.7164
308.46	129.2136
311.98	125.7769
316.51	152.3055
318.01	138.0272
319.02	138.1494
319.41	143.9936
320.08	156.6483
323.87	162.9807
323.87	162.9807
323.87	162.9807
323.87	162.9807
325.23	182.5983
328.77	149.0522
333.44	140.8381
334.20	155.0210
334.20	155.0210
334.30	155.0331
338.28	119.8033
338.28	119.8033
338.28	119.8033
338.28	119.8033
338.32	119.8089
338.32	119.8089
338.32	119.8089
340.50	86.5753
340.57	86.5793
344.27	120.0024
345.85	102.7654
350.59	0.0000
351.07	120.0713
351.92	125.5167
351.92	125.5167
351.92	125.5167
355.39	0.0000
356.01	125.9275
364.48	119.3523
366.43	92.4127
367.43	114.6001
367.94	0.0000
369.80	114.8106
374.96	114.2570
383.85	98.7421
387.95	82.7093
388.63	95.0108
391.69	130.0405
391.69	130.0405
392.90	126.0574
398.62	117.3242
400.65	103.0685
401.10	104.1331
401.81	113.4711
402.60	98.0528
404.84	118.8885
410.95	121.4864
411.60	126.7377
413.65	114.4379
414.70	83.2886
415.30	90.6148

415.76	100.0225
417.63	0.0000
418.52	113.7867
423.70	113.1515
427.08	96.6143
427.89	104.0243
432.53	79.0581
433.93	94.9590
439.47	82.6084
439.56	82.6132
439.89	85.8104
443.98	90.2956
444.90	94.6032
445.03	94.6114
445.03	94.6114
445.03	94.6114
445.03	94.6114
453.90	82.3377
463.38	91.2413
468.07	79.4297
473.00	83.3611
475.06	99.7308
475.35	94.3279
476.78	108.5220
477.59	117.2631
477.96	108.6029
482.03	92.5485
484.57	98.1491
487.03	62.2563
490.36	0.0000
492.35	72.3245
497.08	96.7133
507.63	0.0000
510.53	0.0000
510.84	68.7084
511.00	68.7150
511.85	68.7500
511.85	68.7500
513.99	71.0581
513.99	71.0581
520.41	80.2441
520.65	70.2252
527.90	85.0756
528.96	0.0000
529.64	93.0052
529.87	0.0000
531.02	91.9597
537.32	81.9400
543.00	71.3662
546.56	0.0000
549.76	83.4289
552.65	76.2973
555.20	83.6827
563.23	84.0578
563.90	85.9173
568.70	90.7266
569.32	83.4241
569.50	83.4330
569.67	81.6058
573.80	81.7905
574.00	81.7992
574.64	85.5051
578.91	99.8328
579.30	0.0000
583.14	64.6560
585.48	50.8643
591.81	67.7389
592.07	68.6776
593.00	67.7816
595.88	82.7639
600.56	76.4426
602.52	0.0000
602.71	88.6613
602.71	88.6613
603.60	77.8096
604.41	59.1601
604.70	68.5119
609.31	66.4914

609.31	66.4914
609.31	66.4914
609.31	66.4914
610.33	66.5261
612.46	76.6064
614.37	68.8574
618.01	67.7320
621.84	67.8639
621.84	67.8639
631.29	53.9844
633.02	67.3009
633.10	67.3044
634.78	74.9516
635.90	65.5012
636.97	63.6353
645.85	69.6423
646.12	69.6512
656.30	51.1419
657.75	44.7811
657.90	0.0000
661.65	76.9121
661.65	76.9121
664.57	0.0000
666.33	75.4800
666.33	75.4800
675.00	71.6026
677.61	70.7223
685.20	75.8386
692.80	73.1818
695.00	69.3498
696.49	68.4209
696.49	68.4209
697.00	65.5033
697.49	73.3411
698.33	82.1748
698.50	82.1810
699.00	79.2657
702.63	72.5366
706.10	81.4883
706.58	0.0000
706.67	80.5286
709.31	89.4737
711.68	72.8383
713.82	71.9235
717.42	69.0823
720.50	62.1190
721.93	0.0000
722.20	67.5826
722.78	67.6010
722.78	67.6010
722.89	67.6043
722.95	67.6060
723.30	67.6160
724.18	64.3430
727.18	66.4128
733.00	76.1931
735.90	46.7694
739.58	63.7906
742.81	60.8868
744.21	52.9340
747.13	54.0026
751.79	62.1287
752.31	60.1392
753.82	56.1668
755.35	56.2037
756.15	57.2268
756.87	53.2277
763.93	41.9739
765.79	47.0483
766.42	50.4224
766.84	71.6136
776.49	54.6908
778.00	49.6592
778.57	50.6848
778.89	52.7198
783.80	51.8131
785.46	43.7160
792.07	57.7707

795.84	45.9481
796.30	42.5527
798.80	68.1559
801.93	74.7270
805.60	47.1601
810.29	71.9038
810.76	62.6709
815.85	52.5066
817.79	49.4566
818.51	54.6239
819.60	59.8040
826.30	46.5260
828.27	0.0000
831.60	64.2387
831.96	64.2478
834.83	66.3969
836.80	0.0000
846.75	46.9072
848.13	49.0184
856.28	0.0000
856.80	74.3021
860.37	54.4946
867.32	57.7943
867.82	55.7031
871.10	42.0938
873.19	46.3407
874.81	52.6929
875.33	0.0000
876.40	47.4521
879.36	40.1162
880.27	40.1301
880.51	38.0215
881.50	42.2627
883.24	48.6335
884.67	53.9497
889.25	38.1489
896.60	53.1311
898.02	48.9076
899.00	57.4343
903.28	50.6021
911.07	40.5995
911.07	40.5995
911.07	40.5995
919.63	38.5849
920.93	49.3265
925.00	33.2917
925.24	33.2947
926.50	36.5334
935.52	56.0587
937.48	66.8876
944.10	35.6869
946.00	46.5326
949.00	50.9163
962.29	48.9814
964.01	39.2089
966.15	39.2388
968.20	39.2669
969.11	39.2801
969.11	39.2801
969.11	39.2801
977.42	44.9884
980.50	42.7239
983.50	49.3484
989.30	43.9541
996.32	68.8446
1001.03	42.2930
1001.68	47.8201
1004.76	69.0445
1021.30	0.0000
1024.50	0.0000
1034.80	39.9906
1036.00	41.8671
1037.82	56.7879
1038.57	53.0757
1038.76	0.0000
1045.16	44.7949
1046.59	58.8190
1048.07	56.0474

1050.47	46.7428
1050.47	46.7428
1062.04	45.0430
1063.62	34.7387
1076.63	56.5723
1077.35	53.7552
1078.86	48.1196
1085.78	56.7383
1099.22	48.4351
1112.02	57.2144
1112.84	57.2290
1115.52	49.0932
1120.29	52.5808
1120.29	52.5808
1120.29	52.5808
1120.29	52.5808
1120.51	52.5852
1121.28	47.5437
1124.00	0.0000
1129.67	48.8999
1131.51	0.0000
1147.95	0.0000
1167.94	57.2355
1173.22	54.4118
1175.09	60.2769
1177.93	46.7051
1189.05	51.7406
1204.90	65.7159
1205.75	0.0000
1213.00	58.9893
1221.42	42.3789
1230.97	44.0491
1235.34	64.4616
1236.41	0.0000
1238.25	52.6304
1246.25	53.6023
1260.41	0.0000
1271.85	34.9943
1274.45	42.0239
1274.54	42.0256
1291.56	36.1919
1298.22	0.0000
1312.09	30.3308
1325.50	29.4272
1325.50	29.4272
1332.49	30.4993
1333.61	30.5078
1360.21	20.4834
1362.66	0.0000
1365.15	25.6378
1368.21	24.6328
1368.53	0.0000
1376.25	30.8557
1384.27	30.0370
1394.10	32.0331
1395.20	35.1427
1407.95	20.7406
1434.06	17.7471
1436.60	19.8473
1457.56	0.0000
1460.81	12.6113
1489.15	28.5754
1509.49	17.0176
1596.49	19.5417
1620.62	16.8430
1678.03	0.0000
1691.02	10.4560
1691.02	10.4560
1706.46	0.0000
1750.46	0.0000
1764.49	6.7598
1764.49	6.7598
1764.49	6.7598
1764.49	6.7598
1770.23	13.5356
1771.40	38.6830
1791.20	0.0000
1808.65	9.7461

1836.01 10.7813

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492001

Total Uranium Activity	6.7782E+00	ug/g
Total Uranium Counting Unc.	6.2364E+00	ug/g
Total Uranium Tpu	3.1818E-06	ug/g
Total Uranium Mda	3.1361E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492001
ANALYST	: MXR1	DETECTOR	: GAM12
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 13:59:59.04	SAMPLE ALQT:	128.660 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 8.713E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.312E+00
GROSS GAMMA MDA (pCi/GRAM)	: 3.009E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.455E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:57:44.85

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492002.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:00:25.
Sample ID : G243492002 Sample quantity : 1.37860E+02 GRAM
Detector name : GAM13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.83 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.28*	91	598	1.02	92.32	88	9	1.26E-02	52.2	
2	0	63.01*	196	906	0.99	125.79	121	10	2.72E-02	31.6	
3	5	74.75*	717	864	1.48	149.28	142	18	9.96E-02	8.8	1.24E+00
4	5	77.00*	1018	648	1.10	153.77	142	18	1.41E-01	5.6	
5	4	84.13*	124	483	0.93	168.04	164	28	1.73E-02	29.6	1.45E+00
6	4	87.08	352	533	1.22	173.95	164	28	4.90E-02	11.9	
7	4	89.74	243	497	1.11	179.27	164	28	3.37E-02	16.7	
8	4	92.60*	355	519	1.35	184.98	164	28	4.93E-02	14.7	
9	0	128.64	112	416	1.26	257.08	254	8	1.56E-02	32.9	
10	0	185.62*	223	595	1.62	371.06	364	14	3.10E-02	25.2	
11	0	208.82	98	430	1.11	417.48	414	10	1.36E-02	40.6	
12	1	238.49*	1309	210	1.21	476.84	470	17	1.82E-01	3.4	3.16E+00
13	1	240.70*	141	223	1.37	481.25	470	17	1.96E-02	30.8	
14	1	241.95*	180	192	1.13	483.75	470	17	2.50E-02	16.5	
15	0	270.16	116	240	1.63	540.18	535	10	1.62E-02	26.7	
16	1	295.08*	387	209	1.44	590.04	584	31	5.37E-02	8.6	1.68E+00
17	1	300.01	113	192	1.47	599.91	584	31	1.57E-02	24.3	
18	0	338.25*	231	242	1.31	676.40	671	10	3.21E-02	14.5	
19	0	351.75*	561	291	1.28	703.41	698	12	7.79E-02	7.6	
20	0	463.78	94	221	1.70	927.54	920	16	1.31E-02	37.0	
21	0	510.80*	171	236	2.19	1021.61	1016	17	2.37E-02	23.8	
22	0	583.11*	409	150	1.63	1166.27	1160	14	5.69E-02	8.3	
23	0	609.15*	480	137	1.55	1218.38	1212	15	6.66E-02	7.2	
24	0	727.19	96	109	1.62	1454.53	1449	12	1.33E-02	24.0	
25	0	769.45	11	128	0.89	1539.08	1536	12	1.58E-03	199.4	
26	0	860.63	35	88	1.10	1721.51	1719	10	4.79E-03	54.5	
27	0	910.94*	259	128	1.73	1822.17	1814	18	3.60E-02	12.1	
28	1	964.13	82	59	2.20	1928.60	1922	29	1.14E-02	22.5	1.03E+00
29	1	968.74*	177	54	2.07	1937.81	1922	29	2.46E-02	11.6	
30	0	1120.48	113	105	2.10	2241.42	2233	18	1.57E-02	23.5	
31	0	1460.32	1374	66	2.25	2921.42	2911	20	1.91E-01	3.1	
32	0	1764.10	96	10	1.36	3529.30	3522	15	1.33E-02	12.7	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 11:57:50

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:00:25
Sample ID : G243492002 Sample quantity : 137.86 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.83 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.368E+01	2.912E+00	7.677E-01	4.694E-02	43.873
CD-109	+	88.03	*	3.651E+00	9.127E-01	1.030E+00	8.129E-02	3.544
SN-126	+	64.28		7.504E-01	4.889E-01	4.118E-01	6.413E-02	1.822
	+	86.94		1.488E+00	7.074E-01	4.184E-01	1.725E-01	3.556
	+	87.57	*	3.578E-01	8.945E-02	1.008E-01	7.976E-03	3.549
TL-208		277.35		2.856E-01	4.357E-01	7.131E-01	8.352E-02	0.401
	+	510.84		8.491E-01	4.145E-01	2.795E-01	3.038E-02	3.038
	+	583.14	*	5.868E-01	1.090E-01	6.962E-02	5.763E-03	8.427
	+	860.37		4.697E-01	5.140E-01	5.625E-01	4.743E-02	0.835
BI-210	+	46.50	*	8.378E-01	8.774E-01	8.168E-01	6.658E-02	1.026
PB-210	+	46.50	*	8.378E-01	8.774E-01	8.168E-01	6.658E-02	1.026
PO-210	+	46.50	*	8.378E-01	8.768E-01	8.168E-01	5.823E-02	1.026
BI-211		72.87		5.790E+00	2.106E+00	3.683E+00	3.221E-01	1.572
	+	351.07	*	3.375E+00	5.668E-01	4.005E-01	2.919E-02	8.428
PB-212	+	74.81		2.480E+00	5.377E-01	3.755E-01	4.777E-02	6.604
	+	77.11		2.097E+00	2.939E-01	2.245E-01	1.907E-02	9.341
	+	87.30		1.655E+00	4.456E-01	4.659E-01	5.945E-02	3.552
	+	238.63	*	1.695E+00	1.930E-01	9.761E-02	8.868E-03	17.368
	+	300.09		2.271E+00	1.124E+00	1.309E+00	1.246E-01	1.734
PO-212	+	74.81		2.480E+00	5.377E-01	3.755E-01	4.777E-02	6.604
	+	77.11		2.097E+00	2.939E-01	2.245E-01	1.907E-02	9.341
	+	87.30		1.655E+00	4.456E-01	4.659E-01	5.945E-02	3.552
		115.19		2.026E+00	3.622E+00	6.038E+00	7.002E-01	0.336
	+	238.63	*	1.695E+00	1.930E-01	9.761E-02	8.868E-03	17.368
	+	300.09		2.271E+00	1.124E+00	1.309E+00	1.246E-01	1.734
BI-214	+	609.31	*	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
	+	1120.29		1.582E+00	7.569E-01	6.038E-01	5.402E-02	2.621
	+	1764.49		1.833E+00	4.783E-01	3.253E-01	1.848E-02	5.636
PB-214	+	74.81		4.273E+00	8.940E-01	6.470E-01	7.358E-02	6.604
	+	77.11		3.594E+00	5.734E-01	3.848E-01	4.391E-02	9.341
	+	87.30		2.835E+00	7.416E-01	7.982E-01	8.825E-02	3.552
	+	241.98		1.402E+00	4.821E-01	5.719E-01	5.536E-02	2.451
	+	295.21		1.362E+00	2.687E-01	2.290E-01	2.243E-02	5.947
	+	351.92	*	1.174E+00	2.065E-01	1.396E-01	1.250E-02	8.408

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.273E+00	8.940E-01	6.470E-01	7.358E-02	6.604
	+	77.11		3.594E+00	5.734E-01	3.848E-01	4.391E-02	9.341
	+	87.30		2.835E+00	7.416E-01	7.982E-01	8.825E-02	3.552
	+	241.98		1.402E+00	4.821E-01	5.719E-01	5.536E-02	2.451
	+	295.21		1.362E+00	2.687E-01	2.290E-01	2.243E-02	5.947
	+	351.92	*	1.174E+00	2.065E-01	1.396E-01	1.250E-02	8.408
PO-216	+	74.81		2.480E+00	5.377E-01	3.755E-01	4.777E-02	6.604
	+	77.11		2.097E+00	2.939E-01	2.245E-01	1.907E-02	9.341
	+	87.30		1.655E+00	4.456E-01	4.659E-01	5.945E-02	3.552
	+	238.63	*	1.695E+00	1.930E-01	9.761E-02	8.868E-03	17.368
	+	300.09		2.271E+00	1.124E+00	1.309E+00	1.246E-01	1.734
PO-218	+	74.81		4.273E+00	8.940E-01	6.470E-01	7.358E-02	6.604
	+	77.11		3.594E+00	5.734E-01	3.848E-01	4.391E-02	9.341
	+	87.30		2.835E+00	7.416E-01	7.982E-01	8.825E-02	3.552
	+	241.98		1.402E+00	4.821E-01	5.719E-01	5.536E-02	2.451
	+	295.21		1.362E+00	2.687E-01	2.290E-01	2.243E-02	5.947
	+	351.92	*	1.174E+00	2.065E-01	1.396E-01	1.250E-02	8.408
RA-224	+	240.98	*	2.071E+00	1.285E+00	1.111E+00	8.773E-02	1.864
RA-226	+	609.31	*	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
	+	1120.29		1.582E+00	7.569E-01	6.038E-01	5.402E-02	2.621
	+	1764.49		1.833E+00	4.783E-01	3.253E-01	1.848E-02	5.636
AC-228	+	338.32		1.530E+00	7.679E-01	4.183E-01	1.713E-01	3.658
	+	911.07	*	1.666E+00	4.390E-01	2.885E-01	2.996E-02	5.775
	+	969.11		1.998E+00	6.516E-01	5.050E-01	1.153E-01	3.957
RA-228	+	338.32		1.530E+00	7.679E-01	4.183E-01	1.713E-01	3.658
	+	911.07	*	1.666E+00	4.390E-01	2.885E-01	2.996E-02	5.775
	+	969.11		1.998E+00	6.516E-01	5.050E-01	1.153E-01	3.957
TH-228	+	74.81		2.522E+00	4.944E-01	3.819E-01	3.324E-02	6.604
	+	77.11		2.133E+00	2.989E-01	2.283E-01	1.940E-02	9.341
	+	87.30		1.683E+00	4.208E-01	4.739E-01	3.756E-02	3.552
	+	238.63	*	1.724E+00	1.963E-01	9.929E-02	9.020E-03	17.368
	+	300.09		2.310E+00	1.767E+00	1.332E+00	7.874E-01	1.734
TH-230	+	609.31	*	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
	+	1120.29		1.582E+00	7.569E-01	6.038E-01	5.402E-02	2.621
	+	1764.49		1.833E+00	4.783E-01	3.253E-01	1.848E-02	5.636
TH-232	+	338.32		1.530E+00	4.565E-01	4.183E-01	2.913E-02	3.658
	+	911.07	*	1.666E+00	4.390E-01	2.885E-01	2.996E-02	5.775
	+	969.11		1.998E+00	6.516E-01	5.050E-01	1.153E-01	3.957
TH-234	+	63.29	*	1.896E+00	1.249E+00	1.024E+00	1.880E-01	1.851
	+	92.38		2.487E+00	8.592E-01	6.998E-01	1.260E-01	3.554
U-234	+	609.31	*	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
	+	1120.29		1.582E+00	7.569E-01	6.038E-01	5.402E-02	2.621
	+	1764.49		1.833E+00	4.783E-01	3.253E-01	1.848E-02	5.636
NP-237	+	86.50	*	1.051E+00	3.406E-01	2.951E-01	6.529E-02	3.560
		95.87		-1.908E-01	9.199E-01	1.349E+00	3.337E-01	-0.141
U-238	+	63.29	*	1.896E+00	1.249E+00	1.024E+00	1.880E-01	1.851
	+	92.38		2.487E+00	7.628E-01	6.998E-01	5.907E-02	3.554
AM-243	+	74.67	*	4.020E-01	7.867E-02	6.086E-02	5.257E-03	6.606
	+	86.72		3.941E+01	9.850E+00	1.107E+01	8.812E-01	3.558

---- Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-6.876E+00	3.957E+00	5.880E+00	7.037E-01	-1.169
		142.18		-7.818E+00	2.036E+01	3.173E+01	3.362E+00	-0.246
ANH-511	+	511.00	*	1.834E-01	8.822E-02	6.039E-02	4.215E-03	3.037

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.722E-01	3.848E-01	6.256E-01	4.704E-02	-0.275
NA-22		1274.54	*	0.000E+00	5.961E-02	9.911E-02	5.594E-03	0.000
NA-24		1368.53	*	4.194E+00	5.961E-02	Half-Life too short		
AL-26		1129.67		8.161E-01	2.556E+00	3.812E+00	2.259E-01	0.214
		1808.65	*	1.790E-02	3.613E-02	6.468E-02	3.650E-03	0.277
TI-44		67.85		-4.536E-03	2.708E-02	4.346E-02	3.935E-03	-0.104
	+	78.38	*	3.869E-01	5.424E-02	5.695E-02	4.796E-03	6.795
SC-46		889.25	*	4.072E-02	5.097E-02	8.927E-02	6.759E-03	0.456
	+	1120.51		2.753E-01	1.304E-01	1.520E-01	9.139E-03	1.811
V-48		944.10		-3.453E-01	1.317E+00	2.126E+00	1.552E-01	-0.162
		983.50	*	-6.872E-02	1.124E-01	1.760E-01	1.245E-02	-0.391
		1312.09		1.128E-01	1.140E-01	2.045E-01	1.159E-02	0.552
CR-51		320.08	*	-4.482E-01	4.382E-01	6.741E-01	5.247E-02	-0.665
MN-52		744.21		9.595E-02	4.074E-01	6.660E-01	5.407E-02	0.144
		848.13		-1.062E+01	1.117E+01	1.721E+01	1.340E+00	-0.617
		935.52		1.623E-01	4.594E-01	7.752E-01	5.694E-02	0.209
		1246.25		-2.820E+00	1.284E+01	2.108E+01	1.180E+00	-0.134
		1333.61		-9.311E+00	8.762E+00	1.303E+01	7.412E-01	-0.715
		1434.06	*	-2.854E-01	4.019E-01	6.076E-01	3.492E-02	-0.470
MN-54		834.83	*	9.055E-03	4.986E-02	8.399E-02	6.591E-03	0.108
CO-56		846.75	*	-2.385E-02	5.113E-02	8.205E-02	6.395E-03	-0.291
		977.42		-2.938E-02	4.600E+00	6.472E+00	4.603E-01	-0.005
		1037.82		-5.074E-02	4.082E-01	6.592E-01	4.802E-02	-0.077
		1175.09		2.943E+00	2.930E+00	5.093E+00	2.801E-01	0.578
		1238.25		2.375E-01	1.227E-01	2.263E-01	1.350E-02	1.049
		1360.21		-1.792E-01	1.393E+00	2.273E+00	1.297E-01	-0.079
		1771.40		4.017E-02	2.981E-01	4.368E-01	2.478E-02	0.092
CO-57		122.06	*	3.293E-03	2.559E-02	4.195E-02	5.306E-03	0.079
		136.48		-4.696E-02	2.247E-01	3.605E-01	4.220E-02	-0.130
CO-58		810.76	*	-4.927E-02	5.213E-02	8.088E-02	6.442E-03	-0.609
FE-59		142.65		6.623E-01	3.185E+00	5.077E+00	5.353E-01	0.130
		192.34		5.262E-01	1.048E+00	1.753E+00	2.275E-01	0.300
		1099.22	*	-8.169E-02	1.314E-01	2.025E-01	1.447E-02	-0.403
		1291.56		8.224E-02	1.783E-01	3.063E-01	2.237E-02	0.268
CO-60		1173.22		-7.233E-03	6.161E-02	9.843E-02	5.410E-03	-0.073
		1332.49	*	-9.502E-03	5.072E-02	8.248E-02	4.691E-03	-0.115
ZN-65		1115.52	*	5.884E-02	1.444E-01	2.088E-01	1.268E-02	0.282
GE-68		1077.35	*	2.344E+00	1.939E+00	3.401E+00	2.174E-01	0.689
AS-73		53.44	*	7.187E-02	2.413E-01	4.008E-01	3.386E-02	0.179
AS-74		595.88	*	-6.036E-04	1.244E-01	2.039E-01	1.566E-02	-0.003
		634.78		-1.491E-01	4.835E-01	7.712E-01	6.145E-02	-0.193

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		-5.635E-01	2.821E+00	4.258E+00	4.638E-01	-0.132
		96.73		-4.942E-01	7.642E-01	1.093E+00	1.516E-01	-0.452
		121.11		2.997E-02	1.382E-01	2.274E-01	3.277E-02	0.132
		136.00		-1.717E-02	4.241E-02	6.747E-02	7.622E-03	-0.254
		198.60		1.720E-01	2.045E+00	3.390E+00	3.029E-01	0.051
		264.65	*	3.955E-04	5.427E-02	7.916E-02	6.201E-03	0.005
		279.53		-2.867E-02	1.234E-01	2.017E-01	1.623E-02	-0.142
		303.91		-5.795E-01	2.432E+00	3.808E+00	4.046E-01	-0.152
		400.65		2.852E-02	3.140E-01	5.063E-01	4.653E-02	0.056
BR-77	+	87.88		1.396E+03	3.489E+02	5.092E+02	4.020E+01	2.741
		200.40		2.514E+02	3.135E+02	5.444E+02	4.313E+01	0.462
	+	239.00		4.831E+02	5.054E+01	6.990E+01	5.521E+00	6.912
		249.79		-1.032E+02	1.267E+02	2.030E+02	1.596E+01	-0.508
		281.68		1.977E+01	1.743E+02	2.893E+02	2.218E+01	0.068
		297.23		3.809E+02	1.167E+02	2.110E+02	1.587E+01	1.806
		303.76		-7.426E+01	3.640E+02	5.712E+02	4.255E+01	-0.130
		439.47		2.199E+02	2.989E+02	5.222E+02	3.299E+01	0.421
		484.57		9.182E+01	4.887E+02	8.248E+02	5.560E+01	0.111
		520.65	*	-3.592E+00	2.428E+01	3.888E+01	2.746E+00	-0.092
		574.64		2.399E+02	4.495E+02	7.645E+02	5.744E+01	0.314
		578.91		-5.640E+01	2.179E+02	3.029E+02	2.286E+01	-0.186
		585.48		2.295E+03	5.534E+02	9.548E+02	7.255E+01	2.404
		755.35		7.278E+01	3.888E+02	6.327E+02	5.123E+01	0.115
		817.79		1.449E+02	3.054E+02	5.261E+02	4.165E+01	0.275
SR-82		698.33		3.428E+00	4.875E+01	7.919E+01	6.465E+00	0.043
		776.49	*	-6.261E-02	6.314E-01	9.045E-01	7.280E-02	-0.069
		1395.20		-4.208E+00	1.435E+01	2.288E+01	1.311E+00	-0.184
RB-83		520.41	*	8.799E-03	9.431E-02	1.487E-01	1.050E-02	0.059
		529.64		-1.782E-02	1.258E-01	2.065E-01	1.475E-02	-0.086
		552.65		-1.929E-01	2.412E-01	3.760E-01	2.758E-02	-0.513
RB-84		881.50	*	3.851E-03	1.017E-01	1.552E-01	1.182E-02	0.025
KR-85		513.99	*	1.610E+01	1.065E+01	1.693E+01	1.186E+00	0.951
SR-85		513.99	*	8.429E-02	5.572E-02	8.862E-02	6.208E-03	0.951
RB-86		1076.63	*	1.330E+00	1.329E+00	2.302E+00	1.473E-01	0.578
Y-88		898.02		3.165E-04	5.516E-02	9.129E-02	6.910E-03	0.003
		1836.01	*	-3.777E-03	3.927E-02	6.402E-02	3.605E-03	-0.059
ZR-88		392.90	*	-1.757E-02	3.771E-02	5.889E-02	3.449E-03	-0.298
Y-91		1204.90	*	1.449E+01	2.584E+01	4.474E+01	2.480E+00	0.324
NB-94		702.63	*	1.481E-02	4.516E-02	7.456E-02	6.086E-03	0.199
		871.10		-4.027E-02	4.551E-02	7.029E-02	5.393E-03	-0.573
NB-95		765.79	*	8.371E-02	6.326E-02	1.017E-01	8.214E-03	0.823
NB-95M		235.69	*	2.256E-01	1.561E-01	2.450E-01	2.266E-02	0.921
ZR-95		724.18		1.706E-01	1.448E-01	2.226E-01	1.988E-02	0.766
		756.15	*	3.793E-03	9.540E-02	1.536E-01	1.385E-02	0.025
NB-97		657.90	*	-1.787E-01	9.540E-02	Half-Life too short		
		1024.50		8.409E+01	9.540E-02	Half-Life too short		
ZR-97		254.15		-1.068E+01	9.540E-02	Half-Life too short		
		355.39		-7.481E+00	9.540E-02	Half-Life too short		
		507.63	*	3.135E+01	9.540E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		602.52		-4.648E+01	9.540E-02	Half-Life too short		
		1021.30		-1.781E+00	9.540E-02	Half-Life too short		
		1147.95		-7.770E+00	9.540E-02	Half-Life too short		
		1362.66		-8.134E+01	9.540E-02	Half-Life too short		
		1750.46		2.025E+01	9.540E-02	Half-Life too short		
MO-99		140.51		3.575E+00	4.685E+01	7.588E+01	2.158E+01	0.047
		181.06		-5.659E+00	3.369E+01	4.696E+01	8.429E+00	-0.121
		366.43		-1.727E+01	1.599E+02	2.567E+02	1.651E+01	-0.067
		739.58	*	-1.167E+01	2.619E+01	4.065E+01	6.061E+00	-0.287
		778.00		-6.756E+01	8.363E+01	1.215E+02	9.777E+00	-0.556
TC-99M		140.51	*	7.257E+11	8.363E+01	Half-Life too short		
RH-101	+	127.23		6.891E-02	4.603E-02	5.699E-02	6.921E-03	1.209
		198.01	*	1.636E-02	3.664E-02	6.147E-02	4.867E-03	0.266
		325.23		1.487E-01	2.609E-01	4.373E-01	3.135E-02	0.340
RH-102		418.52		-2.803E-01	3.570E-01	5.419E-01	3.313E-02	-0.517
		475.06	*	2.396E-02	3.439E-02	5.973E-02	3.975E-03	0.401
		631.29		7.606E-02	6.905E-02	1.206E-01	9.582E-03	0.630
		697.49		-3.203E-02	1.064E-01	1.686E-01	1.377E-02	-0.190
		766.84		1.387E-01	1.636E-01	2.534E-01	2.046E-02	0.547
		1046.59		-2.280E-02	1.525E-01	2.456E-01	1.630E-02	-0.093
		1112.84		1.144E-01	3.578E-01	5.135E-01	3.124E-02	0.223
RU-103		497.08	*	-3.564E-02	5.172E-02	8.226E-02	1.083E-02	-0.433
	+	610.33		1.453E+01	3.159E+00	3.372E+00	5.486E-01	4.309
RH-106	+	511.85		9.195E-01	4.423E-01	5.308E-01	3.709E-02	1.732
		621.84	*	-3.691E-01	4.089E-01	6.214E-01	8.010E-02	-0.594
		1050.47		-1.371E+00	2.921E+00	4.566E+00	3.017E-01	-0.300
RU-106	+	511.85		9.195E-01	4.423E-01	5.308E-01	3.709E-02	1.732
		621.84	*	-3.691E-01	4.072E-01	6.214E-01	4.894E-02	-0.594
		1050.47		-1.371E+00	2.921E+00	4.566E+00	3.017E-01	-0.300
AG-108M		433.93	*	2.131E-02	3.826E-02	6.633E-02	4.462E-03	0.321
		614.37		-3.112E-03	5.389E-02	7.583E-02	6.211E-03	-0.041
		722.95		-1.926E-03	6.019E-02	8.331E-02	7.085E-03	-0.023
AG-110M		657.75	*	-1.768E-02	4.645E-02	7.354E-02	6.178E-03	-0.240
		677.61		7.395E-02	4.154E-01	6.817E-01	5.740E-02	0.108
		706.67		-1.342E-02	2.814E-01	4.531E-01	3.811E-02	-0.030
		763.93		9.219E-02	2.344E-01	3.521E-01	2.936E-02	0.262
		884.67		-2.391E-02	6.398E-02	1.029E-01	8.139E-03	-0.232
		937.48		-1.312E-01	1.568E-01	2.420E-01	1.864E-02	-0.542
		1384.27		-2.233E-01	2.325E-01	3.473E-01	2.112E-02	-0.643
IN-111		171.28		-4.989E-01	1.718E+00	2.698E+00	2.118E-01	-0.185
		245.39	*	1.635E+00	2.000E+00	3.077E+00	2.425E-01	0.531
IN-113M		391.69	*	-3.567E-02	5.455E-02	8.419E-02	5.245E-03	-0.424
SN-113		391.69	*	-3.567E-02	5.455E-02	8.419E-02	5.245E-03	-0.424
IN-114M		190.27	*	-4.907E-02	2.325E-01	3.219E-01	2.544E-02	-0.152
CD-115		260.90		-7.236E+01	2.587E+02	4.240E+02	3.311E+01	-0.171
		492.35		5.307E+01	8.076E+01	1.397E+02	9.513E+00	0.380
		527.90	*	-7.594E+00	2.425E+01	3.939E+01	2.807E+00	-0.193
SN-117M		156.02		1.297E+00	2.636E+00	4.310E+00	3.894E-01	0.301
		158.56	*	-1.205E-02	6.354E-02	1.009E-01	8.811E-03	-0.119

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122		563.90	*	3.133E+00	4.475E+00	7.668E+00	5.694E-01	0.409
		692.80		-2.846E+01	9.534E+01	1.510E+02	1.233E+01	-0.188
I-123		159.00	*	2.382E+00	9.534E+01	Half-Life too short		
		528.96		-1.018E+03	9.534E+01	Half-Life too short		
TE-123M		159.00	*	9.851E-04	2.988E-02	4.792E-02	4.184E-03	0.021
I-124		602.71	*	-6.855E-01	1.381E+00	1.870E+00	1.446E-01	-0.367
		722.78		-2.018E+00	8.913E+00	1.208E+01	9.845E-01	-0.167
		1325.50		-2.977E+01	7.084E+01	1.105E+02	6.277E+00	-0.269
		1376.25		9.456E+01	5.891E+01	1.098E+02	6.277E+00	0.861
		1509.49		3.669E+01	2.544E+01	4.850E+01	2.796E+00	0.757
		1691.02		-2.033E-01	6.573E+00	1.057E+01	6.054E-01	-0.019
SB-124		602.71		-2.941E-02	5.927E-02	8.022E-02	6.204E-03	-0.367
		645.85		-2.059E-01	7.052E-01	1.126E+00	9.683E-02	-0.183
		709.31		2.352E+00	3.687E+00	6.212E+00	5.068E-01	0.379
		713.82		-7.392E-01	2.257E+00	3.555E+00	4.163E-01	-0.208
		722.78		-1.255E-01	5.544E-01	7.516E-01	6.272E-02	-0.167
	+	968.20		2.104E+01	5.125E+00	8.760E+00	6.278E-01	2.402
		1045.16		-8.581E-01	3.368E+00	5.378E+00	3.575E-01	-0.160
		1325.50		-1.978E+00	4.706E+00	7.340E+00	4.170E-01	-0.269
		1368.21		6.649E-01	2.352E+00	3.991E+00	4.722E-01	0.167
		1436.60		1.361E+00	5.149E+00	8.698E+00	4.999E-01	0.156
		1691.02	*	-2.983E-03	9.643E-02	1.551E-01	9.660E-03	-0.019
SB-125		427.89	*	-2.985E-02	1.048E-01	1.739E-01	1.119E-02	-0.172
	+	463.38		9.070E-01	6.742E-01	6.381E-01	4.730E-02	1.421
		600.56		3.279E-02	2.293E-01	3.792E-01	3.193E-02	0.086
		635.90		-1.000E-01	3.506E-01	5.602E-01	4.888E-02	-0.178
TE-125M		109.28	*	9.159E-01	9.499E+00	1.565E+01	1.902E+00	0.059
I-126		388.63		1.170E-01	2.721E-01	4.484E-01	2.655E-02	0.261
		666.33	*	-4.264E-02	2.611E-01	4.192E-01	3.420E-02	-0.102
		753.82		1.228E+00	2.107E+00	3.528E+00	2.858E-01	0.348
SB-126		223.80		-1.572E+00	4.643E+00	7.685E+00	6.092E-01	-0.205
		278.60		7.703E-01	3.096E+00	5.171E+00	3.978E-01	0.149
	+	296.50		1.513E+01	2.832E+00	4.124E+00	3.105E-01	3.670
		414.70		-2.588E-03	1.050E-01	1.677E-01	1.019E-02	-0.015
		415.30		4.422E+00	8.450E+00	1.393E+01	8.474E-01	0.317
		555.20		4.129E+00	5.296E+00	9.168E+00	6.744E-01	0.450
		573.80		8.993E-01	1.386E+00	2.375E+00	1.783E-01	0.379
		593.00		-1.072E+00	1.286E+00	1.985E+00	1.520E-01	-0.540
		656.30		2.774E+00	4.847E+00	8.177E+00	6.639E-01	0.339
		666.33		-1.790E-02	1.096E-01	1.760E-01	1.436E-02	-0.102
		675.00		8.312E-01	2.958E+00	4.889E+00	3.991E-01	0.170
		695.00		1.172E-01	1.132E-01	1.952E-01	1.594E-02	0.600
		697.00		-5.547E-02	4.076E-01	6.532E-01	5.333E-02	-0.085
		720.50	*	-3.516E-02	2.509E-01	3.436E-01	2.800E-02	-0.102
		856.80		-2.251E-01	7.867E-01	1.091E+00	8.448E-02	-0.206
		989.30		1.349E+00	2.036E+00	3.491E+00	2.457E-01	0.386
		1034.80		1.434E+00	1.242E+01	2.047E+01	1.377E+00	0.070
		1213.00		4.152E+00	7.243E+00	1.253E+01	6.957E-01	0.331
SB-127		61.10		5.015E+01	3.831E+01	6.072E+01	7.543E+00	0.826

---- Non-Identified Nuclides ----

Nuclide	Iden	Line Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		252.40		4.097E+00	6.701E+00	1.109E+01	4.663E+00	0.369
		290.80		-3.953E+01	3.831E+01	5.102E+01	5.628E+00	-0.775
		411.60		-1.935E+00	2.182E+01	3.473E+01	5.192E+00	-0.056
		444.90		-4.448E+00	1.647E+01	2.727E+01	3.194E+00	-0.163
		473.00		7.267E-02	2.882E+00	4.828E+00	5.896E-01	0.015
		543.00		1.601E-03	2.968E+01	4.908E+01	6.931E+00	0.000
		603.60		-1.255E+01	2.406E+01	3.240E+01	4.045E+00	-0.387
		685.20	*	-7.400E-01	2.699E+00	4.288E+00	4.998E-01	-0.173
		698.50		-2.505E+00	2.988E+01	4.805E+01	7.694E+00	-0.052
		722.20		4.856E+00	6.085E+01	8.525E+01	9.739E+00	0.057
		783.80		1.084E+01	7.138E+00	1.280E+01	1.610E+00	0.846
XE-127		57.60		-5.600E-01	2.325E+00	3.754E+00	3.469E-01	-0.149
		145.22		-2.371E-01	7.822E-01	1.245E+00	1.278E-01	-0.190
		172.10		-4.183E-02	1.306E-01	2.047E-01	1.608E-02	-0.204
		202.84	*	1.342E-03	5.191E-02	8.786E-02	6.963E-03	0.015
		374.96		1.974E-01	2.395E-01	4.041E-01	2.524E-02	0.488
I-131		80.18		3.962E+00	5.300E+00	6.616E+00	5.552E-01	0.599
		284.30		-2.157E+00	1.944E+00	3.016E+00	2.463E-01	-0.715
		364.48	*	-2.788E-02	1.599E-01	2.560E-01	1.818E-02	-0.109
		636.97		-7.077E-01	2.356E+00	3.760E+00	3.203E-01	-0.188
		722.89		-2.561E-01	1.202E+01	1.665E+01	1.369E+00	-0.015
TE-132		49.72		2.742E+00	6.325E+00	9.956E+00	1.070E+00	0.275
		111.76		-2.995E+01	4.745E+01	7.337E+01	9.805E+00	-0.408
		116.30		2.352E+01	4.176E+01	6.958E+01	9.690E+00	0.338
		228.16	*	1.089E+00	1.130E+00	1.945E+00	3.059E-01	0.560
BA-133		53.15		2.899E-01	1.004E+00	1.668E+00	1.400E-01	0.174
		79.62		6.444E-01	1.265E+00	1.555E+00	2.345E-01	0.414
		81.00		3.104E-02	9.764E-02	1.187E-01	1.862E-02	0.262
		276.40		7.040E-01	4.309E-01	7.187E-01	1.001E-01	0.980
		302.84		-1.037E-02	1.646E-01	2.603E-01	3.272E-02	-0.040
		356.01	*	-2.257E-02	6.228E-02	8.607E-02	1.033E-02	-0.262
		383.85		-1.791E-01	3.759E-01	5.879E-01	6.468E-02	-0.305
I-133	+	510.53		8.995E+00	3.759E-01	Half-Life too short		
		529.87	*	-3.846E-03	3.759E-01	Half-Life too short		
		706.58		-1.731E-01	3.759E-01	Half-Life too short		
		856.28		-1.958E+00	3.759E-01	Half-Life too short		
		875.33		-4.438E-01	3.759E-01	Half-Life too short		
		1236.41		8.146E+00	3.759E-01	Half-Life too short		
		1298.22		1.858E-01	3.759E-01	Half-Life too short		
CS-134		475.35		1.710E+00	2.235E+00	3.897E+00	2.594E-01	0.439
		563.23		4.685E-01	4.702E-01	8.178E-01	6.147E-02	0.573
		569.32		4.975E-02	2.420E-01	4.037E-01	3.070E-02	0.123
		604.70		-1.023E-02	4.863E-02	6.761E-02	5.254E-03	-0.151
		795.84	*	1.298E-01	6.413E-02	1.185E-01	9.549E-03	1.096
		801.93		-5.694E-01	5.193E-01	7.980E-01	6.404E-02	-0.713
		1038.57		-8.681E-01	5.057E+00	8.133E+00	5.447E-01	-0.107
		1167.94		-2.411E-01	3.411E+00	5.471E+00	3.037E-01	-0.044
		1365.15		-3.819E-01	1.595E+00	2.570E+00	1.616E-01	-0.149
CS-135		268.24	*	1.797E-01	1.986E-01	3.038E-01	2.806E-02	0.592

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
I-135		288.45		-6.158E+11	1.986E-01	Half-Life too short		
		417.63		-2.824E+12	1.986E-01	Half-Life too short		
		546.56		-2.539E+11	1.986E-01	Half-Life too short		
		836.80		1.951E+12	1.986E-01	Half-Life too short		
		1038.76		-3.449E+10	1.986E-01	Half-Life too short		
		1124.00		-1.553E+12	1.986E-01	Half-Life too short		
		1131.51		1.672E+12	1.986E-01	Half-Life too short		
		1260.41	*	2.787E+11	1.986E-01	Half-Life too short		
		1457.56		1.717E+14	1.986E-01	Half-Life too short		
		1678.03		7.674E+11	1.986E-01	Half-Life too short		
		1706.46		3.751E+12	1.986E-01	Half-Life too short		
		1791.20		-3.700E+11	1.986E-01	Half-Life too short		
CS-136		66.91		-4.582E-03	5.184E-01	7.876E-01	1.238E-01	-0.006
	+	86.29		5.179E+00	1.386E+00	1.857E+00	2.308E-01	2.789
		153.22		7.382E-01	7.623E-01	1.267E+00	1.306E-01	0.583
		163.89		1.940E-01	1.371E+00	2.151E+00	1.975E-01	0.090
		176.55		4.503E-01	4.411E-01	7.299E-01	6.140E-02	0.617
		273.65		-8.333E-01	6.161E-01	8.094E-01	6.767E-02	-1.030
		340.57		2.693E-01	1.884E-01	2.918E-01	2.112E-02	0.923
		818.51		4.526E-02	1.055E-01	1.813E-01	1.436E-02	0.250
		1048.07	*	1.597E-02	1.570E-01	2.581E-01	1.832E-02	0.062
		1235.34		9.988E-01	8.972E-01	1.585E+00	1.563E-01	0.630
BA-137M		661.65	*	-4.359E-02	4.612E-02	6.972E-02	5.686E-03	-0.625
CS-137		661.65	*	-4.608E-02	4.876E-02	7.370E-02	6.024E-03	-0.625
CE-139		165.85	*	-1.964E-03	3.298E-02	5.250E-02	4.116E-03	-0.037
BA-140		162.64		-2.930E-01	9.718E-01	1.497E+00	1.312E-01	-0.196
		304.84		2.398E-01	1.566E+00	2.587E+00	7.161E-01	0.093
		423.70		2.359E+00	2.660E+00	4.305E+00	1.371E+00	0.548
		537.32	*	-1.146E-01	3.521E-01	5.674E-01	1.861E-01	-0.202
LA-140		328.77		1.031E-01	3.682E-01	6.088E-01	4.684E-02	0.169
		432.53		1.056E+00	2.639E+00	4.542E+00	3.096E-01	0.232
		487.03		1.198E-03	1.784E-01	2.979E-01	2.213E-02	0.004
		751.79		-8.813E-02	2.531E+00	4.054E+00	3.680E-01	-0.022
		815.85		1.086E-01	4.750E-01	8.048E-01	7.238E-02	0.135
		867.82		1.101E+00	2.346E+00	3.514E+00	2.881E-01	0.313
		919.63		-1.536E+00	4.912E+00	7.036E+00	6.828E-01	-0.218
		925.24		-1.048E+00	1.756E+00	2.765E+00	2.218E-01	-0.379
		1596.49	*	-1.100E-01	1.230E-01	1.758E-01	1.013E-02	-0.626
CE-141		145.44	*	-3.835E-02	7.090E-02	1.116E-01	1.158E-02	-0.344
CE-143		57.37		-3.397E-04	7.090E-02	Half-Life too short		
		231.56		-6.744E-03	7.090E-02	Half-Life too short		
		293.26	*	2.334E-03	7.090E-02	Half-Life too short		
	+	350.59		7.211E-02	7.090E-02	Half-Life too short		
		490.36		-4.937E-03	7.090E-02	Half-Life too short		
		664.57		4.894E-03	7.090E-02	Half-Life too short		
		721.93		7.153E-04	7.090E-02	Half-Life too short		
CE-144		80.11		1.562E+00	2.067E+00	2.582E+00	2.149E-01	0.605
		133.54	*	-4.730E-02	2.274E-01	3.474E-01	6.022E-02	-0.136
PM-144		476.78		-4.370E-02	8.085E-02	1.308E-01	1.005E-02	-0.334

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		618.01		3.057E-02	4.080E-02	6.831E-02	5.539E-03	0.447
		696.49	*	-9.200E-03	4.712E-02	7.521E-02	6.143E-03	-0.122
		778.57		-2.655E+00	3.337E+00	5.019E+00	4.039E-01	-0.529
PR-144		696.49	*	-6.241E-01	3.196E+00	5.102E+00	4.165E-01	-0.122
		1489.15		-4.197E+00	1.512E+01	2.389E+01	1.377E+00	-0.176
PM-146		453.90	*	3.268E-02	5.237E-02	9.070E-02	8.232E-03	0.360
		633.02		-2.359E-01	1.795E+00	2.899E+00	1.079E+00	-0.081
		735.90		-1.115E-02	2.014E-01	3.227E-01	9.184E-02	-0.035
		747.13		-2.500E-02	1.211E-01	1.914E-01	2.629E-02	-0.131
ND-147	+	91.11		9.634E-01	3.333E-01	5.608E-01	5.058E-02	1.718
		319.41		-1.607E+00	4.130E+00	6.606E+00	4.793E-01	-0.243
		439.89		4.690E+00	7.753E+00	1.346E+01	8.513E-01	0.348
		531.02	*	-6.194E-01	7.585E-01	1.180E+00	1.671E-01	-0.525
PM-149		285.90	*	-1.969E+01	1.783E+02	2.924E+02	4.393E+01	-0.067
EU-152		121.78		2.141E-02	7.377E-02	1.216E-01	1.645E-02	0.176
		244.69		1.380E-01	3.781E-01	5.675E-01	4.473E-02	0.243
		344.27	*	-1.989E-02	1.181E-01	1.834E-01	1.375E-02	-0.108
		443.98		-4.747E-01	1.159E+00	1.905E+00	1.212E-01	-0.249
		778.89		-2.418E-01	3.785E-01	5.763E-01	4.635E-02	-0.420
		867.32		8.382E-01	1.263E+00	1.925E+00	1.481E-01	0.435
	+	964.01		1.066E+00	4.857E-01	7.311E-01	5.257E-02	1.459
		1085.78		-1.973E-01	5.369E-01	8.457E-01	5.345E-02	-0.233
		1112.02		2.828E-01	5.039E-01	7.415E-01	4.516E-02	0.381
		1407.95		-3.305E-03	2.421E-01	3.981E-01	2.283E-02	-0.008
GD-153		69.67		1.122E-01	1.088E+00	1.656E+00	1.480E-01	0.068
	+	83.37		2.218E+01	1.324E+01	2.045E+01	1.665E+00	1.085
		97.43	*	7.971E-03	8.131E-02	1.188E-01	1.081E-02	0.067
		103.18		-1.147E-01	1.036E-01	1.629E-01	1.609E-02	-0.704
EU-154		123.07		-7.698E-02	5.465E-02	8.213E-02	1.197E-02	-0.937
		247.94		-2.764E-02	3.889E-01	6.463E-01	7.060E-02	-0.043
		591.81		-3.185E-01	7.609E-01	1.212E+00	1.330E-01	-0.263
		723.30		3.493E-02	2.543E-01	3.583E-01	3.261E-02	0.098
		756.87		1.554E-01	9.968E-01	1.619E+00	1.878E-01	0.096
		873.19		-3.087E-01	3.872E-01	5.997E-01	6.950E-02	-0.515
		996.32		-2.903E-01	4.910E-01	7.624E-01	1.299E-01	-0.381
		1004.76		-2.075E-01	2.884E-01	4.439E-01	4.641E-02	-0.467
		1274.45	*	0.000E+00	1.663E-01	2.765E-01	2.555E-02	0.000
EU-155		48.70		2.599E-01	4.601E-01	7.297E-01	5.507E-02	0.356
		60.01		1.390E+00	2.187E+00	3.424E+00	3.278E-01	0.406
	+	86.54		4.313E-01	1.079E-01	1.568E-01	1.264E-02	2.751
		105.31	*	1.228E-01	1.063E-01	1.809E-01	1.856E-02	0.679
TB-160	+	86.79		1.173E+00	2.932E-01	4.276E-01	3.401E-02	2.744
		197.04		-1.278E-01	6.325E-01	1.037E+00	8.213E-02	-0.123
		215.65		-4.499E-02	8.183E-01	1.375E+00	1.090E-01	-0.033
	+	298.57		3.367E-01	1.655E-01	2.231E-01	1.675E-02	1.509
		879.36	*	1.054E-01	1.934E-01	3.059E-01	2.333E-02	0.345
		962.29		1.196E+00	8.179E-01	1.310E+00	9.432E-02	0.913
		966.15		1.481E+00	3.559E-01	6.763E-01	4.855E-02	2.190
		1177.93		-1.318E-01	4.952E-01	7.811E-01	4.299E-02	-0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1271.85		1.010E-01	9.666E-01	1.620E+00	9.118E-02	0.062
HO-166M		80.57		1.246E-01	2.687E-01	3.298E-01	2.737E-02	0.378
	+	184.41		1.528E-01	7.798E-02	7.702E-02	6.077E-03	1.984
		280.46		-5.071E-02	9.661E-02	1.556E-01	1.195E-02	-0.326
		410.95		8.926E-03	3.093E-01	4.959E-01	2.994E-02	0.018
		711.68	*	-8.084E-02	8.348E-02	1.220E-01	9.953E-03	-0.663
		752.31		-3.350E-02	3.627E-01	5.784E-01	4.687E-02	-0.058
		810.29		-6.327E-02	7.722E-02	1.211E-01	9.623E-03	-0.522
TM-171		51.35		-7.776E+00	6.967E+00	1.145E+01	9.217E-01	-0.679
		52.39		-1.846E+00	4.155E+00	6.739E+00	5.558E-01	-0.274
		59.40		6.014E+00	1.132E+01	1.768E+01	1.695E+00	0.340
		66.72	*	1.245E-01	1.692E+01	2.573E+01	2.348E+00	0.005
LU-176	+	88.36		8.487E-01	2.122E-01	3.090E-01	2.451E-02	2.746
		201.83		-3.583E-02	3.122E-02	5.039E-02	3.993E-03	-0.711
		306.84	*	3.326E-03	3.102E-02	4.493E-02	3.331E-03	0.074
		401.10		-1.117E+00	8.256E+00	1.314E+01	7.802E-01	-0.085
LU-177		112.95		-1.203E+00	2.125E+00	3.299E+00	3.716E-01	-0.365
	+	208.36	*	2.766E+00	2.259E+00	2.587E+00	2.051E-01	1.069
LU-177M		52.97		6.932E-02	4.517E-01	7.473E-01	6.246E-02	0.093
		54.07		1.026E-01	2.539E-01	4.225E-01	3.619E-02	0.243
		61.30		1.036E+00	7.278E-01	1.161E+00	1.101E-01	0.892
		121.62		9.162E-02	3.804E-01	6.261E-01	7.873E-02	0.146
		147.16		1.214E-01	6.941E-01	1.125E+00	1.131E-01	0.108
		171.86		-3.701E-02	5.049E-01	8.011E-01	6.290E-02	-0.046
		218.09		3.107E-01	8.977E-01	1.530E+00	1.214E-01	0.203
	+	268.79		2.330E+00	1.259E+00	1.625E+00	1.262E-01	1.434
		319.02		-6.630E-02	2.866E-01	4.627E-01	3.358E-02	-0.143
		367.43		-3.482E-01	1.055E+00	1.671E+00	1.071E-01	-0.208
		413.65	*	-8.691E-02	2.237E-01	3.495E-01	2.120E-02	-0.249
HF-181		56.28		1.670E-02	3.154E-01	5.385E-01	4.840E-02	0.031
		57.53		-6.099E-02	1.856E-01	3.127E-01	2.886E-02	-0.195
		65.20		6.637E-02	5.537E-01	8.465E-01	7.808E-02	0.078
		133.02		-2.271E-02	8.077E-02	1.150E-01	1.329E-02	-0.197
		136.25		-1.720E-01	5.064E-01	8.080E-01	9.070E-02	-0.213
		345.85		-9.758E-03	2.574E-01	3.646E-01	2.491E-02	-0.027
		482.03	*	2.254E-02	5.248E-02	8.980E-02	6.033E-03	0.251
W-181		56.28		6.481E-03	1.209E-01	2.065E-01	1.856E-02	0.031
		57.53		-2.340E-02	7.119E-02	1.199E-01	1.107E-02	-0.195
		65.20	*	2.526E-02	2.107E-01	3.222E-01	2.972E-02	0.078
TA-182		67.75		-1.425E-02	6.510E-02	1.043E-01	9.451E-03	-0.137
		100.10		6.648E-02	1.647E-01	2.757E-01	2.607E-02	0.241
		152.43		2.404E-02	3.652E-01	5.881E-01	5.559E-02	0.041
		222.10		-2.817E-01	3.620E-01	5.874E-01	4.657E-02	-0.480
		1001.68		-1.427E-01	2.797E+00	4.516E+00	3.142E-01	-0.032
	+	1121.28		7.571E-01	3.586E-01	4.170E-01	2.504E-02	1.816
		1189.05		-8.271E-02	4.265E-01	7.045E-01	3.889E-02	-0.117
		1221.42	*	1.287E-01	2.650E-01	4.562E-01	2.539E-02	0.282
		1230.97		-3.843E-01	6.408E-01	1.026E+00	5.722E-02	-0.375
RE-183		57.98		-1.669E-02	7.673E-02	1.240E-01	1.155E-02	-0.135

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		59.32		2.555E-02	4.722E-02	7.378E-02	7.063E-03	0.346
		67.20		-4.090E-02	1.241E-01	1.862E-01	1.694E-02	-0.220
		162.32	*	-3.802E-02	1.288E-01	1.984E-01	1.642E-02	-0.192
	+	208.81		2.069E+00	1.690E+00	1.967E+00	1.560E-01	1.052
		291.72		-5.014E-01	1.208E+00	1.696E+00	1.285E-01	-0.296
RE-184		57.98		-6.081E-02	2.795E-01	4.516E-01	4.206E-02	-0.135
		59.32		9.299E-02	1.719E-01	2.686E-01	2.571E-02	0.346
		67.20		-1.490E-01	4.521E-01	6.782E-01	6.168E-02	-0.220
		161.27		2.085E-02	3.922E-01	6.288E-01	5.285E-02	0.033
		216.55		2.332E-01	2.863E-01	4.958E-01	3.932E-02	0.470
		252.85	*	1.924E-01	2.460E-01	4.232E-01	3.322E-02	0.455
		318.01		3.613E-01	4.913E-01	8.337E-01	6.062E-02	0.433
		792.07		2.145E-01	1.324E+00	2.238E+00	1.791E-01	0.096
		903.28		4.984E-01	1.491E+00	2.196E+00	1.646E-01	0.227
		920.93		-8.126E-02	6.740E-01	1.050E+00	7.791E-02	-0.077
OS-185		59.72		5.390E-02	1.293E-01	2.010E-01	1.928E-02	0.268
		61.14		1.093E-01	7.762E-02	1.240E-01	1.177E-02	0.881
		69.30		1.813E-02	1.947E-01	2.963E-01	2.655E-02	0.061
		592.07		-1.429E+00	3.142E+00	4.993E+00	3.820E-01	-0.286
		646.12	*	8.664E-03	5.790E-02	9.522E-02	7.664E-03	0.091
		717.42		8.221E-01	1.203E+00	2.031E+00	1.656E-01	0.405
		874.81		-1.955E-01	7.434E-01	1.207E+00	9.237E-02	-0.162
		880.27		3.564E-01	1.112E+00	1.737E+00	1.324E-01	0.205
RE-188		155.03	*	1.966E-01	1.862E-01	3.103E-01	2.839E-02	0.634
		477.96		-1.738E+00	3.673E+00	5.963E+00	3.984E-01	-0.291
		633.10		-6.226E-01	3.685E+00	5.942E+00	4.728E-01	-0.105
W-188	+	63.58		7.770E+01	4.969E+01	5.795E+01	5.407E+00	1.341
		227.08		1.442E+01	1.367E+01	2.381E+01	1.887E+00	0.606
		290.67	*	-6.559E+00	9.235E+00	1.266E+01	9.606E-01	-0.518
IR-192	+	295.96		1.058E+00	1.982E-01	3.020E-01	2.297E-02	3.502
		308.46		-4.387E-02	1.256E-01	1.758E-01	1.309E-02	-0.250
		316.51	*	1.784E-03	3.918E-02	6.425E-02	4.700E-03	0.028
		468.07		2.874E-02	9.189E-02	1.372E-01	1.013E-02	0.209
		604.41		-2.049E-01	6.655E-01	9.160E-01	1.141E-01	-0.224
		612.46		1.056E+00	1.080E+00	1.649E+00	1.517E-01	0.641
AU-195		65.12		3.559E-02	9.769E-02	1.506E-01	1.390E-02	0.236
		66.83		-1.180E-04	5.645E-02	8.579E-02	7.823E-03	-0.001
	+	75.70		1.311E+00	2.565E-01	3.458E-01	2.966E-02	3.790
		98.88	*	8.354E-03	2.160E-01	3.472E-01	3.226E-02	0.024
	+	129.76		6.112E+00	4.083E+00	5.223E+00	6.210E-01	1.170
TL-200		367.94	*	2.723E-04	4.083E+00	Half-Life too short		
		579.30		-1.575E-03	4.083E+00	Half-Life too short		
		828.27		3.652E-03	4.083E+00	Half-Life too short		
		1205.75		5.892E-03	4.083E+00	Half-Life too short		
TL-201		68.90		1.471E+00	4.768E+00	7.313E+00	6.573E-01	0.201
		70.82		1.174E+00	2.849E+00	4.377E+00	3.882E-01	0.268
		80.30		5.621E+00	7.640E+00	9.530E+00	7.922E-01	0.590
		135.34		1.145E+01	4.141E+01	6.777E+01	7.671E+00	0.169
		167.43	*	-9.376E-01	1.163E+01	1.848E+01	1.449E+00	-0.051

---- Non-Identified Nuclides ----

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TL-202		68.90		9.450E-02	3.063E-01	4.699E-01	4.223E-02	0.201
		70.82		7.523E-02	1.825E-01	2.804E-01	2.487E-02	0.268
		80.30		3.603E-01	4.897E-01	6.108E-01	5.078E-02	0.590
		439.56	*	6.219E-02	9.141E-02	1.592E-01	1.006E-02	0.391
HG-203		70.83		3.010E-01	7.294E-01	1.120E+00	1.541E-01	0.269
		72.87		1.186E+00	4.474E-01	7.542E-01	1.002E-01	1.572
		82.60		-1.181E-01	1.060E+00	1.449E+00	1.952E-01	-0.082
		279.20	*	8.842E-03	4.651E-02	7.749E-02	6.170E-03	0.114
BI-207		72.80		3.104E-01	1.215E-01	2.124E-01	1.858E-02	1.461
	+	74.97		7.217E-01	1.412E-01	1.684E-01	1.451E-02	4.287
	+	84.90		2.853E-01	1.703E-01	2.650E-01	2.135E-02	1.076
		569.67		5.203E-03	3.750E-02	6.231E-02	4.657E-03	0.084
		1063.62	*	8.889E-03	7.467E-02	1.226E-01	7.976E-03	0.072
		1770.23		3.006E-01	5.195E-01	8.502E-01	4.825E-02	0.354
TL-207		81.07		6.472E-02	2.153E-01	2.617E-01	2.164E-02	0.247
	+	83.78		1.881E-01	1.123E-01	1.747E-01	1.418E-02	1.077
		94.90		4.105E-01	2.183E-01	3.464E-01	3.037E-02	1.185
		122.32		-6.815E-01	1.782E+00	2.857E+00	3.733E-01	-0.239
		144.24		-3.819E-01	7.842E-01	1.214E+00	1.365E-01	-0.314
		154.21		2.699E-01	4.253E-01	6.988E-01	7.024E-02	0.386
	+	269.46		5.409E-01	2.924E-01	3.796E-01	3.020E-02	1.425
		323.87	*	5.072E-02	7.738E-01	1.268E+00	2.162E-01	0.040
	+	338.28		6.390E+00	1.987E+00	2.696E+00	3.024E-01	2.370
		445.03		-1.009E+00	2.711E+00	4.461E+00	4.730E-01	-0.226
PO-209		260.50		4.558E-01	1.017E+01	1.693E+01	1.323E+00	0.027
		262.80		-2.599E+00	2.850E+01	4.709E+01	3.673E+00	-0.055
		896.60	*	-2.703E+00	9.968E+00	1.616E+01	1.216E+00	-0.167
PB-211		404.84	*	1.853E-01	1.137E+00	1.830E+00	1.141E+00	0.101
		427.08		1.332E-01	2.478E+00	3.964E+00	2.452E+00	0.034
		831.96		-9.505E-01	1.736E+00	2.564E+00	1.604E+00	-0.371
BI-212	+	727.18	*	1.190E+00	5.828E-01	8.044E-01	7.722E-02	1.479
		785.46		1.001E+00	2.364E+00	4.059E+00	3.257E-01	0.247
		1620.62		3.181E-01	1.776E+00	2.947E+00	1.696E-01	0.108
PO-215		81.07		6.472E-02	2.153E-01	2.617E-01	2.164E-02	0.247
	+	83.78		1.881E-01	1.123E-01	1.747E-01	1.418E-02	1.077
		94.90		4.105E-01	2.183E-01	3.464E-01	3.037E-02	1.185
		122.32		-6.815E-01	1.782E+00	2.857E+00	3.733E-01	-0.239
		144.24		-3.819E-01	7.842E-01	1.214E+00	1.365E-01	-0.314
		154.21		2.699E-01	4.253E-01	6.988E-01	7.024E-02	0.386
	+	269.46		5.409E-01	2.924E-01	3.796E-01	3.020E-02	1.425
		323.87	*	5.072E-02	7.738E-01	1.268E+00	2.162E-01	0.040
	+	338.28		6.390E+00	1.987E+00	2.696E+00	3.024E-01	2.370
		445.03		-1.009E+00	2.711E+00	4.461E+00	4.730E-01	-0.226
RN-219	+	271.23		6.940E-01	3.770E-01	4.671E-01	4.482E-02	1.486
		401.81	*	-2.894E-01	5.022E-01	7.749E-01	1.059E-01	-0.373
RN-220		549.76	*	-1.804E+01	3.130E+01	4.968E+01	3.632E+00	-0.363
RA-223		81.07		6.472E-02	2.153E-01	2.617E-01	2.164E-02	0.247
	+	83.78		1.881E-01	1.123E-01	1.747E-01	1.418E-02	1.077
		94.90		4.105E-01	2.183E-01	3.464E-01	3.037E-02	1.185

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		-6.815E-01	1.782E+00	2.857E+00	3.733E-01	-0.239
		144.24		-3.819E-01	7.842E-01	1.214E+00	1.365E-01	-0.314
		154.21		2.699E-01	4.253E-01	6.988E-01	7.024E-02	0.386
	+	269.46		5.409E-01	2.924E-01	3.796E-01	3.020E-02	1.425
		323.87	*	5.072E-02	7.738E-01	1.268E+00	2.162E-01	0.040
	+	338.28		6.390E+00	1.987E+00	2.696E+00	3.024E-01	2.370
		445.03		-1.009E+00	2.711E+00	4.461E+00	4.730E-01	-0.226
AC-227		79.80		7.921E-01	1.613E+00	1.975E+00	4.225E-01	0.401
		236.00		7.968E-01	3.079E-01	4.879E-01	5.735E-02	1.633
		256.20	*	-2.898E-01	4.046E-01	6.465E-01	9.646E-02	-0.448
		286.10		-6.218E-02	1.620E+00	2.665E+00	3.353E-01	-0.023
	+	299.80		4.208E+00	2.165E+00	2.866E+00	4.861E-01	1.468
		304.40		-7.944E-01	2.148E+00	3.331E+00	5.967E-01	-0.238
		334.20		8.059E-01	2.863E+00	4.161E+00	7.806E-01	0.194
TH-227		79.80		7.921E-01	1.613E+00	1.975E+00	4.280E-01	0.401
	+	94.00		9.611E+00	3.519E+00	3.736E+00	8.141E-01	2.573
		236.00		7.968E-01	3.050E-01	4.879E-01	5.139E-02	1.633
		256.20	*	-2.898E-01	4.055E-01	6.465E-01	1.144E-01	-0.448
		286.10		-6.218E-02	1.621E+00	2.665E+00	2.673E+00	-0.023
	+	299.80		4.208E+00	2.165E+00	2.866E+00	4.861E-01	1.468
		304.40		-7.944E-01	2.148E+00	3.331E+00	5.967E-01	-0.238
		334.20		8.059E-01	2.863E+00	4.161E+00	7.806E-01	0.194
TH-229	+	85.43		2.815E-01	1.681E-01	2.698E-01	2.166E-02	1.044
	+	88.47		3.377E-01	1.162E-01	1.764E-01	1.402E-02	1.914
		100.00		8.551E-02	1.695E-01	2.846E-01	2.688E-02	0.300
		193.63	*	-1.740E-01	5.290E-01	8.862E-01	7.010E-02	-0.196
		210.97		7.261E-01	9.206E-01	1.421E+00	1.127E-01	0.511
PA-231		283.67	*	-5.772E-01	1.655E+00	2.680E+00	3.927E-01	-0.215
	+	301.29		1.683E+00	8.402E-01	1.160E+00	1.330E-01	1.451
TH-231		81.07		6.472E-02	2.153E-01	2.617E-01	2.164E-02	0.247
	+	83.78		1.881E-01	1.123E-01	1.747E-01	1.418E-02	1.077
		94.90		4.105E-01	2.183E-01	3.464E-01	3.037E-02	1.185
		122.32		-6.815E-01	1.782E+00	2.857E+00	3.733E-01	-0.239
		144.24		-3.819E-01	7.842E-01	1.214E+00	1.365E-01	-0.314
		154.21		2.699E-01	4.253E-01	6.988E-01	7.024E-02	0.386
	+	269.46		5.409E-01	2.924E-01	3.796E-01	3.020E-02	1.425
		323.87	*	5.072E-02	7.738E-01	1.268E+00	2.162E-01	0.040
	+	338.28		6.390E+00	1.987E+00	2.696E+00	3.024E-01	2.370
		445.03		-1.009E+00	2.711E+00	4.461E+00	4.730E-01	-0.226
U-231	+	84.21		1.120E+01	6.689E+00	1.035E+01	8.377E-01	1.082
	+	92.29		1.313E+01	4.027E+00	5.962E+00	5.026E-01	2.203
		95.87	*	-2.991E-01	1.440E+00	2.115E+00	1.881E-01	-0.141
		108.00		-2.448E+00	2.846E+00	4.512E+00	4.761E-01	-0.543
PA-233	+	75.28		2.106E+01	4.912E+00	5.202E+00	7.978E-01	4.048
	+	86.59		7.005E+00	2.496E+00	2.548E+00	6.781E-01	2.750
	+	300.12		1.173E+00	5.939E-01	8.104E-01	1.155E-01	1.448
		311.98	*	5.623E-02	7.265E-02	1.234E-01	9.424E-03	0.456
		340.50		1.330E+00	8.819E-01	1.297E+00	3.020E-01	1.025
		398.62		9.906E-01	2.575E+00	4.203E+00	1.088E+00	0.236

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		8.433E-01	2.015E+00	3.291E+00	6.802E-01	0.256
PA-234	+	63.00		2.210E+00	1.441E+00	1.654E+00	2.635E-01	1.336
		94.67		4.569E-01	1.685E-01	2.638E-01	3.293E-02	1.732
		98.44		-1.095E-02	9.075E-02	1.387E-01	7.749E-02	-0.079
		99.86		1.043E-01	4.498E-01	7.273E-01	6.855E-02	0.143
		111.00		-2.332E-02	1.848E-01	3.018E-01	4.186E-02	-0.077
		131.20		-3.954E-02	1.244E-01	1.771E-01	2.079E-02	-0.223
		152.70		-1.346E-02	3.491E-01	5.596E-01	9.774E-02	-0.024
	+	186.00		5.500E+00	3.256E+00	3.024E+00	9.382E-01	1.818
		226.40		3.261E-01	4.289E-01	7.378E-01	9.413E-02	0.442
		227.20		4.390E-01	4.562E-01	7.923E-01	6.278E-02	0.554
		248.90		-6.403E-01	8.890E-01	1.414E+00	3.131E-01	-0.453
	+	293.70		6.537E+00	1.568E+00	1.805E+00	3.032E-01	3.621
		369.80		7.329E-01	9.707E-01	1.618E+00	3.396E-01	0.453
		568.70		-4.653E-01	1.267E+00	2.038E+00	1.522E-01	-0.228
		569.50		5.712E-02	3.335E-01	5.551E-01	4.148E-02	0.103
		574.00		1.110E+00	1.780E+00	3.046E+00	2.287E-01	0.364
		699.00		-5.540E-04	9.727E-01	1.573E+00	2.969E-01	0.000
		706.10		-8.429E-01	1.484E+00	2.227E+00	9.913E-01	-0.378
		733.00		1.814E-01	5.634E-01	8.061E-01	1.774E-01	0.225
		742.81		7.076E-01	1.865E+00	2.984E+00	2.004E+00	0.237
		796.30		2.613E+00	1.407E+00	2.296E+00	6.165E-01	1.138
		805.60		1.051E+00	1.312E+00	2.243E+00	6.835E-01	0.468
		819.60		5.659E-02	1.594E+00	2.665E+00	1.009E+00	0.021
		826.30		4.506E-02	1.043E+00	1.744E+00	7.780E-01	0.026
		831.60		-5.514E-01	8.633E-01	1.326E+00	3.930E-01	-0.416
		876.40		-7.680E-01	1.325E+00	1.665E+00	1.710E+00	-0.461
		880.51		1.405E-01	3.971E-01	6.223E-01	4.743E-02	0.226
		883.24		1.665E-01	3.807E-01	6.238E-01	4.186E-01	0.267
		899.00		1.107E-01	1.108E+00	1.844E+00	8.024E-01	0.060
		925.00		-1.052E+00	1.643E+00	2.579E+00	1.908E-01	-0.408
		926.50		-2.456E-01	2.491E-01	3.675E-01	9.146E-02	-0.668
		946.00	*	9.711E-02	4.102E-01	6.865E-01	1.249E-01	0.141
		949.00		3.577E-01	6.147E-01	1.053E+00	7.660E-02	0.340
		980.50		-2.282E-01	1.042E+00	1.598E+00	1.134E-01	-0.143
		1394.10		2.446E-02	1.410E+00	2.328E+00	1.508E+00	0.011
PA-234M		766.42		1.738E+01	1.940E+01	2.715E+01	1.375E+01	0.640
		1001.03	*	-1.378E+00	6.297E+00	1.004E+01	8.602E-01	-0.137
U-235	+	89.95		3.389E+00	1.539E+00	1.677E+00	5.152E-01	2.021
	+	93.35		2.990E+00	1.215E+00	1.338E+00	3.746E-01	2.236
		105.00		1.190E+00	1.094E+00	1.768E+00	5.361E-01	0.673
		143.76	*	2.769E-02	2.398E-01	3.807E-01	7.029E-02	0.073
		163.35		-4.980E-02	5.492E-01	8.535E-01	1.611E-01	-0.058
	+	185.71		2.037E-01	1.040E-01	1.115E-01	8.799E-03	1.827
		205.31		4.554E-02	6.236E-01	9.176E-01	1.723E-01	0.050
NP-236		94.67		3.501E-01	1.242E-01	2.004E-01	1.751E-02	1.746
		98.44		-8.292E-03	6.845E-02	1.048E-01	9.679E-03	-0.079
		111.00		-1.764E-02	1.398E-01	2.283E-01	2.507E-02	-0.077
		160.31	*	-3.058E-02	8.665E-02	1.365E-01	1.163E-02	-0.224

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		4.980E-02	1.507E-01	2.445E-01	2.294E-02	0.204
		117.00	*	-2.474E-01	1.945E-01	2.984E-01	3.542E-02	-0.829
	+	209.75		1.601E+00	1.307E+00	1.535E+00	1.217E-01	1.043
		228.18		1.401E-01	2.442E-01	4.182E-01	3.313E-02	0.335
		277.60		1.239E-01	2.097E-01	3.428E-01	2.640E-02	0.362
		334.30		4.894E-01	1.622E+00	2.363E+00	1.661E-01	0.207
AM-241		59.54	*	3.395E-02	6.604E-02	1.031E-01	1.048E-02	0.329
CM-243		99.55		5.125E-02	1.551E-01	2.517E-01	2.361E-02	0.204
		103.76	*	-4.694E-02	9.526E-02	1.540E-01	1.534E-02	-0.305
		117.00		-2.546E-01	2.001E-01	3.071E-01	3.644E-02	-0.829
	+	209.75		1.578E+00	1.289E+00	1.513E+00	1.200E-01	1.043
		228.18		1.416E-01	2.468E-01	4.227E-01	3.348E-02	0.335
		277.60		1.250E-01	2.114E-01	3.457E-01	2.662E-02	0.362
AM-246		798.80		-2.773E-01	1.926E-01	2.894E-01	2.310E-02	-0.958
		1036.00		-1.975E-01	3.937E-01	6.152E-01	4.132E-02	-0.321
		1062.04		-2.717E-01	3.314E-01	5.049E-01	3.290E-02	-0.538
		1078.86	*	2.596E-01	2.180E-01	3.821E-01	2.437E-02	0.679
CM-247		278.00		-3.211E-02	8.876E-01	1.414E+00	1.089E-01	-0.023
		287.40		1.544E-01	1.322E+00	2.191E+00	1.669E-01	0.070
		402.60	*	-3.445E-02	4.511E-02	6.892E-02	4.104E-03	-0.500
CF-249		252.85		7.161E-01	9.158E-01	1.575E+00	1.237E-01	0.455
		333.44		-1.803E-02	2.110E-01	2.989E-01	2.105E-02	-0.060
		387.95	*	1.333E-02	4.836E-02	7.900E-02	4.691E-03	0.169
CF-251		176.60	*	1.175E-01	1.382E-01	2.272E-01	1.788E-02	0.517
		227.00		4.098E-01	4.014E-01	6.987E-01	5.536E-02	0.587
		285.00		-1.733E+00	1.918E+00	3.013E+00	2.302E-01	-0.575

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492002		
Acquisition date	: 4-JAN-2010 14:00:25	Detector SN#	:
Detector ID	: GAM13	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.83	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492002	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3786E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 2-FEB-2009 10:41:22	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.368E+01	2.854E+00	7.701E-01	0.000E+00
CD-109	3.651E+00	8.945E-01	1.091E+00	0.000E+00
SN-126	3.578E-01	8.766E-02	1.068E-01	0.000E+00
TL-208	5.868E-01	1.068E-01	7.113E-02	0.000E+00
BI-210	8.378E-01	8.599E-01	8.749E-01	0.000E+00
PB-210	8.378E-01	8.599E-01	8.749E-01	0.000E+00
PO-210	8.378E-01	8.593E-01	8.749E-01	0.000E+00
BI-211	3.375E+00	5.555E-01	4.132E-01	0.000E+00
PB-212	1.695E+00	1.891E-01	1.015E-01	0.000E+00
PO-212	1.695E+00	1.891E-01	1.015E-01	0.000E+00
BI-214	1.300E+00	2.189E-01	1.379E-01	0.000E+00
PB-214	1.174E+00	2.023E-01	1.441E-01	0.000E+00
PO-214	1.174E+00	2.023E-01	1.441E-01	0.000E+00
PO-216	1.695E+00	1.891E-01	1.015E-01	0.000E+00
PO-218	1.174E+00	2.023E-01	1.441E-01	0.000E+00
RA-224	2.071E+00	1.259E+00	1.155E+00	0.000E+00
RA-226	1.300E+00	2.189E-01	1.379E-01	0.000E+00
AC-228	1.666E+00	4.302E-01	2.922E-01	0.000E+00
RA-228	1.666E+00	4.302E-01	2.922E-01	0.000E+00
TH-228	1.724E+00	1.923E-01	1.032E-01	0.000E+00
TH-230	1.300E+00	2.189E-01	1.379E-01	0.000E+00
TH-232	1.666E+00	4.302E-01	2.922E-01	0.000E+00
TH-234	1.896E+00	1.224E+00	1.091E+00	0.000E+00
U-234	1.300E+00	2.189E-01	1.379E-01	0.000E+00
NP-237	1.051E+00	3.338E-01	3.126E-01	0.000E+00
U-238	1.896E+00	1.224E+00	1.091E+00	0.000E+00
AM-243	4.020E-01	7.709E-02	6.463E-02	0.000E+00
ANH-511	1.834E-01	8.645E-02	6.186E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-1.722E-01	3.771E-01	6.417E-01	0.000E+00	NOT IDENT.
NA-22	0.000E+00	5.842E-02	9.969E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.430E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.790E-02	3.540E-02	6.460E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.315E-02	6.043E-02	0.000E+00	FAIL ABUN
SC-46	4.072E-02	4.995E-02	9.044E-02	0.000E+00	FAIL ABUN
V-48	-6.872E-02	1.102E-01	1.779E-01	0.000E+00	NOT IDENT.
CR-51	-4.482E-01	4.294E-01	6.968E-01	0.000E+00	NOT IDENT.
MN-52	-2.854E-01	3.939E-01	6.098E-01	0.000E+00	NOT IDENT.
MN-54	9.055E-03	4.886E-02	8.521E-02	0.000E+00	NOT IDENT.
CO-56	-2.385E-02	5.011E-02	8.321E-02	0.000E+00	NOT IDENT.
CO-57	3.293E-03	2.508E-02	4.415E-02	0.000E+00	NOT IDENT.
CO-58	-4.927E-02	5.108E-02	8.210E-02	0.000E+00	NOT IDENT.
FE-59	-8.169E-02	1.288E-01	2.043E-01	0.000E+00	NOT IDENT.
CO-60	-9.502E-03	4.971E-02	8.289E-02	0.000E+00	NOT IDENT.
ZN-65	5.884E-02	1.415E-01	2.106E-01	0.000E+00	NOT IDENT.
GE-68	2.344E+00	1.901E+00	3.432E+00	0.000E+00	NOT IDENT.
AS-73	7.187E-02	2.365E-01	4.283E-01	0.000E+00	NOT IDENT.
AS-74	-6.036E-04	1.219E-01	2.083E-01	0.000E+00	NOT IDENT.
SE-75	3.955E-04	5.318E-02	8.211E-02	0.000E+00	NOT IDENT.
BR-77	-3.592E+00	2.380E+01	3.981E+01	0.000E+00	FAIL ABUN
SR-82	-6.261E-02	6.187E-01	9.189E-01	0.000E+00	NOT IDENT.
RB-83	8.799E-03	9.242E-02	1.522E-01	0.000E+00	NOT IDENT.
RB-84	3.851E-03	9.970E-02	1.573E-01	0.000E+00	NOT IDENT.
KR-85	1.610E+01	1.043E+01	1.734E+01	0.000E+00	NOT IDENT.
SR-85	8.429E-02	5.461E-02	9.077E-02	0.000E+00	NOT IDENT.
RB-86	1.330E+00	1.303E+00	2.324E+00	0.000E+00	NOT IDENT.
Y-88	-3.777E-03	3.848E-02	6.392E-02	0.000E+00	NOT IDENT.
ZR-88	-1.757E-02	3.696E-02	6.063E-02	0.000E+00	NOT IDENT.
Y-91	1.449E+01	2.532E+01	4.506E+01	0.000E+00	NOT IDENT.
NB-94	1.481E-02	4.426E-02	7.589E-02	0.000E+00	NOT IDENT.
NB-95	8.371E-02	6.199E-02	1.034E-01	0.000E+00	NOT IDENT.
NB-95M	2.256E-01	1.530E-01	2.547E-01	0.000E+00	NOT IDENT.
ZR-95	3.793E-03	9.349E-02	1.561E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.576E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.675E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.167E+01	2.567E+01	4.134E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	9.321E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.636E-02	3.591E-02	6.411E-02	0.000E+00	FAIL ABUN
RH-102	2.396E-02	3.370E-02	6.127E-02	0.000E+00	NOT IDENT.
RU-103	-3.564E-02	5.068E-02	8.431E-02	0.000E+00	FAIL ABUN
RH-106	-3.691E-01	4.008E-01	6.341E-01	0.000E+00	FAIL ABUN
RU-106	-3.691E-01	3.991E-01	6.341E-01	0.000E+00	FAIL ABUN
AG-108M	2.131E-02	3.750E-02	6.816E-02	0.000E+00	NOT IDENT.
AG-110M	-1.768E-02	4.553E-02	7.495E-02	0.000E+00	NOT IDENT.
IN-111	1.635E+00	1.960E+00	3.197E+00	0.000E+00	NOT IDENT.
IN-113M	-3.567E-02	5.346E-02	8.668E-02	0.000E+00	NOT IDENT.
SN-113	-3.567E-02	5.346E-02	8.668E-02	0.000E+00	NOT IDENT.
IN-114M	-4.907E-02	2.279E-01	3.360E-01	0.000E+00	NOT IDENT.
CD-115	-7.594E+00	2.376E+01	4.032E+01	0.000E+00	NOT IDENT.
SN-117M	-1.205E-02	6.227E-02	1.057E-01	0.000E+00	NOT IDENT.
SB-122	3.133E+00	4.385E+00	7.839E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.082E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	9.851E-04	2.929E-02	5.019E-02	0.000E+00	NOT IDENT.
I-124	-6.855E-01	1.354E+00	1.909E+00	0.000E+00	NOT IDENT.
SB-124	-2.983E-03	9.450E-02	1.551E-01	0.000E+00	FAIL ABUN
SB-125	-2.985E-02	1.027E-01	1.788E-01	0.000E+00	FAIL ABUN
TE-125M	9.159E-01	9.309E+00	1.651E+01	0.000E+00	NOT IDENT.
I-126	-4.264E-02	2.558E-01	4.271E-01	0.000E+00	NOT IDENT.
SB-126	-3.516E-02	2.459E-01	3.496E-01	0.000E+00	FAIL ABUN
SB-127	-7.400E-01	2.645E+00	4.367E+00	0.000E+00	NOT IDENT.
XE-127	1.342E-03	5.088E-02	9.160E-02	0.000E+00	NOT IDENT.
I-131	-2.788E-02	1.567E-01	2.639E-01	0.000E+00	NOT IDENT.
TE-132	1.089E+00	1.107E+00	2.023E+00	0.000E+00	NOT IDENT.
BA-133	-2.257E-02	6.104E-02	8.878E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.327E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.285E-02	1.203E-01	0.000E+00	NOT IDENT.
CS-135	1.797E-01	1.946E-01	3.151E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.073E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.597E-02	1.539E-01	2.606E-01	0.000E+00	FAIL ABUN
BA-137M	-4.359E-02	4.520E-02	7.105E-02	0.000E+00	NOT IDENT.
CS-137	-4.608E-02	4.778E-02	7.511E-02	0.000E+00	NOT IDENT.
CE-139	-1.964E-03	3.232E-02	5.495E-02	0.000E+00	NOT IDENT.
BA-140	-1.146E-01	3.451E-01	5.807E-01	0.000E+00	NOT IDENT.
LA-140	-1.100E-01	1.206E-01	1.760E-01	0.000E+00	NOT IDENT.
CE-141	-3.835E-02	6.948E-02	1.171E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	7.134E+02	0.000E+00	0.000E+00	SHORT HLIF

CE-144	-4.730E-02	2.228E-01	3.651E-01	0.000E+00	NOT IDENT.
PM-144	-9.200E-03	4.618E-02	7.657E-02	0.000E+00	NOT IDENT.
PR-144	-6.241E-01	3.133E+00	5.194E+00	0.000E+00	NOT IDENT.
PM-146	3.268E-02	5.132E-02	9.312E-02	0.000E+00	NOT IDENT.
ND-147	-6.194E-01	7.433E-01	1.208E+00	0.000E+00	FAIL ABUN
PM-149	-1.969E+01	1.748E+02	3.029E+02	0.000E+00	NOT IDENT.
EU-152	-1.989E-02	1.158E-01	1.893E-01	0.000E+00	FAIL ABUN
GD-153	7.971E-03	7.969E-02	1.255E-01	0.000E+00	FAIL ABUN
EU-154	0.000E+00	1.630E-01	2.782E-01	0.000E+00	NOT IDENT.
EU-155	1.228E-01	1.042E-01	1.909E-01	0.000E+00	FAIL ABUN
TB-160	1.054E-01	1.895E-01	3.100E-01	0.000E+00	FAIL ABUN
HO-166M	-8.084E-02	8.181E-02	1.242E-01	0.000E+00	FAIL ABUN
TM-171	1.245E-01	1.659E+01	2.739E+01	0.000E+00	NOT IDENT.
LU-176	3.326E-03	3.040E-02	4.648E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.213E+00	2.696E+00	0.000E+00	FAIL ABUN
LU-177M	-8.691E-02	2.192E-01	3.594E-01	0.000E+00	FAIL ABUN
HF-181	2.254E-02	5.143E-02	9.208E-02	0.000E+00	NOT IDENT.
W-181	2.526E-02	2.065E-01	3.430E-01	0.000E+00	NOT IDENT.
TA-182	1.287E-01	2.597E-01	4.593E-01	0.000E+00	FAIL ABUN
RE-183	-3.802E-02	1.262E-01	2.077E-01	0.000E+00	FAIL ABUN
RE-184	1.924E-01	2.411E-01	4.394E-01	0.000E+00	NOT IDENT.
OS-185	8.664E-03	5.674E-02	9.709E-02	0.000E+00	NOT IDENT.
RE-188	1.966E-01	1.825E-01	3.251E-01	0.000E+00	NOT IDENT.
W-188	-6.559E+00	9.050E+00	1.311E+01	0.000E+00	FAIL ABUN
IR-192	1.784E-03	3.840E-02	6.643E-02	0.000E+00	FAIL ABUN
AU-195	8.354E-03	2.117E-01	3.668E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.798E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-9.376E-01	1.140E+01	1.934E+01	0.000E+00	NOT IDENT.
TL-202	6.219E-02	8.958E-02	1.636E-01	0.000E+00	NOT IDENT.
HG-203	8.842E-03	4.558E-02	8.031E-02	0.000E+00	NOT IDENT.
BI-207	8.889E-03	7.318E-02	1.238E-01	0.000E+00	FAIL ABUN
TL-207	5.072E-02	7.583E-01	1.310E+00	0.000E+00	FAIL ABUN
PO-209	-2.703E+00	9.768E+00	1.637E+01	0.000E+00	NOT IDENT.
PB-211	1.853E-01	1.114E+00	1.883E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.712E-01	8.183E-01	0.000E+00	FAIL ABUN
PO-215	5.072E-02	7.583E-01	1.310E+00	0.000E+00	FAIL ABUN
RN-219	-2.894E-01	4.921E-01	7.975E-01	0.000E+00	FAIL ABUN
RN-220	-1.804E+01	3.068E+01	5.082E+01	0.000E+00	NOT IDENT.
RA-223	5.072E-02	7.583E-01	1.310E+00	0.000E+00	FAIL ABUN
AC-227	-2.898E-01	3.965E-01	6.710E-01	0.000E+00	FAIL ABUN
TH-227	-2.898E-01	3.974E-01	6.710E-01	0.000E+00	FAIL ABUN
TH-229	-1.740E-01	5.184E-01	9.247E-01	0.000E+00	FAIL ABUN
PA-231	-5.772E-01	1.622E+00	2.776E+00	0.000E+00	FAIL ABUN
TH-231	5.072E-02	7.583E-01	1.310E+00	0.000E+00	FAIL ABUN
U-231	-2.991E-01	1.412E+00	2.236E+00	0.000E+00	FAIL ABUN
PA-233	5.623E-02	7.120E-02	1.276E-01	0.000E+00	FAIL ABUN
PA-234	9.711E-02	4.020E-01	6.947E-01	0.000E+00	FAIL ABUN
PA-234M	-1.378E+00	6.171E+00	1.014E+01	0.000E+00	NOT IDENT.
U-235	2.769E-02	2.350E-01	3.995E-01	0.000E+00	FAIL ABUN
NP-236	-3.058E-02	8.491E-02	1.429E-01	0.000E+00	NOT IDENT.
NP-239	-2.474E-01	1.906E-01	3.144E-01	0.000E+00	FAIL ABUN
AM-241	3.395E-02	6.472E-02	1.099E-01	0.000E+00	NOT IDENT.
CM-243	-4.694E-02	9.335E-02	1.626E-01	0.000E+00	FAIL ABUN
AM-246	2.596E-01	2.136E-01	3.856E-01	0.000E+00	NOT IDENT.
CM-247	-3.445E-02	4.421E-02	7.093E-02	0.000E+00	NOT IDENT.
CF-249	1.333E-02	4.739E-02	8.135E-02	0.000E+00	NOT IDENT.
CF-251	1.175E-01	1.354E-01	2.375E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:57:46.91

****
* GEL Laboratories LLC *
* 2040 Savage Road *
* Charleston, SC 29414 *
****

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492002.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:00:25.
Sample ID : G243492002 Sample quantity : 1.37860E+02 GRAM
Detector name : GAM13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.83 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A
****

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1374	10.67*	1.041E+00	3.368E+01	3.368E+01	8.65
CD-109	88.03	352	3.72*	7.248E+00	3.559E+00	3.651E+00	25.00
SN-126	64.28	196	9.60	7.391E+00	7.504E-01	7.504E-01	65.16
	86.94	352	8.90	7.248E+00	1.488E+00	1.488E+00	47.55
	87.57	352	37.00*	7.248E+00	3.578E-01	3.578E-01	25.00
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	171	21.60	2.537E+00	8.491E-01	8.491E-01	48.82
	583.14	409	84.20*	2.256E+00	5.868E-01	5.868E-01	18.57
	860.37	35	12.46	1.605E+00	4.697E-01	4.697E-01	109.42
BI-210	46.50	91	4.05*	7.295E+00	8.366E-01	8.378E-01	104.74
PB-210	46.50	91	4.05*	7.295E+00	8.366E-01	8.378E-01	104.74
PO-210	46.50	91	4.05*	7.295E+00	8.366E-01	8.378E-01	104.66
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	561	12.94*	3.498E+00	3.375E+00	3.375E+00	16.79
PB-212	74.81	717	10.70	7.358E+00	2.480E+00	2.480E+00	21.69
	77.11	1018	18.00	7.344E+00	2.097E+00	2.097E+00	14.02
	87.30	352	8.00	7.248E+00	1.655E+00	1.655E+00	26.92
	238.63	1309	44.60*	4.715E+00	1.695E+00	1.695E+00	11.38
	300.09	113	3.41	3.977E+00	2.271E+00	2.271E+00	49.50
PO-212	74.81	717	10.70	7.358E+00	2.480E+00	2.480E+00	21.69
	77.11	1018	18.00	7.344E+00	2.097E+00	2.097E+00	14.02
	87.30	352	8.00	7.248E+00	1.655E+00	1.655E+00	26.92
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	1309	44.60*	4.715E+00	1.695E+00	1.695E+00	11.38
	300.09	113	3.41	3.977E+00	2.271E+00	2.271E+00	49.50
BI-214	609.31	480	46.30*	2.171E+00	1.300E+00	1.300E+00	17.19
	1120.29	113	15.10	1.287E+00	1.582E+00	1.582E+00	47.83
	1764.49	96	15.80	8.989E-01	1.833E+00	1.833E+00	26.09
PB-214	74.81	717	6.21	7.358E+00	4.273E+00	4.273E+00	20.92
	77.11	1018	10.50	7.344E+00	3.594E+00	3.594E+00	15.95
	87.30	352	4.67	7.248E+00	2.835E+00	2.835E+00	26.16
	241.98	180	7.49	4.668E+00	1.402E+00	1.402E+00	34.39

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	387	19.20	4.029E+00	1.362E+00	1.362E+00	19.73
	351.92	561	37.20*	3.498E+00	1.174E+00	1.174E+00	17.59
PO-214	74.81	717	6.21	7.358E+00	4.273E+00	4.273E+00	20.92
	77.11	1018	10.50	7.344E+00	3.594E+00	3.594E+00	15.95
	87.30	352	4.67	7.248E+00	2.835E+00	2.835E+00	26.16
	241.98	180	7.49	4.668E+00	1.402E+00	1.402E+00	34.39
	295.21	387	19.20	4.029E+00	1.362E+00	1.362E+00	19.73
	351.92	561	37.20*	3.498E+00	1.174E+00	1.174E+00	17.59
PO-216	74.81	717	10.70	7.358E+00	2.480E+00	2.480E+00	21.69
	77.11	1018	18.00	7.344E+00	2.097E+00	2.097E+00	14.02
	87.30	352	8.00	7.248E+00	1.655E+00	1.655E+00	26.92
	238.63	1309	44.60*	4.715E+00	1.695E+00	1.695E+00	11.38
	300.09	113	3.41	3.977E+00	2.271E+00	2.271E+00	49.50
PO-218	74.81	717	6.21	7.358E+00	4.273E+00	4.273E+00	20.92
	77.11	1018	10.50	7.344E+00	3.594E+00	3.594E+00	15.95
	87.30	352	4.67	7.248E+00	2.835E+00	2.835E+00	26.16
	241.98	180	7.49	4.668E+00	1.402E+00	1.402E+00	34.39
	295.21	387	19.20	4.029E+00	1.362E+00	1.362E+00	19.73
	351.92	561	37.20*	3.498E+00	1.174E+00	1.174E+00	17.59
RA-224	240.98	141	3.95*	4.685E+00	2.071E+00	2.071E+00	62.04
RA-226	609.31	480	46.30*	2.171E+00	1.300E+00	1.300E+00	17.19
	1120.29	113	15.10	1.287E+00	1.582E+00	1.582E+00	47.83
	1764.49	96	15.80	8.989E-01	1.833E+00	1.833E+00	26.09
AC-228	338.32	231	11.40	3.612E+00	1.530E+00	1.530E+00	50.18
	911.07	259	27.70*	1.529E+00	1.666E+00	1.666E+00	26.34
	969.11	177	16.60	1.452E+00	1.998E+00	1.998E+00	32.61
RA-228	338.32	231	11.40	3.612E+00	1.530E+00	1.530E+00	50.18
	911.07	259	27.70*	1.529E+00	1.666E+00	1.666E+00	26.34
	969.11	177	16.60	1.452E+00	1.998E+00	1.998E+00	32.61
TH-228	74.81	717	10.70	7.358E+00	2.480E+00	2.522E+00	19.60
	77.11	1018	18.00	7.344E+00	2.097E+00	2.133E+00	14.02
	87.30	352	8.00	7.248E+00	1.655E+00	1.683E+00	25.00
	238.63	1309	44.60*	4.715E+00	1.695E+00	1.724E+00	11.38
	300.09	113	3.41	3.977E+00	2.271E+00	2.310E+00	76.53
TH-230	609.31	480	46.30*	2.171E+00	1.300E+00	1.300E+00	17.19
	1120.29	113	15.10	1.287E+00	1.582E+00	1.582E+00	47.83
	1764.49	96	15.80	8.989E-01	1.833E+00	1.833E+00	26.09
TH-232	338.32	231	11.40	3.612E+00	1.530E+00	1.530E+00	29.83
	911.07	259	27.70*	1.529E+00	1.666E+00	1.666E+00	26.34
	969.11	177	16.60	1.452E+00	1.998E+00	1.998E+00	32.61
TH-234	63.29	196	3.80*	7.391E+00	1.896E+00	1.896E+00	65.87
	92.38	355	5.41	7.180E+00	2.487E+00	2.487E+00	34.54
U-234	609.31	480	46.30*	2.171E+00	1.300E+00	1.300E+00	17.19
	1120.29	113	15.10	1.287E+00	1.582E+00	1.582E+00	47.83
	1764.49	96	15.80	8.989E-01	1.833E+00	1.833E+00	26.09
NP-237	86.50	352	12.60*	7.248E+00	1.051E+00	1.051E+00	32.41
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	196	3.80*	7.391E+00	1.896E+00	1.896E+00	65.87
	92.38	355	5.41	7.180E+00	2.487E+00	2.487E+00	30.67

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	717	66.00*	7.358E+00	4.020E-01	4.020E-01	19.57
	86.72	352	0.34	7.248E+00	3.941E+01	3.941E+01	25.00
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	171	100.00*	2.537E+00	1.834E-01	1.834E-01	48.10

Flag: "*" = Keyline

Sample ID : G243492002 Acquisition date : 4-JAN-2010 14:00:25

Total number of lines in spectrum 32
Number of unidentified lines 1
Number of lines tentatively identified by NID 31 96.88%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.368E+01	3.368E+01	0.291E+01	8.65	
CD-109	464.00D	1.03	3.559E+00	3.651E+00	0.913E+00	25.00	
SN-126	1.00E+05Y	1.00	3.578E-01	3.578E-01	0.894E-01	25.00	
TL-208	1.41E+10Y	1.00	5.868E-01	5.868E-01	1.090E-01	18.57	
BI-210	22.26Y	1.00	8.366E-01	8.378E-01	8.774E-01	104.74	
PB-210	22.26Y	1.00	8.366E-01	8.378E-01	8.774E-01	104.74	
PO-210	22.26Y	1.00	8.366E-01	8.378E-01	8.768E-01	104.66	
BI-211	7.04E+08Y	1.00	3.375E+00	3.375E+00	0.567E+00	16.79	
PB-212	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.193E+00	11.38	
PO-212	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.193E+00	11.38	
BI-214	1600.00Y	1.00	1.300E+00	1.300E+00	0.223E+00	17.19	
PB-214	1600.00Y	1.00	1.174E+00	1.174E+00	0.206E+00	17.59	
PO-214	1600.00Y	1.00	1.174E+00	1.174E+00	0.206E+00	17.59	
PO-216	1.41E+10Y	1.00	1.695E+00	1.695E+00	0.193E+00	11.38	
PO-218	1600.00Y	1.00	1.174E+00	1.174E+00	0.206E+00	17.59	
RA-224	1.41E+10Y	1.00	2.071E+00	2.071E+00	1.285E+00	62.04	
RA-226	1600.00Y	1.00	1.300E+00	1.300E+00	0.223E+00	17.19	
AC-228	1.41E+10Y	1.00	1.666E+00	1.666E+00	0.439E+00	26.34	
RA-228	1.41E+10Y	1.00	1.666E+00	1.666E+00	0.439E+00	26.34	
TH-228	1.91Y	1.02	1.695E+00	1.724E+00	0.196E+00	11.38	
TH-230	4.47E+09Y	1.00	1.300E+00	1.300E+00	0.223E+00	17.19	
TH-232	1.41E+10Y	1.00	1.666E+00	1.666E+00	0.439E+00	26.34	
TH-234	4.47E+09Y	1.00	1.896E+00	1.896E+00	1.249E+00	65.87	
U-234	4.47E+09Y	1.00	1.300E+00	1.300E+00	0.223E+00	17.19	
NP-237	2.14E+06Y	1.00	1.051E+00	1.051E+00	0.341E+00	32.41	
U-238	4.47E+09Y	1.00	1.896E+00	1.896E+00	1.249E+00	65.87	
AM-243	7380.00Y	1.00	4.020E-01	4.020E-01	0.787E-01	19.57	
ANH-511	1.00E+09Y	1.00	1.834E-01	1.834E-01	0.882E-01	48.10	
	Total Activity :		7.207E+01	7.220E+01			

Grand Total Activity : 7.207E+01 7.220E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
4	84.13	124	483	0.93	168.04	164	28	1.73E-02	59.2	7.28E+00	T
4	89.74	243	497	1.11	179.27	164	28	3.37E-02	33.4	7.22E+00	T
0	128.64	112	416	1.26	257.08	254	8	1.56E-02	65.7	6.58E+00	T
0	185.62	223	595	1.62	371.06	364	14	3.10E-02	50.4	5.53E+00	T
0	208.82	98	430	1.11	417.48	414	10	1.36E-02	81.3	5.15E+00	T
0	270.16	116	240	1.63	540.18	535	10	1.62E-02	53.5	4.31E+00	T
0	463.78	94	221	1.70	927.54	920	16	1.31E-02	74.0	2.76E+00	T
0	727.19	96	109	1.62	1454.53	1449	12	1.33E-02	48.0	1.86E+00	T
0	769.45	11	128	0.89	1539.08	1536	12	1.58E-03	****	1.77E+00	
1	964.13	82	59	2.20	1928.60	1922	29	1.14E-02	45.0	1.46E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:57:58.70

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492002.CNF;1		
Acquisition date	: 4-JAN-2010 14:00:25.	Detector SN#	:
Detector ID	: GAM13	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:01.83	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492002	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.37860E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 2-FEB-2009 10:41:22.03	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.368E+01	2.912E+00	7.677E-01	4.694E-02	43.873
CD-109	3.651E+00	9.127E-01	1.030E+00	8.129E-02	3.544
SN-126	3.578E-01	8.945E-02	1.008E-01	7.976E-03	3.549
TL-208	5.868E-01	1.090E-01	6.962E-02	5.763E-03	8.427
BI-210	8.378E-01	8.774E-01	8.168E-01	6.658E-02	1.026
PB-210	8.378E-01	8.774E-01	8.168E-01	6.658E-02	1.026
PO-210	8.378E-01	8.768E-01	8.168E-01	5.823E-02	1.026
BI-211	3.375E+00	5.668E-01	4.005E-01	2.919E-02	8.428
PB-212	1.695E+00	1.930E-01	9.761E-02	8.868E-03	17.368
PO-212	1.695E+00	1.930E-01	9.761E-02	8.868E-03	17.368
BI-214	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
PB-214	1.174E+00	2.065E-01	1.396E-01	1.250E-02	8.408
PO-214	1.174E+00	2.065E-01	1.396E-01	1.250E-02	8.408
PO-216	1.695E+00	1.930E-01	9.761E-02	8.868E-03	17.368
PO-218	1.174E+00	2.065E-01	1.396E-01	1.250E-02	8.408
RA-224	2.071E+00	1.285E+00	1.111E+00	8.773E-02	1.864
RA-226	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
AC-228	1.666E+00	4.390E-01	2.885E-01	2.996E-02	5.775

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.666E+00	4.390E-01	2.885E-01	2.996E-02	5.775
TH-228	1.724E+00	1.963E-01	9.929E-02	9.020E-03	17.368
TH-230	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
TH-232	1.666E+00	4.390E-01	2.885E-01	2.996E-02	5.775
TH-234	1.896E+00	1.249E+00	1.024E+00	1.880E-01	1.851
U-234	1.300E+00	2.234E-01	1.351E-01	1.263E-02	9.623
NP-237	1.051E+00	3.406E-01	2.951E-01	6.529E-02	3.560
U-238	1.896E+00	1.249E+00	1.024E+00	1.880E-01	1.851
AM-243	4.020E-01	7.867E-02	6.086E-02	5.257E-03	6.606
ANH-511	1.834E-01	8.822E-02	6.039E-02	4.215E-03	3.037

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.722E-01		3.848E-01	6.256E-01	4.704E-02	-0.275
NA-22	0.000E+00		5.961E-02	9.911E-02	5.594E-03	0.000
NA-24	4.194E+00		4.301E+00	Half-Life too short		
AL-26	1.790E-02		3.613E-02	6.468E-02	3.650E-03	0.277
TI-44	3.869E-01	+	5.424E-02	5.695E-02	4.796E-03	6.795
SC-46	4.072E-02		5.097E-02	8.927E-02	6.759E-03	0.456
V-48	-6.872E-02		1.124E-01	1.760E-01	1.245E-02	-0.391
CR-51	-4.482E-01		4.382E-01	6.741E-01	5.247E-02	-0.665
MN-52	-2.854E-01		4.019E-01	6.076E-01	3.492E-02	-0.470
MN-54	9.055E-03		4.986E-02	8.399E-02	6.591E-03	0.108
CO-56	-2.385E-02		5.113E-02	8.205E-02	6.395E-03	-0.291
CO-57	3.293E-03		2.559E-02	4.195E-02	5.306E-03	0.079
CO-58	-4.927E-02		5.213E-02	8.088E-02	6.442E-03	-0.609
FE-59	-8.169E-02		1.314E-01	2.025E-01	1.447E-02	-0.403
CO-60	-9.502E-03		5.072E-02	8.248E-02	4.691E-03	-0.115
ZN-65	5.884E-02		1.444E-01	2.088E-01	1.268E-02	0.282
GE-68	2.344E+00		1.939E+00	3.401E+00	2.174E-01	0.689
AS-73	7.187E-02		2.413E-01	4.008E-01	3.386E-02	0.179
AS-74	-6.036E-04		1.244E-01	2.039E-01	1.566E-02	-0.003
SE-75	3.955E-04		5.427E-02	7.916E-02	6.201E-03	0.005
BR-77	-3.592E+00		2.428E+01	3.888E+01	2.746E+00	-0.092
SR-82	-6.261E-02		6.314E-01	9.045E-01	7.280E-02	-0.069
RB-83	8.799E-03		9.431E-02	1.487E-01	1.050E-02	0.059
RB-84	3.851E-03		1.017E-01	1.552E-01	1.182E-02	0.025
KR-85	1.610E+01		1.065E+01	1.693E+01	1.186E+00	0.951
SR-85	8.429E-02		5.572E-02	8.862E-02	6.208E-03	0.951
RB-86	1.330E+00		1.329E+00	2.302E+00	1.473E-01	0.578
Y-88	-3.777E-03		3.927E-02	6.402E-02	3.605E-03	-0.059
ZR-88	-1.757E-02		3.771E-02	5.889E-02	3.449E-03	-0.298
Y-91	1.449E+01		2.584E+01	4.474E+01	2.480E+00	0.324
NB-94	1.481E-02		4.516E-02	7.456E-02	6.086E-03	0.199
NB-95	8.371E-02		6.326E-02	1.017E-01	8.214E-03	0.823
NB-95M	2.256E-01		1.561E-01	2.450E-01	2.266E-02	0.921

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	3.793E-03		9.540E-02	1.536E-01	1.385E-02	0.025
NB-97	-1.787E-01		4.376E-01	Half-Life too short		
ZR-97	3.135E+01		8.544E+00	Half-Life too short		
MO-99	-1.167E+01		2.619E+01	4.065E+01	6.061E+00	-0.287
TC-99M	7.257E+11		4.755E+12	Half-Life too short		
RH-101	1.636E-02		3.664E-02	6.147E-02	4.867E-03	0.266
RH-102	2.396E-02		3.439E-02	5.973E-02	3.975E-03	0.401
RU-103	-3.564E-02		5.172E-02	8.226E-02	1.083E-02	-0.433
RH-106	-3.691E-01		4.089E-01	6.214E-01	8.010E-02	-0.594
RU-106	-3.691E-01		4.072E-01	6.214E-01	4.894E-02	-0.594
AG-108M	2.131E-02		3.826E-02	6.633E-02	4.462E-03	0.321
AG-110M	-1.768E-02		4.645E-02	7.354E-02	6.178E-03	-0.240
IN-111	1.635E+00		2.000E+00	3.077E+00	2.425E-01	0.531
IN-113M	-3.567E-02		5.455E-02	8.419E-02	5.245E-03	-0.424
SN-113	-3.567E-02		5.455E-02	8.419E-02	5.245E-03	-0.424
IN-114M	-4.907E-02		2.325E-01	3.219E-01	2.544E-02	-0.152
CD-115	-7.594E+00		2.425E+01	3.939E+01	2.807E+00	-0.193
SN-117M	-1.205E-02		6.354E-02	1.009E-01	8.811E-03	-0.119
SB-122	3.133E+00		4.475E+00	7.668E+00	5.694E-01	0.409
I-123	2.382E+00		3.613E+01	Half-Life too short		
TE-123M	9.851E-04		2.988E-02	4.792E-02	4.184E-03	0.021
I-124	-6.855E-01		1.381E+00	1.870E+00	1.446E-01	-0.367
SB-124	-2.983E-03		9.643E-02	1.551E-01	9.660E-03	-0.019
SB-125	-2.985E-02		1.048E-01	1.739E-01	1.119E-02	-0.172
TE-125M	9.159E-01		9.499E+00	1.565E+01	1.902E+00	0.059
I-126	-4.264E-02		2.611E-01	4.192E-01	3.420E-02	-0.102
SB-126	-3.516E-02		2.509E-01	3.436E-01	2.800E-02	-0.102
SB-127	-7.400E-01		2.699E+00	4.288E+00	4.998E-01	-0.173
XE-127	1.342E-03		5.191E-02	8.786E-02	6.963E-03	0.015
I-131	-2.788E-02		1.599E-01	2.560E-01	1.818E-02	-0.109
TE-132	1.089E+00		1.130E+00	1.945E+00	3.059E-01	0.560
BA-133	-2.257E-02		6.228E-02	8.607E-02	1.033E-02	-0.262
I-133	-3.846E-03		1.698E-02	Half-Life too short		
CS-134	1.298E-01		6.413E-02	1.185E-01	9.549E-03	1.096
CS-135	1.797E-01		1.986E-01	3.038E-01	2.806E-02	0.592
I-135	2.787E+11		5.473E+11	Half-Life too short		
CS-136	1.597E-02		1.570E-01	2.581E-01	1.832E-02	0.062
BA-137M	-4.359E-02		4.612E-02	6.972E-02	5.686E-03	-0.625
CS-137	-4.608E-02		4.876E-02	7.370E-02	6.024E-03	-0.625
CE-139	-1.964E-03		3.298E-02	5.250E-02	4.116E-03	-0.037
BA-140	-1.146E-01		3.521E-01	5.674E-01	1.861E-01	-0.202
LA-140	-1.100E-01		1.230E-01	1.758E-01	1.013E-02	-0.626
CE-141	-3.835E-02		7.090E-02	1.116E-01	1.158E-02	-0.344
CE-143	2.334E-03		3.640E-04	Half-Life too short		
CE-144	-4.730E-02		2.274E-01	3.474E-01	6.022E-02	-0.136
PM-144	-9.200E-03		4.712E-02	7.521E-02	6.143E-03	-0.122
PR-144	-6.241E-01		3.196E+00	5.102E+00	4.165E-01	-0.122
PM-146	3.268E-02		5.237E-02	9.070E-02	8.232E-03	0.360

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-6.194E-01		7.585E-01	1.180E+00	1.671E-01	-0.525
PM-149	-1.969E+01		1.783E+02	2.924E+02	4.393E+01	-0.067
EU-152	-1.989E-02		1.181E-01	1.834E-01	1.375E-02	-0.108
GD-153	7.971E-03		8.131E-02	1.188E-01	1.081E-02	0.067
EU-154	0.000E+00		1.663E-01	2.765E-01	2.555E-02	0.000
EU-155	1.228E-01		1.063E-01	1.809E-01	1.856E-02	0.679
TB-160	1.054E-01		1.934E-01	3.059E-01	2.333E-02	0.345
HO-166M	-8.084E-02		8.348E-02	1.220E-01	9.953E-03	-0.663
TM-171	1.245E-01		1.692E+01	2.573E+01	2.348E+00	0.005
LU-176	3.326E-03		3.102E-02	4.493E-02	3.331E-03	0.074
LU-177	2.766E+00	+	2.259E+00	2.587E+00	2.051E-01	1.069
LU-177M	-8.691E-02		2.237E-01	3.495E-01	2.120E-02	-0.249
HF-181	2.254E-02		5.248E-02	8.980E-02	6.033E-03	0.251
W-181	2.526E-02		2.107E-01	3.222E-01	2.972E-02	0.078
TA-182	1.287E-01		2.650E-01	4.562E-01	2.539E-02	0.282
RE-183	-3.802E-02		1.288E-01	1.984E-01	1.642E-02	-0.192
RE-184	1.924E-01		2.460E-01	4.232E-01	3.322E-02	0.455
OS-185	8.664E-03		5.790E-02	9.522E-02	7.664E-03	0.091
RE-188	1.966E-01		1.862E-01	3.103E-01	2.839E-02	0.634
W-188	-6.559E+00		9.235E+00	1.266E+01	9.606E-01	-0.518
IR-192	1.784E-03		3.918E-02	6.425E-02	4.700E-03	0.028
AU-195	8.354E-03		2.160E-01	3.472E-01	3.226E-02	0.024
TL-200	2.723E-04		9.174E-04	Half-Life too short		
TL-201	-9.376E-01		1.163E+01	1.848E+01	1.449E+00	-0.051
TL-202	6.219E-02		9.141E-02	1.592E-01	1.006E-02	0.391
HG-203	8.842E-03		4.651E-02	7.749E-02	6.170E-03	0.114
BI-207	8.889E-03		7.467E-02	1.226E-01	7.976E-03	0.072
TL-207	5.072E-02		7.738E-01	1.268E+00	2.162E-01	0.040
PO-209	-2.703E+00		9.968E+00	1.616E+01	1.216E+00	-0.167
PB-211	1.853E-01		1.137E+00	1.830E+00	1.141E+00	0.101
BI-212	1.190E+00	+	5.828E-01	8.044E-01	7.722E-02	1.479
PO-215	5.072E-02		7.738E-01	1.268E+00	2.162E-01	0.040
RN-219	-2.894E-01		5.022E-01	7.749E-01	1.059E-01	-0.373
RN-220	-1.804E+01		3.130E+01	4.968E+01	3.632E+00	-0.363
RA-223	5.072E-02		7.738E-01	1.268E+00	2.162E-01	0.040
AC-227	-2.898E-01		4.046E-01	6.465E-01	9.646E-02	-0.448
TH-227	-2.898E-01		4.055E-01	6.465E-01	1.144E-01	-0.448
TH-229	-1.740E-01		5.290E-01	8.862E-01	7.010E-02	-0.196
PA-231	-5.772E-01		1.655E+00	2.680E+00	3.927E-01	-0.215
TH-231	5.072E-02		7.738E-01	1.268E+00	2.162E-01	0.040
U-231	-2.991E-01		1.440E+00	2.115E+00	1.881E-01	-0.141
PA-233	5.623E-02		7.265E-02	1.234E-01	9.424E-03	0.456
PA-234	9.711E-02		4.102E-01	6.865E-01	1.249E-01	0.141
PA-234M	-1.378E+00		6.297E+00	1.004E+01	8.602E-01	-0.137
U-235	2.769E-02		2.398E-01	3.807E-01	7.029E-02	0.073
NP-236	-3.058E-02		8.665E-02	1.365E-01	1.163E-02	-0.224
NP-239	-2.474E-01		1.945E-01	2.984E-01	3.542E-02	-0.829
AM-241	3.395E-02		6.604E-02	1.031E-01	1.048E-02	0.329

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-4.694E-02		9.526E-02	1.540E-01	1.534E-02	-0.305
AM-246	2.596E-01		2.180E-01	3.821E-01	2.437E-02	0.679
CM-247	-3.445E-02		4.511E-02	6.892E-02	4.104E-03	-0.500
CF-249	1.333E-02		4.836E-02	7.900E-02	4.691E-03	0.169
CF-251	1.175E-01		1.382E-01	2.272E-01	1.788E-02	0.517

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492002		
Acquisition date	: 4-JAN-2010 14:00:25	Detector SN#	:
Detector ID	: GAM13	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.83	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492002	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3786E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 2-FEB-2009 10:41:22	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.368E+01	2.854E+00	3.853E-01	1.456E+00
CD-109	3.651E+00	8.945E-01	5.458E-01	4.564E-01
SN-126	3.578E-01	8.766E-02	5.342E-02	4.472E-02
TL-208	5.868E-01	1.068E-01	3.559E-02	5.448E-02
BI-210	8.378E-01	8.599E-01	4.377E-01	4.387E-01
PB-210	8.378E-01	8.599E-01	4.377E-01	4.387E-01
PO-210	8.378E-01	8.593E-01	4.377E-01	4.384E-01
BI-211	3.375E+00	5.555E-01	2.067E-01	2.834E-01
PB-212	1.695E+00	1.891E-01	5.076E-02	9.648E-02
PO-212	1.695E+00	1.891E-01	5.076E-02	9.648E-02
BI-214	1.300E+00	2.189E-01	6.898E-02	1.117E-01
PB-214	1.174E+00	2.023E-01	7.208E-02	1.032E-01
PO-214	1.174E+00	2.023E-01	7.208E-02	1.032E-01
PO-216	1.695E+00	1.891E-01	5.076E-02	9.648E-02
PO-218	1.174E+00	2.023E-01	7.208E-02	1.032E-01
RA-224	2.071E+00	1.259E+00	5.778E-01	6.425E-01
RA-226	1.300E+00	2.189E-01	6.898E-02	1.117E-01
AC-228	1.666E+00	4.302E-01	1.462E-01	2.195E-01
RA-228	1.666E+00	4.302E-01	1.462E-01	2.195E-01
TH-228	1.724E+00	1.923E-01	5.163E-02	9.813E-02
TH-230	1.300E+00	2.189E-01	6.898E-02	1.117E-01
TH-232	1.666E+00	4.302E-01	1.462E-01	2.195E-01
TH-234	1.896E+00	1.224E+00	5.459E-01	6.243E-01
U-234	1.300E+00	2.189E-01	6.898E-02	1.117E-01
NP-237	1.051E+00	3.338E-01	1.564E-01	1.703E-01
U-238	1.896E+00	1.224E+00	5.459E-01	6.243E-01
AM-243	4.020E-01	7.709E-02	3.234E-02	3.933E-02
ANH-511	1.834E-01	8.645E-02	3.095E-02	4.411E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-1.722E-01	3.771E-01	3.210E-01	1.924E-01	NOT IDENT.
NA-22	0.000E+00	5.842E-02	4.987E-02	0.000E+00	NOT IDENT.
NA-24	4.194E+06	8.430E+06	0.000E+00	4.301E+06	SHORT HLIF
AL-26	1.790E-02	3.540E-02	3.232E-02	1.806E-02	NOT IDENT.
TI-44	3.869E-01	5.315E-02	3.023E-02	2.712E-02	FAIL ABUN
SC-46	4.072E-02	4.995E-02	4.525E-02	2.549E-02	FAIL ABUN
V-48	-6.872E-02	1.102E-01	8.902E-02	5.622E-02	NOT IDENT.
CR-51	-4.482E-01	4.294E-01	3.486E-01	2.191E-01	NOT IDENT.
MN-52	-2.854E-01	3.939E-01	3.051E-01	2.010E-01	NOT IDENT.
MN-54	9.055E-03	4.886E-02	4.263E-02	2.493E-02	NOT IDENT.
CO-56	-2.385E-02	5.011E-02	4.163E-02	2.557E-02	NOT IDENT.
CO-57	3.293E-03	2.508E-02	2.209E-02	1.280E-02	NOT IDENT.
CO-58	-4.927E-02	5.108E-02	4.107E-02	2.606E-02	NOT IDENT.
FE-59	-8.169E-02	1.288E-01	1.022E-01	6.569E-02	NOT IDENT.
CO-60	-9.502E-03	4.971E-02	4.147E-02	2.536E-02	NOT IDENT.
ZN-65	5.884E-02	1.415E-01	1.054E-01	7.222E-02	NOT IDENT.
GE-68	2.344E+00	1.901E+00	1.717E+00	9.697E-01	NOT IDENT.
AS-73	7.187E-02	2.365E-01	2.143E-01	1.206E-01	NOT IDENT.
AS-74	-6.036E-04	1.219E-01	1.042E-01	6.218E-02	NOT IDENT.
SE-75	3.955E-04	5.318E-02	4.108E-02	2.713E-02	NOT IDENT.
BR-77	-3.592E+00	2.380E+01	1.992E+01	1.214E+01	FAIL ABUN
SR-82	-6.261E-02	6.187E-01	4.597E-01	3.157E-01	NOT IDENT.
RB-83	8.799E-03	9.242E-02	7.617E-02	4.715E-02	NOT IDENT.
RB-84	3.851E-03	9.970E-02	7.868E-02	5.087E-02	NOT IDENT.
KR-85	1.610E+01	1.043E+01	8.676E+00	5.323E+00	NOT IDENT.
SR-85	8.429E-02	5.461E-02	4.541E-02	2.786E-02	NOT IDENT.
RB-86	1.330E+00	1.303E+00	1.162E+00	6.647E-01	NOT IDENT.
Y-88	-3.777E-03	3.848E-02	3.198E-02	1.964E-02	NOT IDENT.
ZR-88	-1.757E-02	3.696E-02	3.033E-02	1.886E-02	NOT IDENT.
Y-91	1.449E+01	2.532E+01	2.254E+01	1.292E+01	NOT IDENT.
NB-94	1.481E-02	4.426E-02	3.797E-02	2.258E-02	NOT IDENT.
NB-95	8.371E-02	6.199E-02	5.172E-02	3.163E-02	NOT IDENT.
NB-95M	2.256E-01	1.530E-01	1.274E-01	7.805E-02	NOT IDENT.
ZR-95	3.793E-03	9.349E-02	7.809E-02	4.770E-02	NOT IDENT.
NB-97	-1.787E+05	8.576E+05	0.000E+00	4.376E+05	SHORT HLIF
ZR-97	3.135E+07	1.675E+07	0.000E+00	8.544E+06	SHORT HLIF
MO-99	-1.167E+01	2.567E+01	2.068E+01	1.310E+01	NOT IDENT.
TC-99M	7.257E+17	9.321E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.636E-02	3.591E-02	3.208E-02	1.832E-02	FAIL ABUN
RH-102	2.396E-02	3.370E-02	3.065E-02	1.719E-02	NOT IDENT.
RU-103	-3.564E-02	5.068E-02	4.218E-02	2.586E-02	FAIL ABUN
RH-106	-3.691E-01	4.008E-01	3.172E-01	2.045E-01	FAIL ABUN
RU-106	-3.691E-01	3.991E-01	3.172E-01	2.036E-01	FAIL ABUN
AG-108M	2.131E-02	3.750E-02	3.410E-02	1.913E-02	NOT IDENT.
AG-110M	-1.768E-02	4.553E-02	3.750E-02	2.323E-02	NOT IDENT.
IN-111	1.635E+00	1.960E+00	1.599E+00	1.000E+00	NOT IDENT.
IN-113M	-3.567E-02	5.346E-02	4.337E-02	2.728E-02	NOT IDENT.
SN-113	-3.567E-02	5.346E-02	4.337E-02	2.728E-02	NOT IDENT.
IN-114M	-4.907E-02	2.279E-01	1.681E-01	1.163E-01	NOT IDENT.
CD-115	-7.594E+00	2.376E+01	2.017E+01	1.212E+01	NOT IDENT.
SN-117M	-1.205E-02	6.227E-02	5.287E-02	3.177E-02	NOT IDENT.
SB-122	3.133E+00	4.385E+00	3.922E+00	2.237E+00	NOT IDENT.
I-123	2.382E+06	7.082E+07	0.000E+00	3.613E+07	SHORT HLIF
TE-123M	9.851E-04	2.929E-02	2.511E-02	1.494E-02	NOT IDENT.
I-124	-6.855E-01	1.354E+00	9.551E-01	6.907E-01	NOT IDENT.
SB-124	-2.983E-03	9.450E-02	7.761E-02	4.821E-02	FAIL ABUN
SB-125	-2.985E-02	1.027E-01	8.944E-02	5.239E-02	FAIL ABUN
TE-125M	9.159E-01	9.309E+00	8.260E+00	4.750E+00	NOT IDENT.
I-126	-4.264E-02	2.558E-01	2.137E-01	1.305E-01	NOT IDENT.
SB-126	-3.516E-02	2.459E-01	1.749E-01	1.254E-01	FAIL ABUN
SB-127	-7.400E-01	2.645E+00	2.185E+00	1.349E+00	NOT IDENT.
XE-127	1.342E-03	5.088E-02	4.583E-02	2.596E-02	NOT IDENT.
I-131	-2.788E-02	1.567E-01	1.320E-01	7.996E-02	NOT IDENT.
TE-132	1.089E+00	1.107E+00	1.012E+00	5.649E-01	NOT IDENT.
BA-133	-2.257E-02	6.104E-02	4.442E-02	3.114E-02	NOT IDENT.
I-133	-3.846E+03	3.327E+04	0.000E+00	1.698E+04	SHORT HLIF
CS-134	1.298E-01	6.285E-02	6.019E-02	3.207E-02	NOT IDENT.
CS-135	1.797E-01	1.946E-01	1.576E-01	9.930E-02	NOT IDENT.
I-135	2.787E+17	1.073E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	1.597E-02	1.539E-01	1.304E-01	7.850E-02	FAIL ABUN
BA-137M	-4.359E-02	4.520E-02	3.555E-02	2.306E-02	NOT IDENT.
CS-137	-4.608E-02	4.778E-02	3.758E-02	2.438E-02	NOT IDENT.
CE-139	-1.964E-03	3.232E-02	2.749E-02	1.649E-02	NOT IDENT.
BA-140	-1.146E-01	3.451E-01	2.905E-01	1.761E-01	NOT IDENT.
LA-140	-1.100E-01	1.206E-01	8.806E-02	6.151E-02	NOT IDENT.
CE-141	-3.835E-02	6.948E-02	5.857E-02	3.545E-02	NOT IDENT.
CE-143	2.334E+03	7.134E+02	0.000E+00	3.640E+02	SHORT HLIF

CE-144	-4.730E-02	2.228E-01	1.826E-01	1.137E-01 NOT IDENT.
PM-144	-9.200E-03	4.618E-02	3.831E-02	2.356E-02 NOT IDENT.
PR-144	-6.241E-01	3.133E+00	2.599E+00	1.598E+00 NOT IDENT.
PM-146	3.268E-02	5.132E-02	4.659E-02	2.618E-02 NOT IDENT.
ND-147	-6.194E-01	7.433E-01	6.045E-01	3.792E-01 FAIL ABUN
PM-149	-1.969E+01	1.748E+02	1.515E+02	8.917E+01 NOT IDENT.
EU-152	-1.989E-02	1.158E-01	9.471E-02	5.906E-02 FAIL ABUN
GD-153	7.971E-03	7.969E-02	6.280E-02	4.066E-02 FAIL ABUN
EU-154	0.000E+00	1.630E-01	1.392E-01	0.000E+00 NOT IDENT.
EU-155	1.228E-01	1.042E-01	9.552E-02	5.317E-02 FAIL ABUN
TB-160	1.054E-01	1.895E-01	1.551E-01	9.670E-02 FAIL ABUN
HO-166M	-8.084E-02	8.181E-02	6.212E-02	4.174E-02 FAIL ABUN
TM-171	1.245E-01	1.659E+01	1.370E+01	8.462E+00 NOT IDENT.
LU-176	3.326E-03	3.040E-02	2.325E-02	1.551E-02 FAIL ABUN
LU-177	2.766E+00	2.213E+00	1.349E+00	1.129E+00 FAIL ABUN
LU-177M	-8.691E-02	2.192E-01	1.798E-01	1.118E-01 FAIL ABUN
HF-181	2.254E-02	5.143E-02	4.607E-02	2.624E-02 NOT IDENT.
W-181	2.526E-02	2.065E-01	1.716E-01	1.054E-01 NOT IDENT.
TA-182	1.287E-01	2.597E-01	2.298E-01	1.325E-01 FAIL ABUN
RE-183	-3.802E-02	1.262E-01	1.039E-01	6.440E-02 FAIL ABUN
RE-184	1.924E-01	2.411E-01	2.198E-01	1.230E-01 NOT IDENT.
OS-185	8.664E-03	5.674E-02	4.857E-02	2.895E-02 NOT IDENT.
RE-188	1.966E-01	1.825E-01	1.627E-01	9.311E-02 NOT IDENT.
W-188	-6.559E+00	9.050E+00	6.559E+00	4.617E+00 FAIL ABUN
IR-192	1.784E-03	3.840E-02	3.323E-02	1.959E-02 FAIL ABUN
AU-195	8.354E-03	2.117E-01	1.835E-01	1.080E-01 FAIL ABUN
TL-200	2.723E+02	1.798E+03	0.000E+00	9.174E+02 SHORT HLIF
TL-201	-9.376E-01	1.140E+01	9.676E+00	5.815E+00 NOT IDENT.
TL-202	6.219E-02	8.958E-02	8.185E-02	4.570E-02 NOT IDENT.
HG-203	8.842E-03	4.558E-02	4.018E-02	2.326E-02 NOT IDENT.
BI-207	8.889E-03	7.318E-02	6.194E-02	3.733E-02 FAIL ABUN
TL-207	5.072E-02	7.583E-01	6.553E-01	3.869E-01 FAIL ABUN
PO-209	-2.703E+00	9.768E+00	8.188E+00	4.984E+00 NOT IDENT.
PB-211	1.853E-01	1.114E+00	9.423E-01	5.686E-01 NOT IDENT.
BI-212	1.190E+00	5.712E-01	4.094E-01	2.914E-01 FAIL ABUN
PO-215	5.072E-02	7.583E-01	6.553E-01	3.869E-01 FAIL ABUN
RN-219	-2.894E-01	4.921E-01	3.990E-01	2.511E-01 FAIL ABUN
RN-220	-1.804E+01	3.068E+01	2.542E+01	1.565E+01 NOT IDENT.
RA-223	5.072E-02	7.583E-01	6.553E-01	3.869E-01 FAIL ABUN
AC-227	-2.898E-01	3.965E-01	3.357E-01	2.023E-01 FAIL ABUN
TH-227	-2.898E-01	3.974E-01	3.357E-01	2.028E-01 FAIL ABUN
TH-229	-1.740E-01	5.184E-01	4.626E-01	2.645E-01 FAIL ABUN
PA-231	-5.772E-01	1.622E+00	1.389E+00	8.273E-01 FAIL ABUN
TH-231	5.072E-02	7.583E-01	6.553E-01	3.869E-01 FAIL ABUN
U-231	-2.991E-01	1.412E+00	1.119E+00	7.202E-01 FAIL ABUN
PA-233	5.623E-02	7.120E-02	6.385E-02	3.633E-02 FAIL ABUN
PA-234	9.711E-02	4.020E-01	3.475E-01	2.051E-01 FAIL ABUN
PA-234M	-1.378E+00	6.171E+00	5.075E+00	3.148E+00 NOT IDENT.
U-235	2.769E-02	2.350E-01	1.999E-01	1.199E-01 FAIL ABUN
NP-236	-3.058E-02	8.491E-02	7.152E-02	4.332E-02 NOT IDENT.
NP-239	-2.474E-01	1.906E-01	1.573E-01	9.724E-02 FAIL ABUN
AM-241	3.395E-02	6.472E-02	5.498E-02	3.302E-02 NOT IDENT.
CM-243	-4.694E-02	9.335E-02	8.135E-02	4.763E-02 FAIL ABUN
AM-246	2.596E-01	2.136E-01	1.929E-01	1.090E-01 NOT IDENT.
CM-247	-3.445E-02	4.421E-02	3.548E-02	2.255E-02 NOT IDENT.
CF-249	1.333E-02	4.739E-02	4.070E-02	2.418E-02 NOT IDENT.
CF-251	1.175E-01	1.354E-01	1.188E-01	6.908E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	362.4358
46.50	362.4358
46.50	362.4358
48.70	339.5171
49.72	364.8552
51.35	417.9357
52.39	390.8446
52.97	378.9916
53.15	375.8578
53.44	376.2838
54.07	363.5511
56.28	412.2363
56.28	412.2412
57.37	0.0000
57.53	445.2945
57.53	445.2984
57.60	442.1232
57.98	447.9398
57.98	447.9398
59.32	432.1205
59.32	432.1205
59.40	432.2455
59.54	432.4640
59.72	443.2047
60.01	443.6676
61.10	442.7676
61.14	442.8306
61.30	472.0064
63.00	515.8271
63.29	516.3449
63.29	516.3449
63.58	516.8626
64.28	532.7189
65.12	544.9006
65.20	545.0481
65.20	545.0481
66.05	541.2648
66.72	543.8124
66.83	544.0168
66.91	544.1593
67.20	562.1234
67.20	562.1234
67.75	553.7350
67.85	553.9205
68.90	538.2872
68.90	538.2872
69.30	549.7910
69.67	550.4539
70.82	547.0533
70.82	547.0533
70.83	547.0718
72.80	541.8304
72.87	541.9485
72.87	541.9485
74.67	544.9748
74.81	545.2078
74.81	545.2078
74.81	545.2078
74.81	545.2078
74.81	545.2078
74.81	545.2078
74.81	545.2078
74.97	545.4772
75.28	545.9916
75.70	546.6907
77.11	549.0210
77.11	549.0210

77.11	549.0210
77.11	549.0210
77.11	549.0210
77.11	549.0210
77.11	549.0210
78.38	551.1001
79.62	460.1550
79.80	460.3967
79.80	460.3967
80.11	441.2625
80.18	441.3542
80.30	441.5060
80.30	441.5060
80.57	461.4290
81.00	462.0030
81.07	462.0974
81.07	462.0974
81.07	462.0974
81.07	462.0974
82.60	498.8231
83.37	450.1053
83.78	450.6315
83.78	450.6315
83.78	450.6315
83.78	450.6315
84.21	451.1772
84.90	452.0494
85.43	452.7170
86.29	453.7963
86.50	454.0594
86.54	454.1081
86.59	454.1715
86.72	454.3323
86.79	454.4175
86.94	454.6076
87.30	455.0558
87.30	455.0558
87.30	455.0558
87.30	455.0558
87.30	455.0558
87.30	455.0558
87.30	455.0558
87.57	455.3921
87.88	455.7770
88.03	455.9622
88.36	456.3715
88.47	456.5079
89.95	458.3279
91.11	459.7458
92.29	461.1783
92.38	461.2880
92.38	461.2880
93.35	462.4574
94.00	463.2370
94.67	358.9238
94.67	358.9294
94.90	359.1405
94.90	359.1405
94.90	359.1405
94.90	359.1405
95.87	403.7625
95.87	403.7625
96.73	400.2676
97.43	368.7773
98.44	376.7557
98.44	376.7557
98.88	372.0795
99.55	364.8536
99.55	364.8536
99.86	363.1705
100.00	361.3328
100.10	361.4246
103.18	427.4802
103.76	412.2231
105.00	356.7997
105.31	357.0627
108.00	417.3860
109.28	384.4961

111.00	382.9958
111.00	382.9958
111.76	380.6299
112.95	384.6947
115.19	353.0537
116.30	330.4633
117.00	384.0915
117.00	384.0915
117.66	398.9700
121.11	321.5675
121.62	317.7910
121.78	317.8991
122.06	323.2525
122.32	343.0640
122.32	343.0640
122.32	343.0640
122.32	343.0640
123.07	381.9032
127.23	299.1042
129.76	338.4341
131.20	366.2595
133.02	362.8442
133.54	351.4810
135.34	328.9651
136.00	360.2047
136.25	360.3806
136.48	356.2885
140.51	369.7913
140.51	0.0000
142.18	376.3433
142.65	348.6962
143.76	349.4279
144.24	371.3299
144.24	371.3299
144.24	371.3299
144.24	371.3299
145.22	372.0088
145.44	373.2446
147.16	333.1923
152.43	335.3069
152.70	340.9503
153.22	292.9846
154.21	318.7834
154.21	318.7834
154.21	318.7834
154.21	318.7834
155.03	299.4341
156.02	305.4709
158.56	309.0502
159.00	0.0000
159.00	298.2002
160.31	335.5412
161.27	329.4198
162.32	327.7832
162.64	335.7713
163.35	330.5911
163.89	318.5985
165.85	326.3833
167.43	303.6319
171.28	295.3853
171.86	279.8072
172.10	292.3811
176.55	273.9453
176.60	283.0995
181.06	306.9506
184.41	293.5325
185.71	294.1216
186.00	294.2534
190.27	313.0807
192.34	294.7562
193.63	316.4200
197.04	323.3188
198.01	307.8533
198.60	326.7122
200.40	307.1505
201.83	362.0497
202.84	318.9230
205.31	294.6615

208.36	313.1727
208.81	300.0730
209.75	300.4680
209.75	300.4680
210.97	307.1079
215.65	300.2061
216.55	272.4243
218.09	268.4466
222.10	282.7070
223.80	269.5912
226.40	256.7178
227.00	241.2654
227.08	241.2914
227.20	247.7750
228.16	250.8538
228.18	268.3833
228.18	268.3833
231.56	0.0000
235.69	283.1028
236.00	283.2141
236.00	283.2141
238.63	262.6593
238.63	262.6593
238.63	262.6593
238.63	262.6593
239.00	262.7815
240.98	263.4364
241.98	249.3100
241.98	249.3100
241.98	249.3100
244.69	223.0262
245.39	214.1683
247.94	240.1830
248.90	250.8778
249.79	253.0442
252.40	206.3083
252.85	203.5671
252.85	203.5671
254.15	0.0000
256.20	237.8116
256.20	237.8116
260.50	216.9477
260.90	230.4932
262.80	220.4181
264.65	219.1570
268.24	230.9136
268.79	227.9613
269.46	203.6906
269.46	203.6906
269.46	203.6906
269.46	203.6906
271.23	205.2703
273.65	263.5302
276.40	190.6320
277.35	224.1080
277.60	225.1498
277.60	225.1498
278.00	250.7148
278.60	240.1027
279.20	229.4761
279.53	243.2925
280.46	251.4023
281.68	214.3709
283.67	211.8867
284.30	231.7548
285.00	226.9994
285.90	194.6193
286.10	194.6613
286.10	194.6613
287.40	197.9065
288.45	0.0000
290.67	220.8491
290.80	236.7721
291.72	232.2348
293.26	0.0000
293.70	197.6583
295.21	195.5813
295.21	195.5813

295.21	195.5813
295.96	195.7368
296.50	195.8475
297.23	196.0000
298.57	196.2781
299.80	196.5294
299.80	196.5294
300.09	196.5892
300.09	196.5892
300.09	196.5892
300.09	196.5892
300.12	196.5952
301.29	196.8374
302.84	197.1544
303.76	197.3428
303.91	197.3727
304.40	197.4744
304.40	197.4744
304.84	197.5641
306.84	187.4691
308.46	202.3499
311.98	179.7224
316.51	184.6263
318.01	161.4066
319.02	184.0677
319.41	187.2081
320.08	205.7569
323.87	208.5880
323.87	208.5880
323.87	208.5880
323.87	208.5880
325.23	202.6933
328.77	196.1665
333.44	182.5339
334.20	177.6864
334.20	177.6864
334.30	177.7046
338.28	185.0470
338.28	185.0470
338.28	185.0470
338.28	185.0470
338.32	185.0551
338.32	185.0551
338.32	185.0551
340.50	195.4608
340.57	195.4751
344.27	192.8019
345.85	177.9770
350.59	0.0000
351.07	205.6224
351.92	205.7831
351.92	205.7831
351.92	205.7831
355.39	0.0000
356.01	191.5151
364.48	168.6465
366.43	161.4559
367.43	165.8795
367.94	0.0000
369.80	138.3439
374.96	146.5129
383.85	189.9830
387.95	165.5913
388.63	159.1461
391.69	179.2299
391.69	179.2299
392.90	173.9426
398.62	161.5843
400.65	164.0555
401.10	174.0312
401.81	176.3379
402.60	180.8640
404.84	163.5190
410.95	179.8794
411.60	177.7515
413.65	179.1572
414.70	167.0586
415.30	145.9678

415.76	148.2511
417.63	0.0000
418.52	173.1546
423.70	132.3629
427.08	143.9629
427.89	148.5544
432.53	136.4419
433.93	137.4939
439.47	134.4484
439.56	136.2744
439.89	136.3092
443.98	160.4346
444.90	150.5121
445.03	154.1754
445.03	154.1754
445.03	154.1754
445.03	154.1754
453.90	136.8374
463.38	144.2714
468.07	136.1053
473.00	139.6948
475.06	121.2482
475.35	118.4734
476.78	145.6768
477.59	137.3513
477.96	138.3218
482.03	126.5378
484.57	131.4602
487.03	125.1031
490.36	0.0000
492.35	120.8469
497.08	145.8714
507.63	0.0000
510.53	0.0000
510.84	146.2894
511.00	146.3053
511.85	146.3903
511.85	146.3903
513.99	148.5168
513.99	148.5168
520.41	134.7192
520.65	140.0866
527.90	126.6824
528.96	0.0000
529.64	116.1768
529.87	0.0000
531.02	127.9104
537.32	125.5167
543.00	126.9500
546.56	0.0000
549.76	122.5952
552.65	124.7831
555.20	99.3972
563.23	120.6686
563.90	126.6531
568.70	135.9631
569.32	118.1429
569.50	118.1575
569.67	118.1691
573.80	102.5398
574.00	102.5524
574.64	107.5729
578.91	128.1579
579.30	0.0000
583.14	109.1304
585.48	123.6525
591.81	117.7484
592.07	117.7655
593.00	125.8881
595.88	120.0517
600.56	129.4875
602.52	0.0000
602.71	143.4928
602.71	143.4928
603.60	138.5018
604.41	133.4957
604.70	133.5182
609.31	114.8980

609.31	114.8980
609.31	114.8980
609.31	114.8980
610.33	114.9670
612.46	125.6338
614.37	113.8749
618.01	98.7836
621.84	125.9699
621.84	125.9699
631.29	90.6082
633.02	114.4010
633.10	114.4064
634.78	110.3882
635.90	115.6203
636.97	114.6557
645.85	128.7166
646.12	115.2384
656.30	104.3994
657.75	124.3341
657.90	0.0000
661.65	128.7867
661.65	128.7867
664.57	0.0000
666.33	118.6141
666.33	118.6141
675.00	109.6748
677.61	111.9366
685.20	126.1702
692.80	120.2860
695.00	98.0420
696.49	127.9805
696.49	127.9805
697.00	126.9488
697.49	134.4502
698.33	123.8334
698.50	131.3151
699.00	126.0117
702.63	116.6188
706.10	133.9752
706.58	0.0000
706.67	119.0025
709.31	98.7652
711.68	124.6830
713.82	117.2841
717.42	97.0181
720.50	115.1615
721.93	0.0000
722.20	99.0519
722.78	109.8899
722.78	109.8899
722.89	102.6886
722.95	102.6932
723.30	102.7095
724.18	99.1504
727.18	107.2419
733.00	95.9655
735.90	106.6205
739.58	114.4413
742.81	94.9736
744.21	99.4091
747.13	102.8309
751.79	101.9685
752.31	101.9935
753.82	87.8008
755.35	97.7501
756.15	98.8879
756.87	93.4253
763.93	97.6816
765.79	94.6143
766.42	111.9949
766.84	112.0172
776.49	114.1147
778.00	128.2932
778.57	127.7101
778.89	122.1763
783.80	93.6991
785.46	107.6974
792.07	109.8928

795.84	85.8289
796.30	83.0464
798.80	137.3250
801.93	116.0053
805.60	82.4642
810.29	107.0582
810.76	108.0207
815.85	92.2638
817.79	83.8648
818.51	82.9494
819.60	89.5901
826.30	87.0230
828.27	0.0000
831.60	104.2932
831.96	102.4146
834.83	105.3926
836.80	0.0000
846.75	94.4923
848.13	102.1912
856.28	0.0000
856.80	96.9615
860.37	79.0045
867.32	80.8914
867.82	82.5614
871.10	101.2787
873.19	94.6105
874.81	82.1172
875.33	0.0000
876.40	90.8732
879.36	67.7570
880.27	77.4658
880.51	77.4740
881.50	79.4425
883.24	74.6533
884.67	87.3102
889.25	70.9549
896.60	93.5977
898.02	86.8235
899.00	86.8579
903.28	80.4475
911.07	93.1774
911.07	93.1774
911.07	93.1774
919.63	101.8681
920.93	98.0823
925.00	102.5845
925.24	101.6086
926.50	105.6068
935.52	97.0769
937.48	110.0402
944.10	91.4460
946.00	86.5398
949.00	84.6524
962.29	84.0940
964.01	92.1647
966.15	92.2415
968.20	92.3145
969.11	92.3481
969.11	92.3481
969.11	92.3481
977.42	81.1370
980.50	88.3182
983.50	106.9942
989.30	86.9991
996.32	92.3034
1001.03	78.2407
1001.68	75.2120
1004.76	96.6680
1021.30	0.0000
1024.50	0.0000
1034.80	69.9700
1036.00	84.4124
1037.82	77.2583
1038.57	79.3405
1038.76	0.0000
1045.16	84.6960
1046.59	82.6725
1048.07	77.5482

1050.47	78.6502
1050.47	78.6502
1062.04	107.0360
1063.62	91.4984
1076.63	96.1029
1077.35	90.9011
1078.86	88.8599
1085.78	86.9818
1099.22	98.9723
1112.02	83.3975
1112.84	87.0469
1115.52	92.5727
1120.29	85.9076
1120.29	85.9076
1120.29	85.9076
1120.29	85.9076
1120.51	85.9142
1121.28	85.9373
1124.00	0.0000
1129.67	82.9893
1131.51	0.0000
1147.95	0.0000
1167.94	92.6803
1173.22	95.0003
1175.09	69.1328
1177.93	94.0659
1189.05	106.0321
1204.90	94.4233
1205.75	0.0000
1213.00	103.1020
1221.42	97.7394
1230.97	117.8327
1235.34	106.6666
1236.41	0.0000
1238.25	89.7583
1246.25	104.1877
1260.41	0.0000
1271.85	75.4181
1274.45	80.2559
1274.54	80.2588
1291.56	72.9915
1298.22	0.0000
1312.09	50.2480
1325.50	63.0594
1325.50	63.0594
1332.49	56.3857
1333.61	71.9637
1360.21	55.8609
1362.66	0.0000
1365.15	49.0705
1368.21	45.1834
1368.53	0.0000
1376.25	44.3032
1384.27	68.0879
1394.10	37.6011
1395.20	43.5519
1407.95	48.6753
1434.06	50.0279
1436.60	41.0515
1457.56	0.0000
1460.81	45.3547
1489.15	35.5444
1509.49	20.4206
1596.49	40.7152
1620.62	34.6574
1678.03	0.0000
1691.02	21.3644
1691.02	21.3644
1706.46	0.0000
1750.46	0.0000
1764.49	13.3113
1764.49	13.3113
1764.49	13.3113
1764.49	13.3113
1770.23	10.1549
1771.40	15.2368
1791.20	0.0000
1808.65	14.4044

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492002

Total Uranium Activity	5.6525E+00	ug/g
Total Uranium Counting Unc.	3.6420E+00	ug/g
Total Uranium Tpu	1.8582E-06	ug/g
Total Uranium Mda	1.6267E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492002
ANALYST	: MXR1	DETECTOR	: GAM13
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 14:00:25.36	SAMPLE ALQT:	137.860 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 9.986E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.674E+00
GROSS GAMMA MDA (pCi/GRAM)	: 3.218E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.566E+00

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 16:16:22.61

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492003.CNF;2
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 14:15:58.
Sample ID : G243492003 Sample quantity : 1.31780E+02 GRAM
Detector name : GAM13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.61 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	46.37*	103	473	1.04	92.51	88	8	1.43E-02	40.6	
2	0	53.19*	84	442	1.63	106.14	102	8	1.16E-02	46.8	
3	0	63.14*	116	615	1.31	126.05	122	8	1.62E-02	42.3	
4	2	74.71*	572	527	1.07	149.19	145	13	7.94E-02	7.6	1.83E+00
5	2	77.02*	880	551	1.12	153.81	145	13	1.22E-01	5.9	
6	0	83.92*	139	405	1.49	167.61	165	6	1.93E-02	25.4	
7	9	87.11	302	327	1.51	174.01	171	20	4.19E-02	10.5	2.71E+00
8	9	89.83	202	444	1.18	179.44	171	20	2.81E-02	18.6	
9	9	92.54*	282	428	1.21	184.86	171	20	3.92E-02	16.5	
10	0	129.23	106	408	1.28	258.26	254	9	1.48E-02	35.8	
11	0	144.47*	57	596	4.70	288.75	281	14	7.98E-03	93.1	
12	0	185.70*	121	418	1.22	371.22	367	10	1.68E-02	35.5	
13	0	208.85	90	318	1.10	417.54	414	9	1.26E-02	37.0	
14	3	238.49*	1137	190	1.24	476.82	469	21	1.58E-01	3.7	1.23E+00
15	3	241.48*	251	255	1.66	482.81	469	21	3.48E-02	15.5	
16	0	270.09	120	233	0.75	540.05	535	10	1.67E-02	25.5	
17	0	295.08*	335	210	1.40	590.04	585	10	4.65E-02	10.0	
18	0	299.92	83	173	1.30	599.72	596	8	1.15E-02	29.7	
19	0	337.94*	224	239	1.51	675.79	670	14	3.11E-02	16.3	
20	0	351.70*	597	203	1.49	703.32	698	11	8.29E-02	6.4	
21	0	462.94	68	114	1.52	925.86	922	9	9.38E-03	31.1	
22	0	510.86*	170	178	1.98	1021.73	1015	18	2.36E-02	22.2	
23	0	582.86*	375	148	1.58	1165.77	1157	16	5.21E-02	9.1	
24	0	608.87*	481	147	1.70	1217.82	1210	16	6.68E-02	7.4	
25	0	663.99	92	168	8.24	1328.09	1314	26	1.27E-02	40.2	
26	0	727.29	60	97	0.99	1454.73	1449	10	8.36E-03	33.3	
27	0	861.86	42	106	1.01	1723.97	1714	16	5.87E-03	57.7	
28	0	911.14*	211	112	1.67	1822.57	1815	16	2.93E-02	13.5	
29	0	969.05*	113	67	1.32	1938.44	1935	10	1.57E-02	17.6	
30	0	1120.08	93	64	1.47	2240.62	2235	13	1.29E-02	20.6	
31	0	1460.33	850	32	1.97	2921.44	2911	17	1.18E-01	3.7	
32	0	1764.40	77	11	2.53	3529.91	3522	15	1.07E-02	14.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 16:16:25

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492003.CNF;2
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 14:15:58
Sample ID : G243492003 Sample quantity : 131.78 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.61 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.178E+01	2.104E+00	6.335E-01	3.873E-02	34.383
AS-73	+	53.44	*	3.675E-01	3.454E-01	3.624E-01	3.061E-02	1.014
CD-109	+	88.03	*	3.274E+00	7.346E-01	9.020E-01	7.117E-02	3.630
SN-126	+	64.28		4.672E-01	4.022E-01	3.849E-01	5.993E-02	1.214
	+	86.94		1.332E+00	6.161E-01	3.658E-01	1.508E-01	3.641
	+	87.57	*	3.204E-01	7.188E-02	8.814E-02	6.972E-03	3.635
CE-141	+	145.44	*	7.928E-02	1.479E-01	1.106E-01	1.147E-02	0.717
TL-208		277.35		5.806E-01	4.336E-01	7.234E-01	8.473E-02	0.803
	+	510.84		8.838E-01	4.046E-01	2.568E-01	2.791E-02	3.442
	+	583.14	*	5.619E-01	1.128E-01	7.610E-02	6.300E-03	7.383
	+	860.37		6.029E-01	6.981E-01	5.946E-01	5.013E-02	1.014
BI-210	+	46.50	*	9.917E-01	8.094E-01	7.584E-01	6.182E-02	1.308
PB-210	+	46.50	*	9.917E-01	8.094E-01	7.584E-01	6.182E-02	1.308
PO-210	+	46.50	*	9.917E-01	8.084E-01	7.584E-01	5.407E-02	1.308
BI-211		72.87		2.508E+00	2.212E+00	3.467E+00	3.032E-01	0.723
	+	351.07	*	3.755E+00	5.497E-01	3.958E-01	2.885E-02	9.488
PB-212	+	74.81		2.068E+00	4.094E-01	3.756E-01	4.778E-02	5.505
	+	77.11		1.897E+00	2.769E-01	2.245E-01	1.907E-02	8.449
	+	87.30		1.482E+00	3.640E-01	4.073E-01	5.197E-02	3.638
	+	238.63	*	1.540E+00	1.803E-01	9.138E-02	8.301E-03	16.857
	+	300.09		1.737E+00	1.045E+00	1.350E+00	1.284E-01	1.286
PO-212	+	74.81		2.068E+00	4.094E-01	3.756E-01	4.778E-02	5.505
	+	77.11		1.897E+00	2.769E-01	2.245E-01	1.907E-02	8.449
	+	87.30		1.482E+00	3.640E-01	4.073E-01	5.197E-02	3.638
		115.19		-6.606E-01	3.629E+00	5.897E+00	6.839E-01	-0.112
	+	238.63	*	1.540E+00	1.803E-01	9.138E-02	8.301E-03	16.857
	+	300.09		1.737E+00	1.045E+00	1.350E+00	1.284E-01	1.286
BI-214	+	609.31	*	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
	+	1120.29		1.362E+00	5.755E-01	5.702E-01	5.101E-02	2.389
	+	1764.49		1.544E+00	4.661E-01	3.151E-01	1.789E-02	4.900
PB-214	+	74.81		3.563E+00	6.756E-01	6.472E-01	7.361E-02	5.505
	+	77.11		3.252E+00	5.355E-01	3.849E-01	4.392E-02	8.449
	+	87.30		2.538E+00	6.022E-01	6.978E-01	7.715E-02	3.638
	+	241.98		2.040E+00	6.618E-01	5.506E-01	5.330E-02	3.705

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	295.21		1.234E+00	2.747E-01	2.477E-01	2.427E-02	4.979
	+	351.92	*	1.306E+00	2.030E-01	1.380E-01	1.235E-02	9.466
PO-214	+	74.81		3.563E+00	6.756E-01	6.472E-01	7.361E-02	5.505
	+	77.11		3.252E+00	5.355E-01	3.849E-01	4.392E-02	8.449
	+	87.30		2.538E+00	6.022E-01	6.978E-01	7.715E-02	3.638
	+	241.98		2.040E+00	6.618E-01	5.506E-01	5.330E-02	3.705
	+	295.21		1.234E+00	2.747E-01	2.477E-01	2.427E-02	4.979
	+	351.92	*	1.306E+00	2.030E-01	1.380E-01	1.235E-02	9.466
PO-216	+	74.81		2.068E+00	4.094E-01	3.756E-01	4.778E-02	5.505
	+	77.11		1.897E+00	2.769E-01	2.245E-01	1.907E-02	8.449
	+	87.30		1.482E+00	3.640E-01	4.073E-01	5.197E-02	3.638
	+	238.63	*	1.540E+00	1.803E-01	9.138E-02	8.301E-03	16.857
	+	300.09		1.737E+00	1.045E+00	1.350E+00	1.284E-01	1.286
PO-218	+	74.81		3.563E+00	6.756E-01	6.472E-01	7.361E-02	5.505
	+	77.11		3.252E+00	5.355E-01	3.849E-01	4.392E-02	8.449
	+	87.30		2.538E+00	6.022E-01	6.978E-01	7.715E-02	3.638
	+	241.98		2.040E+00	6.618E-01	5.506E-01	5.330E-02	3.705
	+	295.21		1.234E+00	2.747E-01	2.477E-01	2.427E-02	4.979
	+	351.92	*	1.306E+00	2.030E-01	1.380E-01	1.235E-02	9.466
RA-224	+	240.98	*	3.868E+00	1.236E+00	1.040E+00	8.213E-02	3.718
RA-226	+	609.31	*	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
	+	1120.29		1.362E+00	5.755E-01	5.702E-01	5.101E-02	2.389
	+	1764.49		1.544E+00	4.661E-01	3.151E-01	1.789E-02	4.900
AC-228	+	338.32		1.547E+00	8.095E-01	3.954E-01	1.619E-01	3.911
	+	911.07	*	1.421E+00	4.120E-01	3.066E-01	3.184E-02	4.634
	+	969.11		1.336E+00	5.612E-01	5.906E-01	1.349E-01	2.262
RA-228	+	338.32		1.547E+00	8.095E-01	3.954E-01	1.619E-01	3.911
	+	911.07	*	1.421E+00	4.120E-01	3.066E-01	3.184E-02	4.634
	+	969.11		1.336E+00	5.612E-01	5.906E-01	1.349E-01	2.262
TH-228	+	74.81		2.105E+00	3.682E-01	3.824E-01	3.328E-02	5.505
	+	77.11		1.932E+00	2.820E-01	2.286E-01	1.942E-02	8.449
	+	87.30		1.509E+00	3.385E-01	4.147E-01	3.287E-02	3.638
	+	238.63	*	1.568E+00	1.836E-01	9.304E-02	8.452E-03	16.857
	+	300.09		1.768E+00	1.482E+00	1.375E+00	8.127E-01	1.286
TH-230	+	609.31	*	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
	+	1120.29		1.362E+00	5.755E-01	5.702E-01	5.101E-02	2.389
	+	1764.49		1.544E+00	4.661E-01	3.151E-01	1.789E-02	4.900
TH-232	+	338.32		1.547E+00	5.156E-01	3.954E-01	2.753E-02	3.911
	+	911.07	*	1.421E+00	4.120E-01	3.066E-01	3.184E-02	4.634
	+	969.11		1.336E+00	5.612E-01	5.906E-01	1.349E-01	2.262
TH-234	+	63.29	*	1.180E+00	1.022E+00	9.818E-01	1.802E-01	1.202
	+	92.38		2.068E+00	7.784E-01	6.118E-01	1.101E-01	3.381
U-234	+	609.31	*	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
	+	1120.29		1.362E+00	5.755E-01	5.702E-01	5.101E-02	2.389
	+	1764.49		1.544E+00	4.661E-01	3.151E-01	1.789E-02	4.900
U-235	+	89.95		2.960E+00	1.427E+00	1.217E+00	3.738E-01	2.433
	+	93.35		2.487E+00	1.077E+00	7.378E-01	2.066E-01	3.370
		105.00		1.185E+00	1.078E+00	1.746E+00	5.294E-01	0.679
	+	143.76	*	2.482E-01	4.645E-01	3.440E-01	6.351E-02	0.722

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		163.35		-2.140E-01	5.489E-01	8.371E-01	1.580E-01	-0.256
	+	185.71		1.156E-01	8.255E-02	7.316E-02	5.775E-03	1.580
		205.31		-1.201E-01	6.183E-01	8.943E-01	1.679E-01	-0.134
NP-237	+	86.50	*	9.408E-01	2.868E-01	2.818E-01	6.233E-02	3.338
		95.87		-5.056E-01	8.747E-01	1.244E+00	3.078E-01	-0.406
U-238	+	63.29	*	1.180E+00	1.022E+00	9.818E-01	1.802E-01	1.202
	+	92.38		2.068E+00	7.055E-01	6.118E-01	5.164E-02	3.381
AM-243	+	74.67	*	3.352E-01	5.851E-02	6.087E-02	5.258E-03	5.507
	+	86.72		3.528E+01	7.915E+00	1.057E+01	8.413E-01	3.336
		117.66		2.436E+00	3.851E+00	6.435E+00	7.701E-01	0.378
		142.18		-6.324E+00	1.915E+01	2.973E+01	3.150E+00	-0.213
ANH-511	+	511.00	*	1.909E-01	8.594E-02	5.549E-02	3.872E-03	3.440

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	2.383E-01	3.993E-01	6.904E-01	5.191E-02	0.345
NA-22		1274.54	*	8.267E-04	5.058E-02	8.422E-02	4.754E-03	0.010
NA-24		1368.53	*	2.216E+00	5.058E-02	Half-Life too short		
AL-26		1129.67		-1.488E+00	2.213E+00	3.269E+00	1.938E-01	-0.455
		1808.65	*	1.124E-02	4.248E-02	7.321E-02	4.131E-03	0.153
TI-44		67.85		-1.445E-02	2.499E-02	4.139E-02	3.747E-03	-0.349
	+	78.38	*	3.501E-01	5.111E-02	5.521E-02	4.650E-03	6.342
SC-46		889.25	*	5.998E-03	5.365E-02	8.957E-02	6.783E-03	0.067
	+	1120.51		2.390E-01	9.972E-02	1.491E-01	8.963E-03	1.603
V-48		944.10		-1.140E+00	1.305E+00	1.983E+00	1.448E-01	-0.575
		983.50	*	1.411E-01	1.081E-01	1.946E-01	1.376E-02	0.725
		1312.09		-4.869E-03	1.088E-01	1.796E-01	1.018E-02	-0.027
CR-51		320.08	*	2.224E-01	4.316E-01	7.253E-01	5.645E-02	0.307
MN-52		744.21		-4.084E-01	4.715E-01	7.039E-01	5.714E-02	-0.580
		848.13		-6.322E+00	1.292E+01	2.067E+01	1.610E+00	-0.306
		935.52		2.747E-01	4.689E-01	8.077E-01	5.933E-02	0.340
		1246.25		-7.688E+00	1.202E+01	1.888E+01	1.057E+00	-0.407
		1333.61		1.196E+01	9.896E+00	1.810E+01	1.030E+00	0.660
		1434.06	*	4.348E-01	4.065E-01	7.517E-01	4.320E-02	0.578
MN-54		834.83	*	-6.342E-03	5.070E-02	8.370E-02	6.568E-03	-0.076
CO-56		846.75	*	3.008E-06	5.439E-02	9.045E-02	7.050E-03	0.000
		977.42		-1.291E+00	4.369E+00	6.649E+00	4.728E-01	-0.194
		1037.82		-4.599E-01	4.228E-01	6.207E-01	4.521E-02	-0.741
		1175.09		4.343E-01	2.940E+00	4.800E+00	2.640E-01	0.090
		1238.25		1.965E-01	1.108E-01	2.059E-01	1.228E-02	0.954
		1360.21		5.799E-01	1.170E+00	2.043E+00	1.166E-01	0.284
		1771.40		-1.426E-01	3.030E-01	3.708E-01	2.104E-02	-0.384
CO-57		122.06	*	7.464E-03	2.585E-02	4.263E-02	5.392E-03	0.175
		136.48		1.885E-01	2.199E-01	3.669E-01	4.295E-02	0.514
CO-58		810.76	*	-3.332E-02	5.307E-02	8.440E-02	6.722E-03	-0.395
FE-59		142.65		-2.847E-01	3.112E+00	4.885E+00	5.152E-01	-0.058
		192.34		-4.501E-01	9.940E-01	1.653E+00	2.146E-01	-0.272

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1099.22	*	-8.021E-02	1.256E-01	1.922E-01	1.373E-02	-0.417
		1291.56		1.217E-01	1.473E-01	2.635E-01	1.925E-02	0.462
CO-60		1173.22		3.631E-02	5.719E-02	9.713E-02	5.338E-03	0.374
		1332.49	*	4.510E-02	5.371E-02	9.550E-02	5.432E-03	0.472
ZN-65		1115.52	*	2.257E-02	1.340E-01	1.895E-01	1.151E-02	0.119
GE-68		1077.35	*	1.120E+00	1.674E+00	2.870E+00	1.835E-01	0.390
AS-74		595.88	*	-2.283E-02	1.231E-01	1.993E-01	1.530E-02	-0.115
		634.78		-2.087E-01	5.333E-01	8.456E-01	6.738E-02	-0.247
SE-75		66.05		-1.202E+00	2.725E+00	4.065E+00	4.428E-01	-0.296
		96.73		-3.226E-01	7.275E-01	1.051E+00	1.458E-01	-0.307
		121.11		-5.888E-02	1.428E-01	2.286E-01	3.295E-02	-0.258
		136.00		3.592E-02	4.123E-02	6.887E-02	7.780E-03	0.522
		198.60		1.893E+00	2.021E+00	3.434E+00	3.069E-01	0.551
		264.65	*	-2.345E-02	5.425E-02	7.665E-02	6.005E-03	-0.306
		279.53		2.253E-02	1.202E-01	2.003E-01	1.612E-02	0.112
		303.91		-1.053E+00	2.772E+00	3.792E+00	4.028E-01	-0.278
		400.65		2.303E-02	3.397E-01	5.470E-01	5.028E-02	0.042
BR-77	+	87.88		1.678E+03	3.765E+02	6.528E+02	5.153E+01	2.571
		200.40		-3.053E+02	4.066E+02	6.666E+02	5.280E+01	-0.458
	+	239.00		5.895E+02	6.374E+01	9.064E+01	7.160E+00	6.503
		249.79		-9.658E+01	1.646E+02	2.661E+02	2.092E+01	-0.363
		281.68		-1.823E+02	2.284E+02	3.608E+02	2.766E+01	-0.505
		297.23		4.313E+02	2.298E+02	2.850E+02	2.144E+01	1.513
		303.76		-5.250E+02	5.736E+02	7.529E+02	5.609E+01	-0.697
		439.47		2.790E+02	4.022E+02	7.022E+02	4.437E+01	0.397
		484.57		-1.402E+02	6.052E+02	9.948E+02	6.707E+01	-0.141
		520.65	*	-1.187E+01	2.942E+01	4.610E+01	3.256E+00	-0.257
		574.64		-2.093E+02	7.398E+02	1.080E+03	8.111E+01	-0.194
		578.91		6.872E+01	3.061E+02	4.448E+02	3.357E+01	0.155
		585.48		3.669E+03	7.004E+02	1.276E+03	9.700E+01	2.874
		755.35		7.199E+01	5.559E+02	9.007E+02	7.293E+01	0.080
		817.79		1.422E+02	4.128E+02	7.057E+02	5.586E+01	0.201
SR-82		698.33		1.901E+01	5.000E+01	8.293E+01	6.770E+00	0.229
		776.49	*	-2.951E-01	5.141E-01	8.244E-01	6.635E-02	-0.358
		1395.20		-8.670E+00	1.479E+01	2.266E+01	1.298E+00	-0.383
RB-83		520.41	*	-2.835E-02	8.634E-02	1.316E-01	9.294E-03	-0.215
		529.64		4.073E-02	1.316E-01	2.224E-01	1.588E-02	0.183
		552.65		-6.664E-02	2.565E-01	4.162E-01	3.052E-02	-0.160
RB-84		881.50	*	-6.349E-02	1.083E-01	1.560E-01	1.188E-02	-0.407
KR-85		513.99	*	1.835E+01	9.292E+00	1.549E+01	1.085E+00	1.184
SR-85		513.99	*	9.707E-02	4.916E-02	8.195E-02	5.741E-03	1.184
RB-86		1076.63	*	4.935E-01	1.169E+00	1.968E+00	1.259E-01	0.251
Y-88		898.02		-1.154E-02	5.751E-02	9.368E-02	7.091E-03	-0.123
		1836.01	*	1.073E-02	3.888E-02	6.766E-02	3.810E-03	0.159
ZR-88		392.90	*	-2.088E-02	3.665E-02	5.668E-02	3.320E-03	-0.368
Y-91		1204.90	*	5.019E+00	2.418E+01	4.105E+01	2.275E+00	0.122
NB-94		702.63	*	-1.216E-02	4.695E-02	7.451E-02	6.082E-03	-0.163
		871.10		-3.516E-03	4.331E-02	7.137E-02	5.476E-03	-0.049
NB-95		765.79	*	7.603E-02	6.072E-02	1.087E-01	8.778E-03	0.699

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95M		235.69	*	2.707E-01	1.456E-01	2.343E-01	2.167E-02	1.155
ZR-95		724.18		8.167E-02	1.530E-01	2.233E-01	1.994E-02	0.366
		756.15	*	-2.457E-02	1.050E-01	1.656E-01	1.493E-02	-0.148
NB-97		657.90	*	-1.751E+00	1.050E-01	Half-Life too short		
		1024.50		-6.817E+01	1.050E-01	Half-Life too short		
ZR-97		254.15		3.546E+01	1.050E-01	Half-Life too short		
		355.39		7.443E-01	1.050E-01	Half-Life too short		
		507.63	*	1.319E+02	1.050E-01	Half-Life too short		
		602.52		1.974E+01	1.050E-01	Half-Life too short		
		1021.30		2.780E+00	1.050E-01	Half-Life too short		
		1147.95		8.428E+01	1.050E-01	Half-Life too short		
		1362.66		-4.783E+01	1.050E-01	Half-Life too short		
		1750.46		1.140E+02	1.050E-01	Half-Life too short		
MO-99		140.51		-9.978E+00	6.348E+01	9.047E+01	2.573E+01	-0.110
		181.06		-3.396E+01	4.546E+01	6.049E+01	1.086E+01	-0.561
		366.43		1.744E+02	2.095E+02	3.548E+02	2.282E+01	0.492
		739.58	*	1.191E+01	2.958E+01	4.912E+01	7.324E+00	0.242
		778.00		-7.063E+01	9.126E+01	1.440E+02	1.159E+01	-0.491
TC-99M		140.51	*	-2.564E+13	9.126E+01	Half-Life too short		
RH-101		127.23		1.949E-02	3.763E-02	5.600E-02	6.801E-03	0.348
		198.01	*	2.327E-02	3.607E-02	6.077E-02	4.812E-03	0.383
		325.23		6.082E-02	2.609E-01	4.308E-01	3.089E-02	0.141
RH-102		418.52		-6.025E-02	3.486E-01	5.506E-01	3.366E-02	-0.109
		475.06	*	-2.272E-02	3.527E-02	5.663E-02	3.768E-03	-0.401
		631.29		-1.468E-02	7.426E-02	1.195E-01	9.496E-03	-0.123
		697.49		8.179E-02	1.032E-01	1.756E-01	1.434E-02	0.466
		766.84		2.191E-01	1.498E-01	2.704E-01	2.183E-02	0.810
		1046.59		-1.937E-02	1.473E-01	2.373E-01	1.575E-02	-0.082
		1112.84		-2.193E-02	3.206E-01	4.597E-01	2.796E-02	-0.048
RU-103		497.08	*	-2.123E-02	5.302E-02	8.605E-02	1.133E-02	-0.247
	+	610.33		1.550E+01	3.408E+00	3.550E+00	5.777E-01	4.367
RH-106	+	511.85		9.588E-01	4.317E-01	5.149E-01	3.597E-02	1.862
		621.84	*	6.384E-03	4.128E-01	6.753E-01	8.704E-02	0.009
		1050.47		-2.104E+00	2.964E+00	4.515E+00	2.983E-01	-0.466
RU-106	+	511.85		9.588E-01	4.317E-01	5.149E-01	3.597E-02	1.862
		621.84	*	6.384E-03	4.128E-01	6.753E-01	5.318E-02	0.009
		1050.47		-2.104E+00	2.964E+00	4.515E+00	2.983E-01	-0.466
AG-108M		433.93	*	-2.247E-02	3.739E-02	6.072E-02	4.085E-03	-0.370
		614.37		-1.650E-02	5.606E-02	7.698E-02	6.306E-03	-0.214
		722.95		-2.870E-03	6.347E-02	8.773E-02	7.461E-03	-0.033
AG-110M		657.75	*	-4.093E-02	5.285E-02	6.786E-02	5.701E-03	-0.603
		677.61		2.151E-01	3.972E-01	6.692E-01	5.635E-02	0.321
		706.67		2.471E-01	2.912E-01	4.962E-01	4.173E-02	0.498
		763.93		-1.158E-01	2.328E-01	3.786E-01	3.157E-02	-0.306
		884.67		3.075E-02	6.598E-02	1.131E-01	8.948E-03	0.272
		937.48		-1.420E-01	1.467E-01	2.217E-01	1.707E-02	-0.641
		1384.27		-3.190E-01	2.184E-01	2.997E-01	1.823E-02	-1.064
IN-111		171.28		2.093E-01	2.268E+00	3.628E+00	2.848E-01	0.058
		245.39	*	-4.224E-01	2.555E+00	3.709E+00	2.922E-01	-0.114

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
IN-113M		391.69	*	-4.553E-02	5.063E-02	7.624E-02	4.750E-03	-0.597
SN-113		391.69	*	-4.553E-02	5.063E-02	7.624E-02	4.750E-03	-0.597
IN-114M		190.27	*	-1.585E-01	2.287E-01	3.055E-01	2.415E-02	-0.519
CD-115		260.90		1.326E-04	2.287E-01	Half-Life too short		
		492.35		5.693E-05	2.287E-01	Half-Life too short		
		527.90	*	1.010E-05	2.287E-01	Half-Life too short		
SN-117M		156.02		-2.155E+00	2.807E+00	4.334E+00	3.916E-01	-0.497
		158.56	*	-5.942E-03	6.795E-02	1.084E-01	9.465E-03	-0.055
SB-122		563.90	*	-3.083E-01	5.640E+00	9.265E+00	6.881E-01	-0.033
		692.80		-9.006E+01	1.261E+02	1.931E+02	1.577E+01	-0.466
I-123		159.00	*	7.715E+01	1.261E+02	Half-Life too short		
		528.96		2.988E+03	1.261E+02	Half-Life too short		
TE-123M		159.00	*	8.917E-03	3.119E-02	5.055E-02	4.414E-03	0.176
I-124		602.71	*	1.926E-01	1.566E+00	2.246E+00	1.737E-01	0.086
		722.78		1.787E+00	1.062E+01	1.501E+01	1.223E+00	0.119
		1325.50		-3.930E+01	8.260E+01	1.274E+02	7.239E+00	-0.308
		1376.25		1.477E+02	7.006E+01	1.354E+02	7.744E+00	1.091
		1509.49		5.177E-01	3.597E+01	5.892E+01	3.397E+00	0.009
		1691.02		1.823E-01	8.196E+00	1.330E+01	7.615E-01	0.014
SB-124		602.71		7.072E-03	5.748E-02	8.247E-02	6.378E-03	0.086
		645.85		-3.548E-01	6.892E-01	1.080E+00	9.284E-02	-0.329
		709.31		-9.399E-01	3.978E+00	6.314E+00	5.151E-01	-0.149
		713.82		4.936E-01	2.214E+00	3.632E+00	4.253E-01	0.136
		722.78		9.510E-02	5.649E-01	7.988E-01	6.665E-02	0.119
	+	968.20		1.424E+01	5.120E+00	8.466E+00	6.067E-01	1.682
		1045.16		3.053E+00	3.303E+00	5.792E+00	3.851E-01	0.527
		1325.50		-2.234E+00	4.695E+00	7.242E+00	4.114E-01	-0.308
		1368.21		4.553E-01	2.162E+00	3.655E+00	4.324E-01	0.125
		1436.60		2.204E+00	4.733E+00	8.211E+00	4.719E-01	0.268
		1691.02	*	2.289E-03	1.029E-01	1.669E-01	1.040E-02	0.014
SB-125		427.89	*	-2.799E-02	1.085E-01	1.804E-01	1.161E-02	-0.155
	+	463.38		6.804E-01	4.258E-01	6.422E-01	4.760E-02	1.060
		600.56		2.209E-01	2.287E-01	3.790E-01	3.191E-02	0.583
		635.90		-5.184E-02	3.636E-01	5.871E-01	5.122E-02	-0.088
TE-125M		109.28	*	-1.060E+01	9.487E+00	1.475E+01	1.793E+00	-0.719
I-126		388.63		6.568E-02	2.711E-01	4.427E-01	2.622E-02	0.148
		666.33	*	8.592E-02	2.731E-01	4.533E-01	3.699E-02	0.190
		753.82		1.434E+00	2.475E+00	4.133E+00	3.348E-01	0.347
SB-126		223.80		-4.761E-02	4.816E+00	8.084E+00	6.408E-01	-0.006
		278.60		3.917E+00	3.202E+00	5.568E+00	4.283E-01	0.703
	+	296.50		1.450E+01	3.100E+00	4.337E+00	3.266E-01	3.344
		414.70		3.577E-02	1.054E-01	1.722E-01	1.046E-02	0.208
		415.30		2.202E+00	8.817E+00	1.432E+01	8.711E-01	0.154
		555.20		-8.169E-01	6.032E+00	9.869E+00	7.259E-01	-0.083
		573.80		-1.661E-01	1.744E+00	2.687E+00	2.017E-01	-0.062
		593.00		4.062E-01	1.265E+00	2.125E+00	1.628E-01	0.191
		656.30		1.068E-01	5.667E+00	7.976E+00	6.476E-01	0.013
		666.33		3.615E-02	1.149E-01	1.907E-01	1.556E-02	0.190
		675.00		-2.076E+00	3.060E+00	4.700E+00	3.837E-01	-0.442

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		695.00		1.733E-02	1.228E-01	2.006E-01	1.638E-02	0.086
		697.00		1.095E-01	4.285E-01	7.052E-01	5.758E-02	0.155
		720.50	*	-2.224E-02	2.628E-01	3.619E-01	2.949E-02	-0.061
		856.80		4.125E-01	8.201E-01	1.236E+00	9.571E-02	0.334
		989.30		-2.263E+00	2.062E+00	3.060E+00	2.153E-01	-0.740
		1034.80		4.614E+00	1.299E+01	2.187E+01	1.471E+00	0.211
		1213.00		-1.363E+00	7.008E+00	1.154E+01	6.409E-01	-0.118
SB-127		61.10		1.134E+01	4.473E+01	6.906E+01	8.793E+00	0.164
		252.40		-1.158E+00	7.610E+00	1.255E+01	5.287E+00	-0.092
		290.80		-9.711E+00	4.520E+01	6.429E+01	7.316E+00	-0.151
		411.60		-1.843E+01	2.578E+01	3.916E+01	5.954E+00	-0.471
		444.90		4.014E-01	1.929E+01	3.248E+01	3.911E+00	0.012
		473.00		-1.632E+00	3.466E+00	5.625E+00	7.046E-01	-0.290
		543.00		-2.713E+00	3.664E+01	6.031E+01	8.681E+00	-0.045
		603.60		5.327E-01	2.842E+01	4.037E+01	5.165E+00	0.013
		685.20	*	-2.233E-01	3.077E+00	4.957E+00	5.941E-01	-0.045
		698.50		1.205E+01	3.517E+01	5.812E+01	9.447E+00	0.207
		722.20		1.550E+01	7.625E+01	1.082E+02	1.272E+01	0.143
		783.80		6.112E+00	7.944E+00	1.392E+01	1.794E+00	0.439
XE-127		57.60		2.566E-01	2.304E+00	3.767E+00	3.482E-01	0.068
	+	145.22		8.682E-01	1.619E+00	1.300E+00	1.335E-01	0.668
		172.10		-1.267E-01	1.393E-01	2.117E-01	1.662E-02	-0.598
		202.84	*	-1.873E-02	5.116E-02	8.522E-02	6.754E-03	-0.220
		374.96		1.683E-01	2.469E-01	4.141E-01	2.586E-02	0.406
I-131		80.18		3.858E+00	5.665E+00	7.065E+00	5.936E-01	0.546
		284.30		-1.330E+00	2.008E+00	3.189E+00	2.606E-01	-0.417
		364.48	*	-3.303E-02	1.765E-01	2.822E-01	2.007E-02	-0.117
		636.97		8.345E-02	2.621E+00	4.284E+00	3.652E-01	0.019
		722.89		-5.763E-01	1.382E+01	1.911E+01	1.573E+00	-0.030
TE-132		49.72		-4.193E+00	9.275E+00	1.108E+01	1.225E+00	-0.378
		111.76		2.098E+01	5.857E+01	9.399E+01	1.280E+01	0.223
		116.30		5.514E+00	5.281E+01	8.674E+01	1.229E+01	0.064
		228.16	*	3.576E-01	1.354E+00	2.295E+00	3.659E-01	0.156
BA-133	+	53.15		1.517E+00	1.426E+00	1.691E+00	1.419E-01	0.897
		79.62		5.375E-01	1.085E+00	1.516E+00	2.285E-01	0.355
		81.00		4.519E-02	9.439E-02	1.160E-01	1.820E-02	0.390
		276.40		5.209E-01	4.268E-01	7.068E-01	9.842E-02	0.737
		302.84		-1.485E-01	1.928E-01	2.555E-01	3.210E-02	-0.581
		356.01	*	-7.151E-05	6.007E-02	8.535E-02	1.025E-02	-0.001
		383.85		-2.226E-01	3.648E-01	5.639E-01	6.204E-02	-0.395
I-133	+	510.53		2.101E+01	3.648E-01	Half-Life too short		
		529.87	*	2.124E-02	3.648E-01	Half-Life too short		
		706.58		4.951E+00	3.648E-01	Half-Life too short		
		856.28		1.517E+00	3.648E-01	Half-Life too short		
		875.33		2.342E-01	3.648E-01	Half-Life too short		
		1236.41		6.107E+00	3.648E-01	Half-Life too short		
		1298.22		-4.204E+00	3.648E-01	Half-Life too short		
CS-134		475.35		-1.478E+00	2.308E+00	3.707E+00	2.468E-01	-0.399
		563.23		-1.170E-01	4.604E-01	7.464E-01	5.610E-02	-0.157

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		569.32		5.743E-02	2.619E-01	4.370E-01	3.324E-02	0.131
		604.70		1.559E-02	4.761E-02	6.957E-02	5.407E-03	0.224
		795.84	*	8.957E-02	6.186E-02	1.123E-01	9.050E-03	0.798
		801.93		-1.654E-01	5.244E-01	8.567E-01	6.875E-02	-0.193
		1038.57		-4.773E+00	5.061E+00	7.540E+00	5.050E-01	-0.633
		1167.94		5.402E-01	3.259E+00	5.330E+00	2.958E-01	0.101
		1365.15		-1.061E+00	1.507E+00	2.280E+00	1.434E-01	-0.465
CS-135		268.24	*	3.520E-01	1.875E-01	3.021E-01	2.791E-02	1.165
I-135		288.45		3.576E+12	1.875E-01	Half-Life too short		
		417.63		-1.488E+13	1.875E-01	Half-Life too short		
		546.56		1.766E+12	1.875E-01	Half-Life too short		
		836.80		-1.647E+11	1.875E-01	Half-Life too short		
		1038.76		-3.625E+13	1.875E-01	Half-Life too short		
		1124.00		6.475E+12	1.875E-01	Half-Life too short		
		1131.51		-7.185E+12	1.875E-01	Half-Life too short		
		1260.41	*	-1.481E+13	1.875E-01	Half-Life too short		
		1457.56		1.341E+15	1.875E-01	Half-Life too short		
		1678.03		8.380E+12	1.875E-01	Half-Life too short		
		1706.46		-3.309E+13	1.875E-01	Half-Life too short		
		1791.20		-5.351E+12	1.875E-01	Half-Life too short		
CS-136		66.91		-4.031E-01	5.380E-01	7.869E-01	1.237E-01	-0.512
	+	86.29		4.891E+00	1.192E+00	1.891E+00	2.351E-01	2.586
		153.22		7.896E-01	8.326E-01	1.384E+00	1.426E-01	0.571
		163.89		6.879E-03	1.444E+00	2.247E+00	2.063E-01	0.003
		176.55		6.604E-02	4.714E-01	7.538E-01	6.342E-02	0.088
		273.65		-8.235E-01	6.582E-01	8.696E-01	7.272E-02	-0.947
		340.57		2.294E-01	1.950E-01	2.993E-01	2.167E-02	0.767
		818.51		-5.307E-03	1.121E-01	1.863E-01	1.477E-02	-0.028
		1048.07	*	-5.885E-02	1.648E-01	2.601E-01	1.847E-02	-0.226
		1235.34		3.926E-01	8.390E-01	1.443E+00	1.424E-01	0.272
BA-137M		661.65	*	2.357E-02	4.649E-02	7.814E-02	6.373E-03	0.302
CS-137		661.65	*	2.491E-02	4.914E-02	8.260E-02	6.751E-03	0.302
CE-139		165.85	*	-5.242E-03	3.315E-02	5.253E-02	4.118E-03	-0.100
BA-140		162.64		-4.322E-01	1.038E+00	1.586E+00	1.389E-01	-0.273
		304.84		1.587E-01	1.765E+00	2.695E+00	7.461E-01	0.059
		423.70		9.946E-01	2.800E+00	4.542E+00	1.447E+00	0.219
		537.32	*	1.093E-01	3.820E-01	6.409E-01	2.102E-01	0.171
LA-140		328.77		6.037E-01	4.127E-01	7.168E-01	5.516E-02	0.842
		432.53		-1.823E+00	2.770E+00	4.483E+00	3.056E-01	-0.407
		487.03		-5.842E-02	1.743E-01	2.840E-01	2.110E-02	-0.206
		751.79		1.391E-01	2.888E+00	4.653E+00	4.224E-01	0.030
		815.85		7.587E-02	4.948E-01	8.349E-01	7.508E-02	0.091
		867.82		4.761E-01	2.362E+00	3.453E+00	2.831E-01	0.138
		919.63		2.128E+00	4.861E+00	7.726E+00	7.497E-01	0.275
		925.24		-1.712E-02	1.700E+00	2.802E+00	2.248E-01	-0.006
		1596.49	*	5.507E-02	1.250E-01	2.151E-01	1.240E-02	0.256
CE-143		57.37		-8.359E-04	1.250E-01	Half-Life too short		
		231.56		-8.007E-03	1.250E-01	Half-Life too short		
		293.26	*	3.233E-03	1.250E-01	Half-Life too short		

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	350.59		1.335E-01	1.250E-01	Half-Life too short		
		490.36		-8.998E-03	1.250E-01	Half-Life too short		
	+	664.57		2.335E-02	1.250E-01	Half-Life too short		
		721.93		2.428E-03	1.250E-01	Half-Life too short		
CE-144		80.11		1.347E+00	2.029E+00	2.528E+00	2.104E-01	0.533
		133.54	*	-7.832E-02	2.393E-01	3.389E-01	5.875E-02	-0.231
PM-144		476.78		-1.115E-02	8.094E-02	1.342E-01	1.031E-02	-0.083
		618.01		-2.345E-02	4.053E-02	6.345E-02	5.145E-03	-0.370
		696.49	*	8.265E-03	4.663E-02	7.635E-02	6.237E-03	0.108
		778.57		-1.856E+00	2.887E+00	4.603E+00	3.704E-01	-0.403
PR-144		696.49	*	5.610E-01	3.165E+00	5.182E+00	4.231E-01	0.108
		1489.15		-3.479E+00	1.667E+01	2.663E+01	1.534E+00	-0.131
PM-146		453.90	*	5.368E-02	5.011E-02	8.895E-02	8.074E-03	0.604
		633.02		1.043E-01	1.857E+00	3.041E+00	1.132E+00	0.034
		735.90		-6.301E-02	1.885E-01	2.934E-01	8.350E-02	-0.215
		747.13		4.311E-02	1.281E-01	2.107E-01	2.894E-02	0.205
ND-147	+	91.11		8.968E-01	3.427E-01	6.011E-01	5.421E-02	1.492
		319.41		4.521E+00	4.294E+00	7.413E+00	5.378E-01	0.610
		439.89		6.547E+00	8.321E+00	1.459E+01	9.231E-01	0.449
		531.02	*	-5.415E-02	8.221E-01	1.356E+00	1.920E-01	-0.040
PM-149		285.90	*	9.089E-05	8.221E-01	Half-Life too short		
EU-152		121.78		1.761E-02	7.474E-02	1.230E-01	1.664E-02	0.143
		244.69		2.267E-02	3.729E-01	5.497E-01	4.333E-02	0.041
		344.27	*	5.021E-02	1.300E-01	1.902E-01	1.425E-02	0.264
		443.98		-2.533E-01	1.122E+00	1.862E+00	1.184E-01	-0.136
		778.89		-1.762E-01	3.254E-01	5.227E-01	4.203E-02	-0.337
		867.32		7.477E-02	1.187E+00	1.707E+00	1.313E-01	0.044
		964.01		6.093E-01	4.244E-01	6.839E-01	4.918E-02	0.891
		1085.78		1.479E-01	4.997E-01	8.333E-01	5.267E-02	0.178
		1112.02		-2.347E-01	4.570E-01	6.471E-01	3.941E-02	-0.363
		1407.95		8.435E-02	2.385E-01	4.073E-01	2.336E-02	0.207
GD-153		69.67		-1.316E-02	1.019E+00	1.641E+00	1.467E-01	-0.008
	+	83.37		2.608E+01	1.344E+01	2.039E+01	1.660E+00	1.279
		97.43	*	-4.335E-02	7.825E-02	1.098E-01	9.995E-03	-0.395
		103.18		-9.374E-02	1.003E-01	1.587E-01	1.567E-02	-0.591
EU-154		123.07		-1.401E-02	5.306E-02	8.547E-02	1.246E-02	-0.164
		247.94		2.984E-01	4.035E-01	6.487E-01	7.086E-02	0.460
		591.81		-3.591E-01	7.071E-01	1.113E+00	1.222E-01	-0.323
		723.30		-1.233E-02	2.655E-01	3.670E-01	3.341E-02	-0.034
		756.87		-6.013E-01	1.115E+00	1.714E+00	1.989E-01	-0.351
		873.19		-1.032E-01	3.782E-01	6.131E-01	7.105E-02	-0.168
		996.32		-5.488E-01	5.008E-01	7.298E-01	1.243E-01	-0.752
		1004.76		-2.069E-01	2.900E-01	4.455E-01	4.657E-02	-0.465
		1274.45	*	2.302E-03	1.411E-01	2.349E-01	2.170E-02	0.010
EU-155		48.70		-2.909E-01	5.586E-01	6.649E-01	5.018E-02	-0.437
		60.01		1.211E+00	2.157E+00	3.373E+00	3.229E-01	0.359
	+	86.54		3.863E-01	8.680E-02	1.524E-01	1.229E-02	2.534
		105.31	*	1.397E-01	1.057E-01	1.808E-01	1.855E-02	0.772
TB-160	+	86.79		1.061E+00	2.379E-01	4.201E-01	3.341E-02	2.524

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		197.04		-2.798E-01	6.353E-01	1.028E+00	8.142E-02	-0.272
		215.65		4.614E-01	7.771E-01	1.339E+00	1.062E-01	0.344
	+	298.57		2.600E-01	1.558E-01	2.311E-01	1.735E-02	1.125
		879.36	*	7.602E-02	2.048E-01	3.197E-01	2.439E-02	0.238
		962.29		1.013E+00	7.468E-01	1.266E+00	9.114E-02	0.800
		966.15		7.957E-01	3.758E-01	6.157E-01	4.420E-02	1.292
		1177.93		-3.052E-01	4.948E-01	7.550E-01	4.155E-02	-0.404
		1271.85		-8.552E-01	9.053E-01	1.372E+00	7.723E-02	-0.623
HO-166M		80.57		1.165E-01	2.634E-01	3.235E-01	2.684E-02	0.360
	+	184.41		8.668E-02	6.191E-02	7.623E-02	6.015E-03	1.137
		280.46		-5.642E-02	9.273E-02	1.483E-01	1.139E-02	-0.380
		410.95		1.181E-01	2.930E-01	4.805E-01	2.901E-02	0.246
		711.68	*	-6.808E-02	8.550E-02	1.266E-01	1.033E-02	-0.538
		752.31		2.454E-02	3.976E-01	6.413E-01	5.196E-02	0.038
		810.29		-4.245E-02	7.637E-02	1.221E-01	9.700E-03	-0.348
TM-171		51.35		2.120E+00	7.101E+00	1.112E+01	8.952E-01	0.191
	+	52.39		6.337E+00	5.956E+00	6.836E+00	5.638E-01	0.927
		59.40		7.775E+00	1.126E+01	1.770E+01	1.697E+00	0.439
		66.72	*	-1.172E+01	1.660E+01	2.446E+01	2.232E+00	-0.479
LU-176	+	88.36		7.598E-01	1.705E-01	2.981E-01	2.364E-02	2.549
		201.83		-2.346E-02	2.984E-02	4.881E-02	3.868E-03	-0.481
		306.84	*	6.122E-03	2.812E-02	4.663E-02	3.457E-03	0.131
		401.10		6.238E-01	8.648E+00	1.393E+01	8.272E-01	0.045
LU-177		112.95		-5.701E-01	2.344E+00	3.676E+00	4.142E-01	-0.155
	+	208.36	*	2.961E+00	2.205E+00	2.824E+00	2.240E-01	1.048
LU-177M	+	52.97		6.865E-01	6.452E-01	7.651E-01	6.394E-02	0.897
	+	54.07		3.890E-01	3.656E-01	4.178E-01	3.579E-02	0.931
		61.30		4.914E-01	7.093E-01	1.112E+00	1.054E-01	0.442
		121.62		8.144E-02	3.874E-01	6.372E-01	8.012E-02	0.128
		147.16		3.507E-01	7.441E-01	1.096E+00	1.101E-01	0.320
		171.86		-3.778E-01	5.369E-01	8.252E-01	6.480E-02	-0.458
		218.09		1.462E-01	8.652E-01	1.466E+00	1.163E-01	0.100
	+	268.79		2.525E+00	1.300E+00	1.617E+00	1.255E-01	1.562
		319.02		3.174E-01	2.859E-01	4.945E-01	3.588E-02	0.642
		367.43		1.769E-01	1.071E+00	1.748E+00	1.120E-01	0.101
		413.65	*	6.258E-02	2.132E-01	3.473E-01	2.107E-02	0.180
HF-181		56.28		-2.587E-01	3.563E-01	5.285E-01	4.750E-02	-0.490
		57.53		-9.583E-02	1.957E-01	3.126E-01	2.885E-02	-0.307
		65.20		1.829E-01	5.370E-01	8.284E-01	7.641E-02	0.221
		133.02		-6.219E-03	7.766E-02	1.118E-01	1.292E-02	-0.056
		136.25		5.077E-01	5.004E-01	8.391E-01	9.419E-02	0.605
		345.85		1.682E-02	2.943E-01	3.907E-01	2.670E-02	0.043
		482.03	*	-1.755E-03	5.191E-02	8.653E-02	5.813E-03	-0.020
W-181		56.28		-9.778E-02	1.352E-01	2.005E-01	1.802E-02	-0.488
		57.53		-3.636E-02	7.427E-02	1.186E-01	1.095E-02	-0.306
		65.20	*	6.886E-02	2.022E-01	3.119E-01	2.877E-02	0.221
TA-182		67.75		-3.934E-02	6.040E-02	9.979E-02	9.041E-03	-0.394
		100.10		4.054E-02	1.585E-01	2.644E-01	2.500E-02	0.153
		152.43		2.537E-01	3.671E-01	6.056E-01	5.725E-02	0.419

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		222.10		-7.399E-03	3.447E-01	5.786E-01	4.588E-02	-0.013
		1001.68		-2.193E-01	2.840E+00	4.571E+00	3.180E-01	-0.048
	+	1121.28		6.557E-01	2.736E-01	4.097E-01	2.461E-02	1.600
		1189.05		-1.139E-01	3.788E-01	6.188E-01	3.416E-02	-0.184
		1221.42	*	3.137E-02	2.515E-01	4.236E-01	2.357E-02	0.074
		1230.97		-5.657E-01	6.014E-01	9.307E-01	5.191E-02	-0.608
RE-183		57.98		4.756E-02	7.338E-02	1.272E-01	1.185E-02	0.374
		59.32		3.272E-02	4.735E-02	7.447E-02	7.129E-03	0.439
		67.20		-1.610E-01	1.243E-01	1.777E-01	1.616E-02	-0.906
		162.32	*	-5.371E-02	1.321E-01	2.019E-01	1.671E-02	-0.266
	+	208.81		2.015E+00	1.501E+00	1.924E+00	1.526E-01	1.048
		291.72		-1.920E-01	1.202E+00	1.717E+00	1.301E-01	-0.112
RE-184		57.98		1.722E-01	2.658E-01	4.607E-01	4.292E-02	0.374
		59.32		1.184E-01	1.714E-01	2.695E-01	2.580E-02	0.439
		67.20		-5.830E-01	4.502E-01	6.432E-01	5.850E-02	-0.906
		161.27		1.339E-01	3.960E-01	6.425E-01	5.400E-02	0.208
		216.55		2.162E-01	2.726E-01	4.730E-01	3.752E-02	0.457
		252.85	*	2.534E-02	2.387E-01	3.994E-01	3.135E-02	0.063
		318.01		3.684E-01	5.002E-01	8.498E-01	6.179E-02	0.433
		792.07		7.678E-01	1.324E+00	2.296E+00	1.838E-01	0.334
		903.28		-1.425E-01	1.568E+00	2.206E+00	1.654E-01	-0.065
		920.93		3.545E-01	6.294E-01	1.062E+00	7.875E-02	0.334
OS-185		59.72		6.909E-02	1.293E-01	2.020E-01	1.938E-02	0.342
		61.14		2.877E-02	7.654E-02	1.187E-01	1.127E-02	0.242
		69.30		-1.971E-02	1.747E-01	2.936E-01	2.632E-02	-0.067
		592.07		-1.036E+00	2.980E+00	4.761E+00	3.642E-01	-0.218
		646.12	*	-6.888E-03	5.659E-02	9.134E-02	7.352E-03	-0.075
		717.42		-2.249E-01	1.224E+00	1.947E+00	1.587E-01	-0.115
		874.81		-1.320E-01	7.652E-01	1.251E+00	9.575E-02	-0.105
		880.27		-8.380E-02	1.138E+00	1.714E+00	1.306E-01	-0.049
RE-188		155.03	*	2.315E-02	1.866E-01	3.009E-01	2.754E-02	0.077
		477.96		3.113E+00	3.793E+00	6.637E+00	4.434E-01	0.469
		633.10		3.616E-01	3.872E+00	6.357E+00	5.058E-01	0.057
W-188	+	63.58		4.887E+01	4.162E+01	5.729E+01	5.346E+00	0.853
		227.08		4.313E+00	1.354E+01	2.302E+01	1.824E+00	0.187
		290.67	*	-2.407E+00	9.492E+00	1.347E+01	1.022E+00	-0.179
IR-192	+	295.96		9.671E-01	2.070E-01	3.033E-01	2.307E-02	3.188
		308.46		-2.299E-02	1.129E-01	1.830E-01	1.363E-02	-0.126
		316.51	*	-8.434E-05	3.917E-02	6.407E-02	4.687E-03	-0.001
		468.07		2.610E-02	9.574E-02	1.426E-01	1.052E-02	0.183
		604.41		1.530E-01	6.566E-01	9.512E-01	1.185E-01	0.161
		612.46		2.176E+00	1.076E+00	1.762E+00	1.621E-01	1.235
AU-195		65.12		6.145E-02	9.391E-02	1.464E-01	1.351E-02	0.420
		66.83		-4.071E-02	5.551E-02	8.166E-02	7.446E-03	-0.498
	+	75.70		1.097E+00	1.915E-01	3.344E-01	2.868E-02	3.281
		98.88	*	1.033E-01	2.062E-01	3.351E-01	3.114E-02	0.308
	+	129.76		6.097E+00	4.430E+00	5.176E+00	6.154E-01	1.178
TL-200		367.94	*	-1.453E-04	4.430E+00	Half-Life too short		
		579.30		2.633E-02	4.430E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		828.27		-3.813E-02	4.430E+00	Half-Life too short		
		1205.75		4.261E-03	4.430E+00	Half-Life too short		
TL-201		68.90		3.410E+00	5.293E+00	9.084E+00	8.164E-01	0.375
		70.82		3.445E+00	3.510E+00	5.501E+00	4.879E-01	0.626
		80.30		9.902E+00	9.218E+00	1.177E+01	9.788E-01	0.841
		135.34		1.054E+01	5.196E+01	8.484E+01	9.604E+00	0.124
		167.43	*	-1.120E+01	1.537E+01	2.368E+01	1.856E+00	-0.473
TL-202		68.90		1.843E-01	2.861E-01	4.910E-01	4.413E-02	0.375
		70.82		1.857E-01	1.892E-01	2.965E-01	2.630E-02	0.626
		80.30		5.339E-01	4.970E-01	6.348E-01	5.277E-02	0.841
		439.56	*	7.233E-02	9.673E-02	1.694E-01	1.070E-02	0.427
HG-203		70.83		7.113E-01	7.281E-01	1.135E+00	1.562E-01	0.627
		72.87		5.215E-01	4.629E-01	7.209E-01	9.577E-02	0.723
	+	82.60		2.009E+00	1.057E+00	1.474E+00	1.986E-01	1.364
		279.20	*	4.442E-02	4.628E-02	7.973E-02	6.348E-03	0.557
BI-207		72.80		1.250E-01	1.282E-01	2.002E-01	1.751E-02	0.625
	+	74.97		6.019E-01	1.050E-01	1.620E-01	1.396E-02	3.715
	+	84.90		3.345E-01	1.724E-01	2.643E-01	2.130E-02	1.265
		569.67		8.930E-03	4.073E-02	6.798E-02	5.080E-03	0.131
		1063.62	*	-3.772E-02	6.646E-02	1.025E-01	6.668E-03	-0.368
		1770.23		-2.644E-01	5.530E-01	6.681E-01	3.791E-02	-0.396
TL-207		81.07		9.833E-02	2.080E-01	2.559E-01	2.116E-02	0.384
	+	83.78		2.205E-01	1.136E-01	1.741E-01	1.414E-02	1.266
		94.90		4.574E-01	2.056E-01	3.323E-01	2.913E-02	1.377
		122.32		6.544E-01	1.767E+00	2.921E+00	3.817E-01	0.224
	+	144.24		8.044E-01	1.501E+00	1.259E+00	1.414E-01	0.639
		154.21		2.536E-01	4.212E-01	6.922E-01	6.959E-02	0.366
	+	269.46		5.836E-01	3.007E-01	3.851E-01	3.064E-02	1.516
		323.87	*	-1.004E+00	7.838E-01	1.159E+00	1.977E-01	-0.866
	+	338.28		6.458E+00	2.227E+00	2.566E+00	2.877E-01	2.517
		445.03		-9.024E-02	2.649E+00	4.444E+00	4.712E-01	-0.020
PO-209		260.50		6.572E+00	1.048E+01	1.789E+01	1.398E+00	0.367
		262.80		1.357E+01	2.876E+01	4.877E+01	3.804E+00	0.278
		896.60	*	1.343E+00	9.877E+00	1.651E+01	1.243E+00	0.081
PB-211		404.84	*	-1.521E+00	1.537E+00	1.792E+00	1.117E+00	-0.849
		427.08		6.004E-01	2.594E+00	4.156E+00	2.571E+00	0.144
		831.96		5.279E-01	1.660E+00	2.722E+00	1.703E+00	0.194
BI-212	+	727.18	*	7.823E-01	5.258E-01	7.741E-01	7.431E-02	1.011
		785.46		1.959E+00	2.268E+00	4.006E+00	3.215E-01	0.489
		1620.62		1.097E+00	1.698E+00	2.984E+00	1.717E-01	0.367
PO-215		81.07		9.833E-02	2.080E-01	2.559E-01	2.116E-02	0.384
	+	83.78		2.205E-01	1.136E-01	1.741E-01	1.414E-02	1.266
		94.90		4.574E-01	2.056E-01	3.323E-01	2.913E-02	1.377
		122.32		6.544E-01	1.767E+00	2.921E+00	3.817E-01	0.224
	+	144.24		8.044E-01	1.501E+00	1.259E+00	1.414E-01	0.639
		154.21		2.536E-01	4.212E-01	6.922E-01	6.959E-02	0.366
	+	269.46		5.836E-01	3.007E-01	3.851E-01	3.064E-02	1.516
		323.87	*	-1.004E+00	7.838E-01	1.159E+00	1.977E-01	-0.866
	+	338.28		6.458E+00	2.227E+00	2.566E+00	2.877E-01	2.517

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-9.024E-02	2.649E+00	4.444E+00	4.712E-01	-0.020
RN-219	+	271.23		7.488E-01	3.879E-01	4.956E-01	4.755E-02	1.511
		401.81	*	4.226E-01	5.257E-01	8.771E-01	1.199E-01	0.482
RN-220		549.76	*	-1.788E+00	3.187E+01	5.245E+01	3.835E+00	-0.034
RA-223		81.07		9.833E-02	2.080E-01	2.559E-01	2.116E-02	0.384
	+	83.78		2.205E-01	1.136E-01	1.741E-01	1.414E-02	1.266
		94.90		4.574E-01	2.056E-01	3.323E-01	2.913E-02	1.377
		122.32		6.544E-01	1.767E+00	2.921E+00	3.817E-01	0.224
	+	144.24		8.044E-01	1.501E+00	1.259E+00	1.414E-01	0.639
		154.21		2.536E-01	4.212E-01	6.922E-01	6.959E-02	0.366
	+	269.46		5.836E-01	3.007E-01	3.851E-01	3.064E-02	1.516
		323.87	*	-1.004E+00	7.838E-01	1.159E+00	1.977E-01	-0.866
	+	338.28		6.458E+00	2.227E+00	2.566E+00	2.877E-01	2.517
		445.03		-9.024E-02	2.649E+00	4.444E+00	4.712E-01	-0.020
AC-227		79.80		5.615E-01	1.378E+00	1.914E+00	4.094E-01	0.293
		236.00		8.592E-01	2.896E-01	4.667E-01	5.486E-02	1.841
		256.20	*	-3.502E-01	4.043E-01	6.381E-01	9.521E-02	-0.549
		286.10		6.507E-01	1.610E+00	2.707E+00	3.405E-01	0.240
	+	299.80		3.218E+00	1.989E+00	2.898E+00	4.915E-01	1.111
		304.40		-1.662E+00	2.527E+00	3.366E+00	6.030E-01	-0.494
		334.20		-5.963E-02	2.705E+00	3.848E+00	7.219E-01	-0.015
TH-227		79.80		5.615E-01	1.378E+00	1.914E+00	4.147E-01	0.293
	+	94.00		7.993E+00	3.160E+00	3.649E+00	7.951E-01	2.190
		236.00		8.592E-01	2.861E-01	4.667E-01	4.916E-02	1.841
		256.20	*	-3.502E-01	4.057E-01	6.381E-01	1.130E-01	-0.549
		286.10		6.507E-01	1.735E+00	2.707E+00	2.715E+00	0.240
	+	299.80		3.218E+00	1.989E+00	2.898E+00	4.915E-01	1.111
		304.40		-1.662E+00	2.527E+00	3.366E+00	6.030E-01	-0.494
		334.20		-5.963E-02	2.705E+00	3.848E+00	7.219E-01	-0.015
TH-229		85.43		4.226E-01	1.945E-01	2.603E-01	2.089E-02	1.624
	+	88.47		4.374E-01	9.814E-02	1.706E-01	1.355E-02	2.564
		100.00		4.874E-02	1.618E-01	2.703E-01	2.552E-02	0.180
		193.63	*	3.266E-01	5.237E-01	9.083E-01	7.185E-02	0.360
		210.97		1.423E+00	8.412E-01	1.359E+00	1.078E-01	1.047
PA-231		283.67	*	-1.826E+00	1.623E+00	2.478E+00	3.631E-01	-0.737
	+	301.29		1.287E+00	7.793E-01	1.165E+00	1.336E-01	1.105
TH-231		81.07		9.833E-02	2.080E-01	2.559E-01	2.116E-02	0.384
	+	83.78		2.205E-01	1.136E-01	1.741E-01	1.414E-02	1.266
		94.90		4.574E-01	2.056E-01	3.323E-01	2.913E-02	1.377
		122.32		6.544E-01	1.767E+00	2.921E+00	3.817E-01	0.224
	+	144.24		8.044E-01	1.501E+00	1.259E+00	1.414E-01	0.639
		154.21		2.536E-01	4.212E-01	6.922E-01	6.959E-02	0.366
	+	269.46		5.836E-01	3.007E-01	3.851E-01	3.064E-02	1.516
		323.87	*	-1.004E+00	7.838E-01	1.159E+00	1.977E-01	-0.866
	+	338.28		6.458E+00	2.227E+00	2.566E+00	2.877E-01	2.517
		445.03		-9.024E-02	2.649E+00	4.444E+00	4.712E-01	-0.020
U-231	+	84.21		1.552E+01	7.997E+00	1.218E+01	9.856E-01	1.275
	+	92.29		1.290E+01	4.401E+00	7.117E+00	5.999E-01	1.813
		95.87	*	-9.364E-01	1.606E+00	2.305E+00	2.050E-01	-0.406

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		108.00		-1.986E+00	3.304E+00	5.295E+00	5.587E-01	-0.375
PA-233	+	75.28		1.756E+01	3.790E+00	4.995E+00	7.661E-01	3.516
	+	86.59		6.272E+00	2.125E+00	2.477E+00	6.592E-01	2.532
	+	300.12		8.972E-01	5.484E-01	8.144E-01	1.160E-01	1.102
		311.98	*	6.199E-02	7.088E-02	1.213E-01	9.262E-03	0.511
		340.50		1.099E+00	8.512E-01	1.263E+00	2.941E-01	0.870
		398.62		-1.810E-01	2.668E+00	4.264E+00	1.104E+00	-0.042
		415.76		8.695E-02	2.009E+00	3.221E+00	6.657E-01	0.027
PA-234	+	63.00		1.376E+00	1.185E+00	1.630E+00	2.597E-01	0.844
		94.67		4.805E-01	1.607E-01	2.541E-01	3.173E-02	1.891
		98.44		-1.337E-02	8.298E-02	1.310E-01	7.321E-02	-0.102
		99.86		4.569E-03	4.305E-01	6.867E-01	6.472E-02	0.007
		111.00		5.768E-02	1.798E-01	2.984E-01	4.139E-02	0.193
		131.20		6.834E-02	1.147E-01	1.714E-01	2.013E-02	0.399
		152.70		1.816E-01	3.512E-01	5.741E-01	1.003E-01	0.316
	+	186.00		3.120E+00	2.417E+00	2.970E+00	9.213E-01	1.051
		226.40		-6.009E-02	4.121E-01	6.870E-01	8.765E-02	-0.087
		227.20		1.974E-01	4.433E-01	7.574E-01	6.001E-02	0.261
		248.90		1.445E-01	8.566E-01	1.438E+00	3.183E-01	0.101
	+	293.70		5.921E+00	1.546E+00	1.768E+00	2.970E-01	3.348
		369.80		1.284E-01	9.810E-01	1.597E+00	3.351E-01	0.080
		568.70		4.431E-01	1.312E+00	2.206E+00	1.647E-01	0.201
		569.50		7.923E-02	3.614E-01	6.031E-01	4.506E-02	0.131
		574.00		-2.020E-01	2.120E+00	3.268E+00	2.453E-01	-0.062
		699.00		5.924E-02	9.639E-01	1.565E+00	2.954E-01	0.038
		706.10		1.154E+00	1.542E+00	2.474E+00	1.101E+00	0.467
		733.00		9.614E-02	5.156E-01	7.644E-01	1.683E-01	0.126
		742.81		1.831E-01	1.722E+00	2.786E+00	1.871E+00	0.066
		796.30		1.260E+00	1.237E+00	2.126E+00	5.711E-01	0.593
		805.60		4.578E-01	1.310E+00	2.230E+00	6.794E-01	0.205
		819.60		-2.175E-01	1.595E+00	2.629E+00	9.957E-01	-0.083
		826.30		-5.763E-01	1.043E+00	1.609E+00	7.175E-01	-0.358
		831.60		-3.062E-03	8.510E-01	1.392E+00	4.125E-01	-0.002
		876.40		-4.705E-02	1.075E+00	1.774E+00	1.822E+00	-0.027
		880.51		-4.383E-02	4.015E-01	6.023E-01	4.591E-02	-0.073
		883.24		-2.801E-01	4.252E-01	5.951E-01	3.993E-01	-0.471
		899.00		-3.282E-02	1.140E+00	1.882E+00	8.187E-01	-0.017
		925.00		6.375E-02	1.510E+00	2.499E+00	1.849E-01	0.026
		926.50		-5.135E-02	2.230E-01	3.601E-01	8.961E-02	-0.143
		946.00	*	-1.596E-01	3.920E-01	6.218E-01	1.131E-01	-0.257
		949.00		4.573E-01	5.808E-01	1.014E+00	7.373E-02	0.451
		980.50		-1.509E+00	1.047E+00	1.506E+00	1.068E-01	-1.002
		1394.10		-6.685E-01	1.478E+00	2.194E+00	1.421E+00	-0.305
PA-234M		766.42		2.468E+01	2.008E+01	2.870E+01	1.454E+01	0.860
		1001.03	*	-1.933E-01	6.238E+00	1.008E+01	8.636E-01	-0.019
NP-236		94.67		3.678E-01	1.176E-01	1.931E-01	1.687E-02	1.905
		98.44		-1.015E-02	6.248E-02	9.903E-02	9.144E-03	-0.102
		111.00		4.363E-02	1.359E-01	2.257E-01	2.479E-02	0.193
		160.31	*	4.320E-02	8.652E-02	1.414E-01	1.205E-02	0.306

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		1.009E-01	1.428E-01	2.335E-01	2.191E-02	0.432
		117.00	*	1.042E-01	1.927E-01	3.212E-01	3.812E-02	0.324
	+	209.75		1.544E+00	1.150E+00	1.458E+00	1.156E-01	1.059
		228.18		1.441E-01	2.317E-01	3.986E-01	3.157E-02	0.362
		277.60		2.639E-01	2.065E-01	3.460E-01	2.664E-02	0.763
		334.30		-6.980E-02	1.531E+00	2.174E+00	1.528E-01	-0.032
AM-241		59.54	*	4.530E-02	6.564E-02	1.032E-01	1.049E-02	0.439
CM-243		99.55		1.038E-01	1.469E-01	2.403E-01	2.255E-02	0.432
		103.76	*	-3.720E-02	9.194E-02	1.490E-01	1.484E-02	-0.250
		117.00		1.072E-01	1.983E-01	3.305E-01	3.922E-02	0.324
	+	209.75		1.522E+00	1.134E+00	1.437E+00	1.140E-01	1.059
		228.18		1.457E-01	2.342E-01	4.028E-01	3.191E-02	0.362
		277.60		2.661E-01	2.083E-01	3.489E-01	2.687E-02	0.763
AM-246		798.80		-2.059E-01	1.874E-01	2.880E-01	2.299E-02	-0.715
		1036.00		4.788E-02	3.701E-01	6.111E-01	4.104E-02	0.078
		1062.04		1.865E-02	2.967E-01	4.858E-01	3.165E-02	0.038
		1078.86	*	1.557E-01	1.884E-01	3.268E-01	2.084E-02	0.476
CM-247		278.00		8.562E-01	8.646E-01	1.433E+00	1.103E-01	0.597
		287.40		7.590E-01	1.334E+00	2.261E+00	1.722E-01	0.336
		402.60	*	6.718E-02	4.580E-02	7.943E-02	4.730E-03	0.846
CF-249		252.85		9.393E-02	8.849E-01	1.480E+00	1.162E-01	0.063
		333.44		-1.608E-01	2.081E-01	2.773E-01	1.953E-02	-0.580
		387.95	*	3.533E-02	4.499E-02	7.589E-02	4.506E-03	0.466
CF-251		176.60	*	2.447E-02	1.389E-01	2.225E-01	1.750E-02	0.110
		227.00		1.120E-01	3.937E-01	6.684E-01	5.296E-02	0.167
		285.00		-6.471E-01	1.834E+00	2.967E+00	2.267E-01	-0.218

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492003		
Acquisition date	: 5-JAN-2010 14:15:58	Detector SN#	:
Detector ID	: GAM13	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.61	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492003	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3178E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 2-FEB-2009 10:41:22	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.178E+01	2.062E+00	6.343E-01	0.000E+00
AS-73	3.675E-01	3.385E-01	3.834E-01	0.000E+00
CD-109	3.274E+00	7.199E-01	9.466E-01	0.000E+00
SN-126	3.204E-01	7.044E-02	9.251E-02	0.000E+00
CE-141	7.928E-02	1.449E-01	1.151E-01	0.000E+00
TL-208	5.619E-01	1.105E-01	7.741E-02	0.000E+00
BI-210	9.917E-01	7.932E-01	8.040E-01	0.000E+00
PB-210	9.917E-01	7.932E-01	8.040E-01	0.000E+00
PO-210	9.917E-01	7.923E-01	8.040E-01	0.000E+00
BI-211	3.755E+00	5.387E-01	4.060E-01	0.000E+00
PB-212	1.540E+00	1.767E-01	9.435E-02	0.000E+00
PO-212	1.540E+00	1.767E-01	9.435E-02	0.000E+00
BI-214	1.362E+00	2.335E-01	1.505E-01	0.000E+00
PB-214	1.306E+00	1.989E-01	1.416E-01	0.000E+00
PO-214	1.306E+00	1.989E-01	1.416E-01	0.000E+00
PO-216	1.540E+00	1.767E-01	9.435E-02	0.000E+00
PO-218	1.306E+00	1.989E-01	1.416E-01	0.000E+00
RA-224	3.868E+00	1.211E+00	1.074E+00	0.000E+00
RA-226	1.362E+00	2.335E-01	1.505E-01	0.000E+00
AC-228	1.421E+00	4.037E-01	3.095E-01	0.000E+00
RA-228	1.421E+00	4.037E-01	3.095E-01	0.000E+00
TH-228	1.568E+00	1.799E-01	9.607E-02	0.000E+00
TH-230	1.362E+00	2.335E-01	1.505E-01	0.000E+00
TH-232	1.421E+00	4.037E-01	3.095E-01	0.000E+00
TH-234	1.180E+00	1.002E+00	1.036E+00	0.000E+00
U-234	1.362E+00	2.335E-01	1.505E-01	0.000E+00
U-235	2.482E-01	4.552E-01	3.581E-01	0.000E+00
NP-237	9.408E-01	2.810E-01	2.958E-01	0.000E+00
U-238	1.180E+00	1.002E+00	1.036E+00	0.000E+00
AM-243	3.352E-01	5.734E-02	6.405E-02	0.000E+00
ANH-511	1.909E-01	8.422E-02	5.657E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM	)	
BE-7	2.383E-01	3.913E-01	7.046E-01	0.000E+00	NOT IDENT.
NA-22	8.267E-04	4.957E-02	8.453E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	2.437E+07	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.124E-02	4.163E-02	7.303E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.009E-02	5.805E-02	0.000E+00	FAIL ABUN
SC-46	5.998E-03	5.257E-02	9.046E-02	0.000E+00	FAIL ABUN
V-48	1.411E-01	1.059E-01	1.962E-01	0.000E+00	NOT IDENT.
CR-51	2.224E-01	4.229E-01	7.453E-01	0.000E+00	NOT IDENT.
MN-52	4.348E-01	3.984E-01	7.529E-01	0.000E+00	NOT IDENT.
MN-54	-6.342E-03	4.968E-02	8.462E-02	0.000E+00	NOT IDENT.
CO-56	3.008E-06	5.330E-02	9.143E-02	0.000E+00	NOT IDENT.
CO-57	7.464E-03	2.533E-02	4.450E-02	0.000E+00	NOT IDENT.
CO-58	-3.332E-02	5.201E-02	8.537E-02	0.000E+00	NOT IDENT.
FE-59	-8.021E-02	1.231E-01	1.934E-01	0.000E+00	NOT IDENT.
CO-60	4.510E-02	5.263E-02	9.577E-02	0.000E+00	NOT IDENT.
ZN-65	2.257E-02	1.313E-01	1.906E-01	0.000E+00	NOT IDENT.
GE-68	1.120E+00	1.641E+00	2.889E+00	0.000E+00	NOT IDENT.
AS-74	-2.283E-02	1.207E-01	2.026E-01	0.000E+00	NOT IDENT.
SE-75	-2.345E-02	5.316E-02	7.901E-02	0.000E+00	NOT IDENT.
BR-77	-1.187E+01	2.883E+01	4.699E+01	0.000E+00	FAIL ABUN
SR-82	-2.951E-01	5.038E-01	8.345E-01	0.000E+00	NOT IDENT.
RB-83	-2.835E-02	8.462E-02	1.341E-01	0.000E+00	NOT IDENT.
RB-84	-6.349E-02	1.061E-01	1.576E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.107E+00	1.579E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.818E-02	8.354E-02	0.000E+00	NOT IDENT.
RB-86	4.935E-01	1.146E+00	1.981E+00	0.000E+00	NOT IDENT.
Y-88	1.073E-02	3.810E-02	6.747E-02	0.000E+00	NOT IDENT.
ZR-88	-2.088E-02	3.592E-02	5.804E-02	0.000E+00	NOT IDENT.
Y-91	5.019E+00	2.370E+01	4.123E+01	0.000E+00	NOT IDENT.
NB-94	-1.216E-02	4.601E-02	7.556E-02	0.000E+00	NOT IDENT.
NB-95	7.603E-02	5.951E-02	1.101E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.427E-01	2.420E-01	0.000E+00	NOT IDENT.
ZR-95	-2.457E-02	1.029E-01	1.677E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.659E+06	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	4.588E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.191E+01	2.899E+01	4.977E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.600E+20	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.327E-02	3.535E-02	6.294E-02	0.000E+00	NOT IDENT.
RH-102	-2.272E-02	3.457E-02	5.781E-02	0.000E+00	NOT IDENT.
RU-103	-2.123E-02	5.196E-02	8.777E-02	0.000E+00	FAIL ABUN
RH-106	6.384E-03	4.045E-01	6.862E-01	0.000E+00	FAIL ABUN
RU-106	6.384E-03	4.045E-01	6.862E-01	0.000E+00	FAIL ABUN
AG-108M	-2.247E-02	3.665E-02	6.207E-02	0.000E+00	NOT IDENT.
AG-110M	-4.093E-02	5.179E-02	6.889E-02	0.000E+00	NOT IDENT.
IN-111	-4.224E-01	2.503E+00	3.828E+00	0.000E+00	NOT IDENT.
IN-113M	-4.553E-02	4.962E-02	7.807E-02	0.000E+00	NOT IDENT.
SN-113	-4.553E-02	4.962E-02	7.807E-02	0.000E+00	NOT IDENT.
IN-114M	-1.585E-01	2.242E-01	3.166E-01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	3.236E+01	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	-5.942E-03	6.659E-02	1.127E-01	0.000E+00	NOT IDENT.
SB-122	-3.083E-01	5.528E+00	9.430E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.644E+08	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.917E-03	3.056E-02	5.254E-02	0.000E+00	NOT IDENT.
I-124	1.926E-01	1.535E+00	2.284E+00	0.000E+00	NOT IDENT.
SB-124	2.289E-03	1.008E-01	1.667E-01	0.000E+00	FAIL ABUN
SB-125	-2.799E-02	1.063E-01	1.844E-01	0.000E+00	FAIL ABUN
TE-125M	-1.060E+01	9.297E+00	1.543E+01	0.000E+00	NOT IDENT.
I-126	8.592E-02	2.677E-01	4.601E-01	0.000E+00	NOT IDENT.
SB-126	-2.224E-02	2.575E-01	3.668E-01	0.000E+00	FAIL ABUN
SB-127	-2.233E-01	3.016E+00	5.029E+00	0.000E+00	NOT IDENT.
XE-127	-1.873E-02	5.014E-02	8.823E-02	0.000E+00	FAIL ABUN
I-131	-3.303E-02	1.730E-01	2.893E-01	0.000E+00	NOT IDENT.
TE-132	3.576E-01	1.327E+00	2.371E+00	0.000E+00	NOT IDENT.
BA-133	-7.151E-05	5.887E-02	8.755E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	7.782E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.957E-02	6.062E-02	1.136E-01	0.000E+00	NOT IDENT.
CS-135	0.000E+00	1.837E-01	3.113E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.324E+19	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.885E-02	1.615E-01	2.620E-01	0.000E+00	FAIL ABUN
BA-137M	2.357E-02	4.556E-02	7.932E-02	0.000E+00	NOT IDENT.
CS-137	2.491E-02	4.816E-02	8.384E-02	0.000E+00	NOT IDENT.
CE-139	-5.242E-03	3.248E-02	5.456E-02	0.000E+00	NOT IDENT.
BA-140	1.093E-01	3.743E-01	6.529E-01	0.000E+00	NOT IDENT.
LA-140	5.507E-02	1.225E-01	2.150E-01	0.000E+00	NOT IDENT.

CE-143	0.000E+00	1.091E+03	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-7.832E-02	2.345E-01	3.533E-01	0.000E+00	NOT IDENT.
PM-144	8.265E-03	4.570E-02	7.743E-02	0.000E+00	NOT IDENT.
PR-144	5.610E-01	3.102E+00	5.255E+00	0.000E+00	NOT IDENT.
PM-146	5.368E-02	4.911E-02	9.087E-02	0.000E+00	NOT IDENT.
ND-147	-5.415E-02	8.057E-01	1.382E+00	0.000E+00	FAIL ABUN
PM-149	0.000E+00	2.389E+02	0.000E+00	0.000E+00	SHORT HLIF
EU-152	5.021E-02	1.274E-01	1.952E-01	0.000E+00	NOT IDENT.
GD-153	-4.335E-02	7.669E-02	1.151E-01	0.000E+00	FAIL ABUN
EU-154	2.302E-03	1.382E-01	2.357E-01	0.000E+00	NOT IDENT.
EU-155	1.397E-01	1.036E-01	1.892E-01	0.000E+00	FAIL ABUN
TB-160	7.602E-02	2.007E-01	3.229E-01	0.000E+00	FAIL ABUN
HO-166M	-6.808E-02	8.379E-02	1.283E-01	0.000E+00	FAIL ABUN
TM-171	-1.172E+01	1.627E+01	2.578E+01	0.000E+00	FAIL ABUN
LU-176	6.122E-03	2.756E-02	4.795E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.161E+00	2.923E+00	0.000E+00	FAIL ABUN
LU-177M	6.258E-02	2.089E-01	3.554E-01	0.000E+00	FAIL ABUN
HF-181	-1.755E-03	5.087E-02	8.830E-02	0.000E+00	NOT IDENT.
W-181	6.886E-02	1.982E-01	3.289E-01	0.000E+00	NOT IDENT.
TA-182	3.137E-02	2.464E-01	4.254E-01	0.000E+00	FAIL ABUN
RE-183	-5.371E-02	1.294E-01	2.098E-01	0.000E+00	FAIL ABUN
RE-184	2.534E-02	2.339E-01	4.120E-01	0.000E+00	NOT IDENT.
OS-185	-6.888E-03	5.546E-02	9.275E-02	0.000E+00	NOT IDENT.
RE-188	2.315E-02	1.829E-01	3.130E-01	0.000E+00	NOT IDENT.
W-188	-2.407E+00	9.302E+00	1.386E+01	0.000E+00	FAIL ABUN
IR-192	-8.434E-05	3.839E-02	6.585E-02	0.000E+00	FAIL ABUN
AU-195	1.033E-01	2.021E-01	3.510E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	3.545E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.120E+01	1.507E+01	2.459E+01	0.000E+00	NOT IDENT.
TL-202	7.233E-02	9.480E-02	1.731E-01	0.000E+00	NOT IDENT.
HG-203	4.442E-02	4.535E-02	8.211E-02	0.000E+00	FAIL ABUN
BI-207	-3.772E-02	6.513E-02	1.032E-01	0.000E+00	FAIL ABUN
TL-207	-1.004E+00	7.682E-01	1.191E+00	0.000E+00	FAIL ABUN
PO-209	1.343E+00	9.679E+00	1.667E+01	0.000E+00	NOT IDENT.
PB-211	-1.521E+00	1.506E+00	1.834E+00	0.000E+00	NOT IDENT.
BI-212	7.823E-01	5.153E-01	7.844E-01	0.000E+00	FAIL ABUN
PO-215	-1.004E+00	7.682E-01	1.191E+00	0.000E+00	FAIL ABUN
RN-219	4.226E-01	5.152E-01	8.979E-01	0.000E+00	FAIL ABUN
RN-220	-1.788E+00	3.123E+01	5.341E+01	0.000E+00	NOT IDENT.
RA-223	-1.004E+00	7.682E-01	1.191E+00	0.000E+00	FAIL ABUN
AC-227	-3.502E-01	3.963E-01	6.581E-01	0.000E+00	FAIL ABUN
TH-227	-3.502E-01	3.976E-01	6.581E-01	0.000E+00	FAIL ABUN
TH-229	3.266E-01	5.132E-01	9.411E-01	0.000E+00	FAIL ABUN
PA-231	-1.826E+00	1.591E+00	2.551E+00	0.000E+00	FAIL ABUN
TH-231	-1.004E+00	7.682E-01	1.191E+00	0.000E+00	FAIL ABUN
U-231	-9.364E-01	1.573E+00	2.416E+00	0.000E+00	FAIL ABUN
PA-233	6.199E-02	6.946E-02	1.247E-01	0.000E+00	FAIL ABUN
PA-234	-1.596E-01	3.842E-01	6.273E-01	0.000E+00	FAIL ABUN
PA-234M	-1.933E-01	6.113E+00	1.015E+01	0.000E+00	NOT IDENT.
NP-236	4.320E-02	8.479E-02	1.469E-01	0.000E+00	NOT IDENT.
NP-239	1.042E-01	1.888E-01	3.355E-01	0.000E+00	FAIL ABUN
AM-241	4.530E-02	6.432E-02	1.089E-01	0.000E+00	NOT IDENT.
CM-243	-3.720E-02	9.010E-02	1.560E-01	0.000E+00	FAIL ABUN
AM-246	1.557E-01	1.846E-01	3.289E-01	0.000E+00	NOT IDENT.
CM-247	6.718E-02	4.488E-02	8.130E-02	0.000E+00	NOT IDENT.
CF-249	3.533E-02	4.409E-02	7.773E-02	0.000E+00	NOT IDENT.
CF-251	2.447E-02	1.361E-01	2.309E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 16:16:23.54

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492003.CNF;2
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 14:15:58.
Sample ID : G243492003 Sample quantity : 1.31780E+02 GRAM
Detector name : GAM13 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.61 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	850	10.67*	1.041E+00	2.178E+01	2.178E+01	9.66
AS-73	53.44	84	10.30*	7.353E+00	3.142E-01	3.675E-01	93.99
CD-109	88.03	302	3.72*	7.248E+00	3.186E+00	3.274E+00	22.44
SN-126	64.28	116	9.60	7.391E+00	4.672E-01	4.672E-01	86.09
	86.94	302	8.90	7.248E+00	1.332E+00	1.332E+00	46.26
	87.57	302	37.00*	7.248E+00	3.204E-01	3.204E-01	22.44
CE-141	145.44	57	48.40*	6.279E+00	5.385E-02	7.928E-02	186.50
TL-208	277.35	------	6.80	4.225E+00	------ Line Not Found		------
	510.84	170	21.60	2.536E+00	8.838E-01	8.838E-01	45.78
	583.14	375	84.20*	2.257E+00	5.619E-01	5.619E-01	20.07
	860.37	42	12.46	1.603E+00	6.029E-01	6.029E-01	115.78
BI-210	46.50	103	4.05*	7.296E+00	9.902E-01	9.917E-01	81.61
PB-210	46.50	103	4.05*	7.296E+00	9.902E-01	9.917E-01	81.61
PO-210	46.50	103	4.05*	7.296E+00	9.902E-01	9.917E-01	81.52
BI-211	72.87	------	1.27	7.369E+00	------ Line Not Found		------
	351.07	597	12.94*	3.498E+00	3.755E+00	3.755E+00	14.64
PB-212	74.81	572	10.70	7.359E+00	2.068E+00	2.068E+00	19.80
	77.11	880	18.00	7.343E+00	1.897E+00	1.897E+00	14.60
	87.30	302	8.00	7.248E+00	1.482E+00	1.482E+00	24.56
	238.63	1137	44.60*	4.715E+00	1.540E+00	1.540E+00	11.71
	300.09	83	3.41	3.978E+00	1.737E+00	1.737E+00	60.19
PO-212	74.81	572	10.70	7.359E+00	2.068E+00	2.068E+00	19.80
	77.11	880	18.00	7.343E+00	1.897E+00	1.897E+00	14.60
	87.30	302	8.00	7.248E+00	1.482E+00	1.482E+00	24.56
	115.19	------	0.60	6.822E+00	------ Line Not Found		------
	238.63	1137	44.60*	4.715E+00	1.540E+00	1.540E+00	11.71
	300.09	83	3.41	3.978E+00	1.737E+00	1.737E+00	60.19
BI-214	609.31	481	46.30*	2.172E+00	1.362E+00	1.362E+00	17.49
	1120.29	93	15.10	1.287E+00	1.362E+00	1.362E+00	42.25
	1764.49	77	15.80	8.987E-01	1.544E+00	1.544E+00	30.19
PB-214	74.81	572	6.21	7.359E+00	3.563E+00	3.563E+00	18.96
	77.11	880	10.50	7.343E+00	3.252E+00	3.252E+00	16.47

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	87.30	302	4.67	7.248E+00	2.538E+00	2.538E+00	23.72
	241.98	251	7.49	4.674E+00	2.040E+00	2.040E+00	32.44
	295.21	335	19.20	4.029E+00	1.233E+00	1.234E+00	22.27
	351.92	597	37.20*	3.498E+00	1.306E+00	1.306E+00	15.54
PO-214	74.81	572	6.21	7.359E+00	3.563E+00	3.563E+00	18.96
	77.11	880	10.50	7.343E+00	3.252E+00	3.252E+00	16.47
	87.30	302	4.67	7.248E+00	2.538E+00	2.538E+00	23.72
	241.98	251	7.49	4.674E+00	2.040E+00	2.040E+00	32.44
	295.21	335	19.20	4.029E+00	1.233E+00	1.234E+00	22.27
	351.92	597	37.20*	3.498E+00	1.306E+00	1.306E+00	15.54
PO-216	74.81	572	10.70	7.359E+00	2.068E+00	2.068E+00	19.80
	77.11	880	18.00	7.343E+00	1.897E+00	1.897E+00	14.60
	87.30	302	8.00	7.248E+00	1.482E+00	1.482E+00	24.56
	238.63	1137	44.60*	4.715E+00	1.540E+00	1.540E+00	11.71
	300.09	83	3.41	3.978E+00	1.737E+00	1.737E+00	60.19
PO-218	74.81	572	6.21	7.359E+00	3.563E+00	3.563E+00	18.96
	77.11	880	10.50	7.343E+00	3.252E+00	3.252E+00	16.47
	87.30	302	4.67	7.248E+00	2.538E+00	2.538E+00	23.72
	241.98	251	7.49	4.674E+00	2.040E+00	2.040E+00	32.44
	295.21	335	19.20	4.029E+00	1.233E+00	1.234E+00	22.27
	351.92	597	37.20*	3.498E+00	1.306E+00	1.306E+00	15.54
RA-224	240.98	251	3.95*	4.674E+00	3.868E+00	3.868E+00	31.95
RA-226	609.31	481	46.30*	2.172E+00	1.362E+00	1.362E+00	17.49
	1120.29	93	15.10	1.287E+00	1.362E+00	1.362E+00	42.25
	1764.49	77	15.80	8.987E-01	1.544E+00	1.544E+00	30.19
AC-228	338.32	224	11.40	3.615E+00	1.547E+00	1.547E+00	52.34
	911.07	211	27.70*	1.529E+00	1.421E+00	1.421E+00	29.00
	969.11	113	16.60	1.452E+00	1.336E+00	1.336E+00	42.00
RA-228	338.32	224	11.40	3.615E+00	1.547E+00	1.547E+00	52.34
	911.07	211	27.70*	1.529E+00	1.421E+00	1.421E+00	29.00
	969.11	113	16.60	1.452E+00	1.336E+00	1.336E+00	42.00
TH-228	74.81	572	10.70	7.359E+00	2.068E+00	2.105E+00	17.49
	77.11	880	18.00	7.343E+00	1.897E+00	1.932E+00	14.60
	87.30	302	8.00	7.248E+00	1.482E+00	1.509E+00	22.44
	238.63	1137	44.60*	4.715E+00	1.540E+00	1.568E+00	11.71
	300.09	83	3.41	3.978E+00	1.737E+00	1.768E+00	83.84
TH-230	609.31	481	46.30*	2.172E+00	1.362E+00	1.362E+00	17.49
	1120.29	93	15.10	1.287E+00	1.362E+00	1.362E+00	42.25
	1764.49	77	15.80	8.987E-01	1.544E+00	1.544E+00	30.19
TH-232	338.32	224	11.40	3.615E+00	1.547E+00	1.547E+00	33.34
	911.07	211	27.70*	1.529E+00	1.421E+00	1.421E+00	29.00
	969.11	113	16.60	1.452E+00	1.336E+00	1.336E+00	42.00
TH-234	63.29	116	3.80*	7.391E+00	1.180E+00	1.180E+00	86.63
	92.38	282	5.41	7.181E+00	2.068E+00	2.068E+00	37.63
U-234	609.31	481	46.30*	2.172E+00	1.362E+00	1.362E+00	17.49
	1120.29	93	15.10	1.287E+00	1.362E+00	1.362E+00	42.25
	1764.49	77	15.80	8.987E-01	1.544E+00	1.544E+00	30.19
U-235	89.95	202	2.70	7.216E+00	2.960E+00	2.960E+00	48.22
	93.35	282	4.50	7.181E+00	2.487E+00	2.487E+00	43.30

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	105.00	------	2.10	6.995E+00	------ Line Not Found		------
	143.76	57	10.50*	6.279E+00	2.482E-01	2.482E-01	187.12
	163.35	------	4.70	5.928E+00	------ Line Not Found		------
	185.71	121	54.00	5.531E+00	1.156E-01	1.156E-01	71.43
	205.31	------	4.70	5.207E+00	------ Line Not Found		------
NP-237	86.50	302	12.60*	7.248E+00	9.408E-01	9.408E-01	30.48
	95.87	------	2.60	7.135E+00	------ Line Not Found		------
U-238	63.29	116	3.80*	7.391E+00	1.180E+00	1.180E+00	86.63
	92.38	282	5.41	7.181E+00	2.068E+00	2.068E+00	34.11
AM-243	74.67	572	66.00*	7.359E+00	3.352E-01	3.352E-01	17.45
	86.72	302	0.34	7.248E+00	3.528E+01	3.528E+01	22.44
	117.66	------	0.55	6.778E+00	------ Line Not Found		------
	142.18	------	0.13	6.323E+00	------ Line Not Found		------
ANH-511	511.00	170	100.00*	2.536E+00	1.909E-01	1.909E-01	45.02

Flag: "*" = Keyline

Total number of lines in spectrum 32
Number of unidentified lines 0
Number of lines tentatively identified by NID 32 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.178E+01	2.178E+01	0.210E+01	9.66	
AS-73	80.30D	1.17	3.142E-01	3.675E-01	3.454E-01	93.99	
CD-109	464.00D	1.03	3.186E+00	3.274E+00	0.735E+00	22.44	
SN-126	1.00E+05Y	1.00	3.204E-01	3.204E-01	0.719E-01	22.44	
CE-141	32.50D	1.47	5.385E-02	7.928E-02	14.79E-02	186.50	
TL-208	1.41E+10Y	1.00	5.619E-01	5.619E-01	1.128E-01	20.07	
BI-210	22.26Y	1.00	9.902E-01	9.917E-01	8.094E-01	81.61	
PB-210	22.26Y	1.00	9.902E-01	9.917E-01	8.094E-01	81.61	
PO-210	22.26Y	1.00	9.902E-01	9.917E-01	8.084E-01	81.52	
BI-211	7.04E+08Y	1.00	3.755E+00	3.755E+00	0.550E+00	14.64	
PB-212	1.41E+10Y	1.00	1.540E+00	1.540E+00	0.180E+00	11.71	
PO-212	1.41E+10Y	1.00	1.540E+00	1.540E+00	0.180E+00	11.71	
BI-214	1600.00Y	1.00	1.362E+00	1.362E+00	0.238E+00	17.49	
PB-214	1600.00Y	1.00	1.306E+00	1.306E+00	0.203E+00	15.54	
PO-214	1600.00Y	1.00	1.306E+00	1.306E+00	0.203E+00	15.54	
PO-216	1.41E+10Y	1.00	1.540E+00	1.540E+00	0.180E+00	11.71	
PO-218	1600.00Y	1.00	1.306E+00	1.306E+00	0.203E+00	15.54	
RA-224	1.41E+10Y	1.00	3.868E+00	3.868E+00	1.236E+00	31.95	
RA-226	1600.00Y	1.00	1.362E+00	1.362E+00	0.238E+00	17.49	
AC-228	1.41E+10Y	1.00	1.421E+00	1.421E+00	0.412E+00	29.00	
RA-228	1.41E+10Y	1.00	1.421E+00	1.421E+00	0.412E+00	29.00	
TH-228	1.91Y	1.02	1.540E+00	1.568E+00	0.184E+00	11.71	
TH-230	4.47E+09Y	1.00	1.362E+00	1.362E+00	0.238E+00	17.49	
TH-232	1.41E+10Y	1.00	1.421E+00	1.421E+00	0.412E+00	29.00	
TH-234	4.47E+09Y	1.00	1.180E+00	1.180E+00	1.022E+00	86.63	
U-234	4.47E+09Y	1.00	1.362E+00	1.362E+00	0.238E+00	17.49	
U-235	7.04E+08Y	1.00	2.482E-01	2.482E-01	4.645E-01	187.12	
NP-237	2.14E+06Y	1.00	9.408E-01	9.408E-01	2.868E-01	30.48	
U-238	4.47E+09Y	1.00	1.180E+00	1.180E+00	1.022E+00	86.63	
AM-243	7380.00Y	1.00	3.352E-01	3.352E-01	0.585E-01	17.45	
ANH-511	1.00E+09Y	1.00	1.909E-01	1.909E-01	0.859E-01	45.02	
	Total Activity :		6.068E+01	6.088E+01			

Grand Total Activity : 6.068E+01 6.088E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	83.92	139	405	1.49	167.61	165	6	1.93E-02	50.9	7.28E+00	T
0	129.23	106	408	1.28	258.26	254	9	1.48E-02	71.7	6.57E+00	T
0	208.85	90	318	1.10	417.54	414	9	1.26E-02	74.1	5.15E+00	T
0	270.09	120	233	0.75	540.05	535	10	1.67E-02	50.9	4.31E+00	T
0	462.94	68	114	1.52	925.86	922	9	9.38E-03	62.1	2.77E+00	T
0	663.99	92	168	8.24	1328.09	1314	26	1.27E-02	80.3	2.01E+00	T
0	727.29	60	97	0.99	1454.73	1449	10	8.36E-03	66.5	1.86E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 16:16:28.63

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492003.CNF;2		
Acquisition date	: 5-JAN-2010 14:15:58.	Detector SN#	:
Detector ID	: GAM13	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:01.61	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492003	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.31780E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 2-FEB-2009 10:41:22.03	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.178E+01	2.104E+00	6.335E-01	3.873E-02	34.383
AS-73	3.675E-01	3.454E-01	3.624E-01	3.061E-02	1.014
CD-109	3.274E+00	7.346E-01	9.020E-01	7.117E-02	3.630
SN-126	3.204E-01	7.188E-02	8.814E-02	6.972E-03	3.635
CE-141	7.928E-02	1.479E-01	1.106E-01	1.147E-02	0.717
TL-208	5.619E-01	1.128E-01	7.610E-02	6.300E-03	7.383
BI-210	9.917E-01	8.094E-01	7.584E-01	6.182E-02	1.308
PB-210	9.917E-01	8.094E-01	7.584E-01	6.182E-02	1.308
PO-210	9.917E-01	8.084E-01	7.584E-01	5.407E-02	1.308
BI-211	3.755E+00	5.497E-01	3.958E-01	2.885E-02	9.488
PB-212	1.540E+00	1.803E-01	9.138E-02	8.301E-03	16.857
PO-212	1.540E+00	1.803E-01	9.138E-02	8.301E-03	16.857
BI-214	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
PB-214	1.306E+00	2.030E-01	1.380E-01	1.235E-02	9.466
PO-214	1.306E+00	2.030E-01	1.380E-01	1.235E-02	9.466
PO-216	1.540E+00	1.803E-01	9.138E-02	8.301E-03	16.857
PO-218	1.306E+00	2.030E-01	1.380E-01	1.235E-02	9.466
RA-224	3.868E+00	1.236E+00	1.040E+00	8.213E-02	3.718

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-226	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
AC-228	1.421E+00	4.120E-01	3.066E-01	3.184E-02	4.634
RA-228	1.421E+00	4.120E-01	3.066E-01	3.184E-02	4.634
TH-228	1.568E+00	1.836E-01	9.304E-02	8.452E-03	16.857
TH-230	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
TH-232	1.421E+00	4.120E-01	3.066E-01	3.184E-02	4.634
TH-234	1.180E+00	1.022E+00	9.818E-01	1.802E-01	1.202
U-234	1.362E+00	2.383E-01	1.480E-01	1.384E-02	9.204
U-235	2.482E-01	4.645E-01	3.440E-01	6.351E-02	0.722
NP-237	9.408E-01	2.868E-01	2.818E-01	6.233E-02	3.338
U-238	1.180E+00	1.022E+00	9.818E-01	1.802E-01	1.202
AM-243	3.352E-01	5.851E-02	6.087E-02	5.258E-03	5.507
ANH-511	1.909E-01	8.594E-02	5.549E-02	3.872E-03	3.440

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	2.383E-01		3.993E-01	6.904E-01	5.191E-02	0.345
NA-22	8.267E-04		5.058E-02	8.422E-02	4.754E-03	0.010
NA-24	2.216E+00		1.244E+01	Half-Life too short		
AL-26	1.124E-02		4.248E-02	7.321E-02	4.131E-03	0.153
TI-44	3.501E-01	+	5.111E-02	5.521E-02	4.650E-03	6.342
SC-46	5.998E-03		5.365E-02	8.957E-02	6.783E-03	0.067
V-48	1.411E-01		1.081E-01	1.946E-01	1.376E-02	0.725
CR-51	2.224E-01		4.316E-01	7.253E-01	5.645E-02	0.307
MN-52	4.348E-01		4.065E-01	7.517E-01	4.320E-02	0.578
MN-54	-6.342E-03		5.070E-02	8.370E-02	6.568E-03	-0.076
CO-56	3.008E-06		5.439E-02	9.045E-02	7.050E-03	0.000
CO-57	7.464E-03		2.585E-02	4.263E-02	5.392E-03	0.175
CO-58	-3.332E-02		5.307E-02	8.440E-02	6.722E-03	-0.395
FE-59	-8.021E-02		1.256E-01	1.922E-01	1.373E-02	-0.417
CO-60	4.510E-02		5.371E-02	9.550E-02	5.432E-03	0.472
ZN-65	2.257E-02		1.340E-01	1.895E-01	1.151E-02	0.119
GE-68	1.120E+00		1.674E+00	2.870E+00	1.835E-01	0.390
AS-74	-2.283E-02		1.231E-01	1.993E-01	1.530E-02	-0.115
SE-75	-2.345E-02		5.425E-02	7.665E-02	6.005E-03	-0.306
BR-77	-1.187E+01		2.942E+01	4.610E+01	3.256E+00	-0.257
SR-82	-2.951E-01		5.141E-01	8.244E-01	6.635E-02	-0.358
RB-83	-2.835E-02		8.634E-02	1.316E-01	9.294E-03	-0.215
RB-84	-6.349E-02		1.083E-01	1.560E-01	1.188E-02	-0.407
KR-85	1.835E+01		9.292E+00	1.549E+01	1.085E+00	1.184
SR-85	9.707E-02		4.916E-02	8.195E-02	5.741E-03	1.184
RB-86	4.935E-01		1.169E+00	1.968E+00	1.259E-01	0.251
Y-88	1.073E-02		3.888E-02	6.766E-02	3.810E-03	0.159
ZR-88	-2.088E-02		3.665E-02	5.668E-02	3.320E-03	-0.368
Y-91	5.019E+00		2.418E+01	4.105E+01	2.275E+00	0.122
NB-94	-1.216E-02		4.695E-02	7.451E-02	6.082E-03	-0.163

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	7.603E-02		6.072E-02	1.087E-01	8.778E-03	0.699
NB-95M	2.707E-01		1.456E-01	2.343E-01	2.167E-02	1.155
ZR-95	-2.457E-02		1.050E-01	1.656E-01	1.493E-02	-0.148
NB-97	-1.751E+00		1.357E+00	Half-Life too short		
ZR-97	1.319E+02		2.341E+01	Half-Life too short		
MO-99	1.191E+01		2.958E+01	4.912E+01	7.324E+00	0.242
TC-99M	-2.564E+13		8.161E+13	Half-Life too short		
RH-101	2.327E-02		3.607E-02	6.077E-02	4.812E-03	0.383
RH-102	-2.272E-02		3.527E-02	5.663E-02	3.768E-03	-0.401
RU-103	-2.123E-02		5.302E-02	8.605E-02	1.133E-02	-0.247
RH-106	6.384E-03		4.128E-01	6.753E-01	8.704E-02	0.009
RU-106	6.384E-03		4.128E-01	6.753E-01	5.318E-02	0.009
AG-108M	-2.247E-02		3.739E-02	6.072E-02	4.085E-03	-0.370
AG-110M	-4.093E-02		5.285E-02	6.786E-02	5.701E-03	-0.603
IN-111	-4.224E-01		2.555E+00	3.709E+00	2.922E-01	-0.114
IN-113M	-4.553E-02		5.063E-02	7.624E-02	4.750E-03	-0.597
SN-113	-4.553E-02		5.063E-02	7.624E-02	4.750E-03	-0.597
IN-114M	-1.585E-01		2.287E-01	3.055E-01	2.415E-02	-0.519
CD-115	1.010E-05		1.651E-05	Half-Life too short		
SN-117M	-5.942E-03		6.795E-02	1.084E-01	9.465E-03	-0.055
SB-122	-3.083E-01		5.640E+00	9.265E+00	6.881E-01	-0.033
I-123	7.715E+01		1.349E+02	Half-Life too short		
TE-123M	8.917E-03		3.119E-02	5.055E-02	4.414E-03	0.176
I-124	1.926E-01		1.566E+00	2.246E+00	1.737E-01	0.086
SB-124	2.289E-03		1.029E-01	1.669E-01	1.040E-02	0.014
SB-125	-2.799E-02		1.085E-01	1.804E-01	1.161E-02	-0.155
TE-125M	-1.060E+01		9.487E+00	1.475E+01	1.793E+00	-0.719
I-126	8.592E-02		2.731E-01	4.533E-01	3.699E-02	0.190
SB-126	-2.224E-02		2.628E-01	3.619E-01	2.949E-02	-0.061
SB-127	-2.233E-01		3.077E+00	4.957E+00	5.941E-01	-0.045
XE-127	-1.873E-02		5.116E-02	8.522E-02	6.754E-03	-0.220
I-131	-3.303E-02		1.765E-01	2.822E-01	2.007E-02	-0.117
TE-132	3.576E-01		1.354E+00	2.295E+00	3.659E-01	0.156
BA-133	-7.151E-05		6.007E-02	8.535E-02	1.025E-02	-0.001
I-133	2.124E-02		3.970E-02	Half-Life too short		
CS-134	8.957E-02		6.186E-02	1.123E-01	9.050E-03	0.798
CS-135	3.520E-01		1.875E-01	3.021E-01	2.791E-02	1.165
I-135	-1.481E+13		6.755E+12	Half-Life too short		
CS-136	-5.885E-02		1.648E-01	2.601E-01	1.847E-02	-0.226
BA-137M	2.357E-02		4.649E-02	7.814E-02	6.373E-03	0.302
CS-137	2.491E-02		4.914E-02	8.260E-02	6.751E-03	0.302
CE-139	-5.242E-03		3.315E-02	5.253E-02	4.118E-03	-0.100
BA-140	1.093E-01		3.820E-01	6.409E-01	2.102E-01	0.171
LA-140	5.507E-02		1.250E-01	2.151E-01	1.240E-02	0.256
CE-143	3.233E-03		5.566E-04	Half-Life too short		
CE-144	-7.832E-02		2.393E-01	3.389E-01	5.875E-02	-0.231
PM-144	8.265E-03		4.663E-02	7.635E-02	6.237E-03	0.108
PR-144	5.610E-01		3.165E+00	5.182E+00	4.231E-01	0.108

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-146	5.368E-02		5.011E-02	8.895E-02	8.074E-03	0.604
ND-147	-5.415E-02		8.221E-01	1.356E+00	1.920E-01	-0.040
PM-149	9.089E-05		1.219E-04	Half-Life too short		
EU-152	5.021E-02		1.300E-01	1.902E-01	1.425E-02	0.264
GD-153	-4.335E-02		7.825E-02	1.098E-01	9.995E-03	-0.395
EU-154	2.302E-03		1.411E-01	2.349E-01	2.170E-02	0.010
EU-155	1.397E-01		1.057E-01	1.808E-01	1.855E-02	0.772
TB-160	7.602E-02		2.048E-01	3.197E-01	2.439E-02	0.238
HO-166M	-6.808E-02		8.550E-02	1.266E-01	1.033E-02	-0.538
TM-171	-1.172E+01		1.660E+01	2.446E+01	2.232E+00	-0.479
LU-176	6.122E-03		2.812E-02	4.663E-02	3.457E-03	0.131
LU-177	2.961E+00	+	2.205E+00	2.824E+00	2.240E-01	1.048
LU-177M	6.258E-02		2.132E-01	3.473E-01	2.107E-02	0.180
HF-181	-1.755E-03		5.191E-02	8.653E-02	5.813E-03	-0.020
W-181	6.886E-02		2.022E-01	3.119E-01	2.877E-02	0.221
TA-182	3.137E-02		2.515E-01	4.236E-01	2.357E-02	0.074
RE-183	-5.371E-02		1.321E-01	2.019E-01	1.671E-02	-0.266
RE-184	2.534E-02		2.387E-01	3.994E-01	3.135E-02	0.063
OS-185	-6.888E-03		5.659E-02	9.134E-02	7.352E-03	-0.075
RE-188	2.315E-02		1.866E-01	3.009E-01	2.754E-02	0.077
W-188	-2.407E+00		9.492E+00	1.347E+01	1.022E+00	-0.179
IR-192	-8.434E-05		3.917E-02	6.407E-02	4.687E-03	-0.001
AU-195	1.033E-01		2.062E-01	3.351E-01	3.114E-02	0.308
TL-200	-1.453E-04		1.809E-03	Half-Life too short		
TL-201	-1.120E+01		1.537E+01	2.368E+01	1.856E+00	-0.473
TL-202	7.233E-02		9.673E-02	1.694E-01	1.070E-02	0.427
HG-203	4.442E-02		4.628E-02	7.973E-02	6.348E-03	0.557
BI-207	-3.772E-02		6.646E-02	1.025E-01	6.668E-03	-0.368
TL-207	-1.004E+00		7.838E-01	1.159E+00	1.977E-01	-0.866
PO-209	1.343E+00		9.877E+00	1.651E+01	1.243E+00	0.081
PB-211	-1.521E+00		1.537E+00	1.792E+00	1.117E+00	-0.849
BI-212	7.823E-01	+	5.258E-01	7.741E-01	7.431E-02	1.011
PO-215	-1.004E+00		7.838E-01	1.159E+00	1.977E-01	-0.866
RN-219	4.226E-01		5.257E-01	8.771E-01	1.199E-01	0.482
RN-220	-1.788E+00		3.187E+01	5.245E+01	3.835E+00	-0.034
RA-223	-1.004E+00		7.838E-01	1.159E+00	1.977E-01	-0.866
AC-227	-3.502E-01		4.043E-01	6.381E-01	9.521E-02	-0.549
TH-227	-3.502E-01		4.057E-01	6.381E-01	1.130E-01	-0.549
TH-229	3.266E-01		5.237E-01	9.083E-01	7.185E-02	0.360
PA-231	-1.826E+00		1.623E+00	2.478E+00	3.631E-01	-0.737
TH-231	-1.004E+00		7.838E-01	1.159E+00	1.977E-01	-0.866
U-231	-9.364E-01		1.606E+00	2.305E+00	2.050E-01	-0.406
PA-233	6.199E-02		7.088E-02	1.213E-01	9.262E-03	0.511
PA-234	-1.596E-01		3.920E-01	6.218E-01	1.131E-01	-0.257
PA-234M	-1.933E-01		6.238E+00	1.008E+01	8.636E-01	-0.019
NP-236	4.320E-02		8.652E-02	1.414E-01	1.205E-02	0.306
NP-239	1.042E-01		1.927E-01	3.212E-01	3.812E-02	0.324
AM-241	4.530E-02		6.564E-02	1.032E-01	1.049E-02	0.439

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-3.720E-02		9.194E-02	1.490E-01	1.484E-02	-0.250
AM-246	1.557E-01		1.884E-01	3.268E-01	2.084E-02	0.476
CM-247	6.718E-02		4.580E-02	7.943E-02	4.730E-03	0.846
CF-249	3.533E-02		4.499E-02	7.589E-02	4.506E-03	0.466
CF-251	2.447E-02		1.389E-01	2.225E-01	1.750E-02	0.110

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492003		
Acquisition date	: 5-JAN-2010 14:15:58	Detector SN#	:
Detector ID	: GAM13	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.61	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492003	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3178E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 2-FEB-2009 10:41:22	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.178E+01	2.062E+00	3.173E-01	1.052E+00
AS-73	3.675E-01	3.385E-01	1.918E-01	1.727E-01
CD-109	3.274E+00	7.199E-01	4.736E-01	3.673E-01
SN-126	3.204E-01	7.044E-02	4.628E-02	3.594E-02
CE-141	7.928E-02	1.449E-01	5.760E-02	7.393E-02
TL-208	5.619E-01	1.105E-01	3.873E-02	5.638E-02
BI-210	9.917E-01	7.932E-01	4.022E-01	4.047E-01
PB-210	9.917E-01	7.932E-01	4.022E-01	4.047E-01
PO-210	9.917E-01	7.923E-01	4.022E-01	4.042E-01
BI-211	3.755E+00	5.387E-01	2.031E-01	2.748E-01
PB-212	1.540E+00	1.767E-01	4.721E-02	9.015E-02
PO-212	1.540E+00	1.767E-01	4.721E-02	9.015E-02
BI-214	1.362E+00	2.335E-01	7.527E-02	1.191E-01
PB-214	1.306E+00	1.989E-01	7.083E-02	1.015E-01
PO-214	1.306E+00	1.989E-01	7.083E-02	1.015E-01
PO-216	1.540E+00	1.767E-01	4.721E-02	9.015E-02
PO-218	1.306E+00	1.989E-01	7.083E-02	1.015E-01
RA-224	3.868E+00	1.211E+00	5.374E-01	6.180E-01
RA-226	1.362E+00	2.335E-01	7.527E-02	1.191E-01
AC-228	1.421E+00	4.037E-01	1.548E-01	2.060E-01
RA-228	1.421E+00	4.037E-01	1.548E-01	2.060E-01
TH-228	1.568E+00	1.799E-01	4.806E-02	9.179E-02
TH-230	1.362E+00	2.335E-01	7.527E-02	1.191E-01
TH-232	1.421E+00	4.037E-01	1.548E-01	2.060E-01
TH-234	1.180E+00	1.002E+00	5.182E-01	5.112E-01
U-234	1.362E+00	2.335E-01	7.527E-02	1.191E-01
U-235	2.482E-01	4.552E-01	1.792E-01	2.322E-01
NP-237	9.408E-01	2.810E-01	1.480E-01	1.434E-01
U-238	1.180E+00	1.002E+00	5.182E-01	5.112E-01
AM-243	3.352E-01	5.734E-02	3.204E-02	2.926E-02
ANH-511	1.909E-01	8.422E-02	2.830E-02	4.297E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	2.383E-01	3.913E-01	3.525E-01	1.996E-01	NOT IDENT.
NA-22	8.267E-04	4.957E-02	4.229E-02	2.529E-02	NOT IDENT.
NA-24	2.216E+06	2.437E+07	0.000E+00	1.244E+07	SHORT HLIF
AL-26	1.124E-02	4.163E-02	3.654E-02	2.124E-02	NOT IDENT.
TI-44	3.501E-01	5.009E-02	2.904E-02	2.555E-02	FAIL ABUN
SC-46	5.998E-03	5.257E-02	4.526E-02	2.682E-02	FAIL ABUN
V-48	1.411E-01	1.059E-01	9.814E-02	5.405E-02	NOT IDENT.
CR-51	2.224E-01	4.229E-01	3.729E-01	2.158E-01	NOT IDENT.
MN-52	4.348E-01	3.984E-01	3.766E-01	2.033E-01	NOT IDENT.
MN-54	-6.342E-03	4.968E-02	4.234E-02	2.535E-02	NOT IDENT.
CO-56	3.008E-06	5.330E-02	4.574E-02	2.720E-02	NOT IDENT.
CO-57	7.464E-03	2.533E-02	2.226E-02	1.292E-02	NOT IDENT.
CO-58	-3.332E-02	5.201E-02	4.271E-02	2.653E-02	NOT IDENT.
FE-59	-8.021E-02	1.231E-01	9.674E-02	6.282E-02	NOT IDENT.
CO-60	4.510E-02	5.263E-02	4.791E-02	2.685E-02	NOT IDENT.
ZN-65	2.257E-02	1.313E-01	9.537E-02	6.700E-02	NOT IDENT.
GE-68	1.120E+00	1.641E+00	1.445E+00	8.371E-01	NOT IDENT.
AS-74	-2.283E-02	1.207E-01	1.014E-01	6.156E-02	NOT IDENT.
SE-75	-2.345E-02	5.316E-02	3.953E-02	2.712E-02	NOT IDENT.
BR-77	-1.187E+01	2.883E+01	2.351E+01	1.471E+01	FAIL ABUN
SR-82	-2.951E-01	5.038E-01	4.175E-01	2.570E-01	NOT IDENT.
RB-83	-2.835E-02	8.462E-02	6.711E-02	4.317E-02	NOT IDENT.
RB-84	-6.349E-02	1.061E-01	7.885E-02	5.413E-02	NOT IDENT.
KR-85	1.835E+01	9.107E+00	7.901E+00	4.646E+00	NOT IDENT.
SR-85	9.707E-02	4.818E-02	4.180E-02	2.458E-02	NOT IDENT.
RB-86	4.935E-01	1.146E+00	9.910E-01	5.846E-01	NOT IDENT.
Y-88	1.073E-02	3.810E-02	3.375E-02	1.944E-02	NOT IDENT.
ZR-88	-2.088E-02	3.592E-02	2.904E-02	1.833E-02	NOT IDENT.
Y-91	5.019E+00	2.370E+01	2.063E+01	1.209E+01	NOT IDENT.
NB-94	-1.216E-02	4.601E-02	3.780E-02	2.348E-02	NOT IDENT.
NB-95	7.603E-02	5.951E-02	5.507E-02	3.036E-02	NOT IDENT.
NB-95M	2.707E-01	1.427E-01	1.211E-01	7.282E-02	NOT IDENT.
ZR-95	-2.457E-02	1.029E-01	8.388E-02	5.250E-02	NOT IDENT.
NB-97	-1.751E+06	2.659E+06	0.000E+00	1.357E+06	SHORT HLIF
ZR-97	1.319E+08	4.588E+07	0.000E+00	2.341E+07	SHORT HLIF
MO-99	1.191E+01	2.899E+01	2.490E+01	1.479E+01	NOT IDENT.
TC-99M	-2.564E+19	1.600E+20	0.000E+00	0.000E+00	SHORT HLIF
RH-101	2.327E-02	3.535E-02	3.149E-02	1.803E-02	NOT IDENT.
RH-102	-2.272E-02	3.457E-02	2.892E-02	1.764E-02	NOT IDENT.
RU-103	-2.123E-02	5.196E-02	4.391E-02	2.651E-02	FAIL ABUN
RH-106	6.384E-03	4.045E-01	3.433E-01	2.064E-01	FAIL ABUN
RU-106	6.384E-03	4.045E-01	3.433E-01	2.064E-01	FAIL ABUN
AG-108M	-2.247E-02	3.665E-02	3.106E-02	1.870E-02	NOT IDENT.
AG-110M	-4.093E-02	5.179E-02	3.446E-02	2.642E-02	NOT IDENT.
IN-111	-4.224E-01	2.503E+00	1.915E+00	1.277E+00	NOT IDENT.
IN-113M	-4.553E-02	4.962E-02	3.906E-02	2.531E-02	NOT IDENT.
SN-113	-4.553E-02	4.962E-02	3.906E-02	2.531E-02	NOT IDENT.
IN-114M	-1.585E-01	2.242E-01	1.584E-01	1.144E-01	NOT IDENT.
CD-115	1.010E+01	3.236E+01	0.000E+00	1.651E+01	SHORT HLIF
SN-117M	-5.942E-03	6.659E-02	5.637E-02	3.397E-02	NOT IDENT.
SB-122	-3.083E-01	5.528E+00	4.718E+00	2.820E+00	NOT IDENT.
I-123	7.715E+07	2.644E+08	0.000E+00	1.349E+08	SHORT HLIF
TE-123M	8.917E-03	3.056E-02	2.629E-02	1.559E-02	NOT IDENT.
I-124	1.926E-01	1.535E+00	1.143E+00	7.829E-01	NOT IDENT.
SB-124	2.289E-03	1.008E-01	8.339E-02	5.144E-02	FAIL ABUN
SB-125	-2.799E-02	1.063E-01	9.227E-02	5.426E-02	FAIL ABUN
TE-125M	-1.060E+01	9.297E+00	7.717E+00	4.743E+00	NOT IDENT.
I-126	8.592E-02	2.677E-01	2.302E-01	1.366E-01	NOT IDENT.
SB-126	-2.224E-02	2.575E-01	1.835E-01	1.314E-01	FAIL ABUN
SB-127	-2.233E-01	3.016E+00	2.516E+00	1.539E+00	NOT IDENT.
XE-127	-1.873E-02	5.014E-02	4.414E-02	2.558E-02	FAIL ABUN
I-131	-3.303E-02	1.730E-01	1.447E-01	8.824E-02	NOT IDENT.
TE-132	3.576E-01	1.327E+00	1.186E+00	6.771E-01	NOT IDENT.
BA-133	-7.151E-05	5.887E-02	4.380E-02	3.003E-02	FAIL ABUN
I-133	2.124E+04	7.782E+04	0.000E+00	3.970E+04	SHORT HLIF
CS-134	8.957E-02	6.062E-02	5.684E-02	3.093E-02	NOT IDENT.
CS-135	3.520E-01	1.837E-01	1.558E-01	9.373E-02	NOT IDENT.
I-135	-1.481E+19	1.324E+19	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.885E-02	1.615E-01	1.311E-01	8.238E-02	FAIL ABUN
BA-137M	2.357E-02	4.556E-02	3.968E-02	2.324E-02	NOT IDENT.
CS-137	2.491E-02	4.816E-02	4.195E-02	2.457E-02	NOT IDENT.
CE-139	-5.242E-03	3.248E-02	2.730E-02	1.657E-02	NOT IDENT.
BA-140	1.093E-01	3.743E-01	3.266E-01	1.910E-01	NOT IDENT.
LA-140	5.507E-02	1.225E-01	1.076E-01	6.249E-02	NOT IDENT.

CE-143	3.233E+03	1.091E+03	0.000E+00	5.566E+02	SHORT HLIF
CE-144	-7.832E-02	2.345E-01	1.768E-01	1.196E-01	NOT IDENT.
PM-144	8.265E-03	4.570E-02	3.874E-02	2.332E-02	NOT IDENT.
PR-144	5.610E-01	3.102E+00	2.629E+00	1.582E+00	NOT IDENT.
PM-146	5.368E-02	4.911E-02	4.546E-02	2.506E-02	NOT IDENT.
ND-147	-5.415E-02	8.057E-01	6.913E-01	4.111E-01	FAIL ABUN
PM-149	9.089E+01	2.389E+02	0.000E+00	1.219E+02	SHORT HLIF
EU-152	5.021E-02	1.274E-01	9.764E-02	6.500E-02	NOT IDENT.
GD-153	-4.335E-02	7.669E-02	5.757E-02	3.913E-02	FAIL ABUN
EU-154	2.302E-03	1.382E-01	1.179E-01	7.053E-02	NOT IDENT.
EU-155	1.397E-01	1.036E-01	9.465E-02	5.283E-02	FAIL ABUN
TB-160	7.602E-02	2.007E-01	1.616E-01	1.024E-01	FAIL ABUN
HO-166M	-6.808E-02	8.379E-02	6.421E-02	4.275E-02	FAIL ABUN
TM-171	-1.172E+01	1.627E+01	1.290E+01	8.301E+00	FAIL ABUN
LU-176	6.122E-03	2.756E-02	2.399E-02	1.406E-02	FAIL ABUN
LU-177	2.961E+00	2.161E+00	1.462E+00	1.103E+00	FAIL ABUN
LU-177M	6.258E-02	2.089E-01	1.778E-01	1.066E-01	FAIL ABUN
HF-181	-1.755E-03	5.087E-02	4.418E-02	2.595E-02	NOT IDENT.
W-181	6.886E-02	1.982E-01	1.645E-01	1.011E-01	NOT IDENT.
TA-182	3.137E-02	2.464E-01	2.128E-01	1.257E-01	FAIL ABUN
RE-183	-5.371E-02	1.294E-01	1.050E-01	6.603E-02	FAIL ABUN
RE-184	2.534E-02	2.339E-01	2.061E-01	1.194E-01	NOT IDENT.
OS-185	-6.888E-03	5.546E-02	4.640E-02	2.830E-02	NOT IDENT.
RE-188	2.315E-02	1.829E-01	1.566E-01	9.330E-02	NOT IDENT.
W-188	-2.407E+00	9.302E+00	6.934E+00	4.746E+00	FAIL ABUN
IR-192	-8.434E-05	3.839E-02	3.295E-02	1.959E-02	FAIL ABUN
AU-195	1.033E-01	2.021E-01	1.756E-01	1.031E-01	FAIL ABUN
TL-200	-1.453E+02	3.545E+03	0.000E+00	1.809E+03	SHORT HLIF
TL-201	-1.120E+01	1.507E+01	1.230E+01	7.687E+00	NOT IDENT.
TL-202	7.233E-02	9.480E-02	8.660E-02	4.837E-02	NOT IDENT.
HG-203	4.442E-02	4.535E-02	4.108E-02	2.314E-02	FAIL ABUN
BI-207	-3.772E-02	6.513E-02	5.164E-02	3.323E-02	FAIL ABUN
TL-207	-1.004E+00	7.682E-01	5.959E-01	3.919E-01	FAIL ABUN
PO-209	1.343E+00	9.679E+00	8.341E+00	4.938E+00	NOT IDENT.
PB-211	-1.521E+00	1.506E+00	9.176E-01	7.684E-01	NOT IDENT.
BI-212	7.823E-01	5.153E-01	3.924E-01	2.629E-01	FAIL ABUN
PO-215	-1.004E+00	7.682E-01	5.959E-01	3.919E-01	FAIL ABUN
RN-219	4.226E-01	5.152E-01	4.492E-01	2.629E-01	FAIL ABUN
RN-220	-1.788E+00	3.123E+01	2.672E+01	1.594E+01	NOT IDENT.
RA-223	-1.004E+00	7.682E-01	5.959E-01	3.919E-01	FAIL ABUN
AC-227	-3.502E-01	3.963E-01	3.293E-01	2.022E-01	FAIL ABUN
TH-227	-3.502E-01	3.976E-01	3.293E-01	2.029E-01	FAIL ABUN
TH-229	3.266E-01	5.132E-01	4.708E-01	2.618E-01	FAIL ABUN
PA-231	-1.826E+00	1.591E+00	1.276E+00	8.116E-01	FAIL ABUN
TH-231	-1.004E+00	7.682E-01	5.959E-01	3.919E-01	FAIL ABUN
U-231	-9.364E-01	1.573E+00	1.209E+00	8.028E-01	FAIL ABUN
PA-233	6.199E-02	6.946E-02	6.237E-02	3.544E-02	FAIL ABUN
PA-234	-1.596E-01	3.842E-01	3.138E-01	1.960E-01	FAIL ABUN
PA-234M	-1.933E-01	6.113E+00	5.080E+00	3.119E+00	NOT IDENT.
NP-236	4.320E-02	8.479E-02	7.350E-02	4.326E-02	NOT IDENT.
NP-239	1.042E-01	1.888E-01	1.679E-01	9.634E-02	FAIL ABUN
AM-241	4.530E-02	6.432E-02	5.450E-02	3.282E-02	NOT IDENT.
CM-243	-3.720E-02	9.010E-02	7.803E-02	4.597E-02	FAIL ABUN
AM-246	1.557E-01	1.846E-01	1.645E-01	9.418E-02	NOT IDENT.
CM-247	6.718E-02	4.488E-02	4.068E-02	2.290E-02	NOT IDENT.
CF-249	3.533E-02	4.409E-02	3.889E-02	2.249E-02	NOT IDENT.
CF-251	2.447E-02	1.361E-01	1.155E-01	6.945E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	285.4803
46.50	285.4803
46.50	285.4803
48.70	315.7133
49.72	317.0466
51.35	292.5550
52.39	312.8452
52.97	313.5603
53.15	313.7818
53.44	314.1374
54.07	331.5483
56.28	396.3148
56.28	396.3195
57.37	0.0000
57.53	404.6559
57.53	404.6595
57.60	372.5874
57.98	375.0154
57.98	375.0154
59.32	383.8170
59.32	383.8170
59.40	383.9280
59.54	384.1221
59.72	394.8313
60.01	395.2437
61.10	420.4321
61.14	420.4919
61.30	429.9334
63.00	432.9421
63.29	433.3767
63.29	433.3767
63.58	451.9235
64.28	425.1123
65.12	446.3123
65.20	446.4330
65.20	446.4330
66.05	462.4139
66.72	495.5926
66.83	495.7789
66.91	495.9088
67.20	527.2422
67.20	527.2422
67.75	483.8461
67.85	484.0082
68.90	459.5902
68.90	459.5902
69.30	498.9094
69.67	498.7897
70.82	458.8189
70.82	458.8189
70.83	458.8344
72.80	517.6985
72.87	517.8113
72.87	517.8113
74.67	498.2627
74.81	498.4757
74.81	498.4757
74.81	498.4757
74.81	498.4757
74.81	498.4757
74.81	498.4757
74.81	498.4757
74.97	498.7220
75.28	499.1924
75.70	499.8315
77.11	501.9621
77.11	501.9621

77.11	501.9621
77.11	501.9621
77.11	501.9621
77.11	501.9621
77.11	501.9621
78.38	464.0356
79.62	399.7306
79.80	399.9406
79.80	399.9406
80.11	385.4065
80.18	385.4865
80.30	357.6758
80.30	357.6758
80.57	402.7017
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81.07	386.4815
81.07	386.4815
81.07	386.4815
81.07	386.4815
82.60	440.2207
83.37	439.7688
83.78	414.8820
83.78	414.8820
83.78	414.8820
83.78	414.8820
84.21	405.4944
84.90	376.5506
85.43	377.1066
86.29	378.0057
86.50	378.2249
86.54	378.2654
86.59	378.3182
86.72	378.4521
86.79	317.3333
86.94	317.4660
87.30	317.7791
87.30	317.7791
87.30	317.7791
87.30	317.7791
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87.30	317.7791
87.57	318.0139
87.88	318.2827
88.03	318.4120
88.36	318.6978
88.47	318.7931
89.95	320.0640
91.11	321.0542
92.29	322.0546
92.38	322.1312
92.38	322.1312
93.35	322.9478
94.00	285.7757
94.67	274.6421
94.67	274.6464
94.90	274.8079
94.90	274.8079
94.90	274.8079
94.90	274.8079
95.87	336.7117
95.87	336.7117
96.73	325.7653
97.43	319.0216
98.44	306.1385
98.44	306.1385
98.88	286.8929
99.55	279.5249
99.55	279.5249
99.86	302.3149
100.00	305.3655
100.10	305.4430
103.18	363.1603
103.76	349.7951
105.00	314.0633
105.31	314.2947
108.00	364.3370
109.28	367.4297

111.00	319.4991
111.00	319.4991
111.76	315.0040
112.95	335.0894
115.19	343.8967
116.30	327.4034
117.00	306.4560
117.00	306.4560
117.66	300.7620
121.11	324.6595
121.62	299.2188
121.78	299.3206
122.06	295.3681
122.32	290.3644
122.32	290.3644
122.32	290.3644
122.32	290.3644
123.07	315.6653
127.23	322.5940
129.76	315.8718
131.20	265.2224
133.02	293.1274
133.54	312.4628
135.34	300.3133
136.00	275.2007
136.25	275.3351
136.48	281.8402
140.51	300.6564
140.51	0.0000
142.18	293.5478
142.65	293.8088
143.76	294.4253
144.24	294.6891
144.24	294.6891
144.24	294.6891
144.24	294.6891
145.22	295.2279
145.44	295.3501
147.16	268.6160
152.43	289.2844
152.70	299.2908
153.22	287.4980
154.21	285.8058
154.21	285.8058
154.21	285.8058
154.21	285.8058
155.03	292.8289
156.02	314.2932
158.56	289.1115
159.00	0.0000
159.00	287.1147
160.31	285.5433
161.27	297.1456
162.32	308.8298
162.64	313.4609
163.35	303.7864
163.89	289.5334
165.85	300.5867
167.43	320.5003
171.28	278.4091
171.86	300.1980
172.10	304.8470
176.55	278.5111
176.60	277.3919
181.06	313.8484
184.41	308.5558
185.71	272.1204
186.00	272.2423
190.27	278.0996
192.34	271.9477
193.63	260.1675
197.04	295.0505
198.01	261.8522
198.60	259.4219
200.40	298.2733
201.83	297.1120
202.84	281.5074
205.31	267.4840

208.36	284.4413
208.81	262.3393
209.75	236.0563
209.75	236.0563
210.97	210.5059
215.65	227.6488
216.55	222.4799
218.09	229.3171
222.10	217.7484
223.80	230.1612
226.40	237.3950
227.00	228.3734
227.08	228.3979
227.20	224.7476
228.16	233.3309
228.18	218.5802
228.18	218.5802
231.56	0.0000
235.69	205.6220
236.00	205.7029
236.00	205.7029
238.63	210.3144
238.63	210.3144
238.63	210.3144
238.63	210.3144
239.00	210.4122
240.98	210.9366
241.98	211.2001
241.98	211.2001
241.98	211.2001
244.69	203.4360
245.39	212.6601
247.94	186.5989
248.90	200.7022
249.79	213.2395
252.40	194.8995
252.85	186.4446
252.85	186.4446
254.15	0.0000
256.20	219.6653
256.20	219.6653
260.50	197.7488
260.90	0.0000
262.80	193.4674
264.65	205.2668
268.24	164.2741
268.79	170.5833
269.46	161.0126
269.46	161.0126
269.46	161.0126
269.46	161.0126
271.23	161.7281
273.65	246.3774
276.40	180.8560
277.35	180.0693
277.60	179.1410
277.60	179.1410
278.00	189.9948
278.60	187.1821
279.20	184.3654
279.53	200.1277
280.46	214.0848
281.68	203.5540
283.67	197.1039
284.30	184.4177
285.00	181.5995
285.90	0.0000
286.10	166.9937
286.10	166.9937
287.40	175.1472
288.45	0.0000
290.67	201.7830
290.80	198.6343
291.72	202.0125
293.26	0.0000
293.70	186.5002
295.21	209.1523
295.21	209.1523

295.21	209.1523
295.96	199.7314
296.50	199.8444
297.23	200.0000
298.57	200.2838
299.80	190.9142
299.80	190.9142
300.09	190.9723
300.09	190.9723
300.09	190.9723
300.09	190.9723
300.12	190.9781
301.29	170.3246
302.84	206.0063
303.76	207.8141
303.91	183.6775
304.40	199.8925
304.40	199.8925
304.84	177.4045
306.84	180.8027
308.46	189.1971
311.98	153.3225
316.51	166.2657
318.01	151.1910
319.02	141.1186
319.41	137.0813
320.08	148.4316
323.87	212.6981
323.87	212.6981
323.87	212.6981
323.87	212.6981
325.23	191.3754
328.77	175.5174
333.44	172.5775
334.20	149.4558
334.20	149.4558
334.30	149.4712
338.28	151.0800
338.28	151.0800
338.28	151.0800
338.28	151.0800
338.32	151.0867
338.32	151.0867
338.32	151.0867
340.50	175.4136
340.57	175.4264
344.27	165.9773
345.85	176.2980
350.59	0.0000
351.07	183.4785
351.92	183.6218
351.92	183.6218
351.92	183.6218
355.39	0.0000
356.01	154.2290
364.48	157.9727
366.43	135.7940
367.43	146.6161
367.94	0.0000
369.80	142.6337
374.96	138.9718
383.85	166.0994
387.95	122.0146
388.63	131.8951
391.69	144.2582
391.69	144.2582
392.90	149.8751
398.62	168.1795
400.65	173.9649
401.10	170.7268
401.81	150.9893
402.60	131.2366
404.84	196.6648
410.95	141.0166
411.60	166.6420
413.65	136.8717
414.70	131.4194
415.30	133.7109

415.76	141.5631
417.63	0.0000
418.52	141.8751
423.70	137.9715
427.08	138.3393
427.89	144.9531
432.53	140.0563
433.93	138.3985
439.47	123.5472
439.56	122.6470
439.89	122.6783
443.98	134.9109
444.90	126.7951
445.03	129.5438
445.03	129.5438
445.03	129.5438
445.03	129.5438
453.90	105.6127
463.38	123.0006
468.07	133.0120
473.00	135.9696
475.06	138.0364
475.35	138.0635
476.78	127.0003
477.59	114.9266
477.96	111.2182
482.03	116.2273
484.57	107.9852
487.03	102.5281
490.36	0.0000
492.35	0.0000
497.08	131.6631
507.63	0.0000
510.53	0.0000
510.84	112.8245
511.00	112.8368
511.85	112.9023
511.85	112.9023
513.99	92.6234
513.99	92.6234
520.41	107.0537
520.65	108.0057
527.90	0.0000
528.96	0.0000
529.64	107.4635
529.87	0.0000
531.02	111.4371
537.32	111.8948
543.00	124.0203
546.56	0.0000
549.76	108.8646
552.65	118.8878
555.20	120.0640
563.23	124.6250
563.90	120.7163
568.70	122.0691
569.32	126.0853
569.50	126.1008
569.67	126.1132
573.80	130.6636
574.00	130.6796
574.64	135.1775
578.91	121.5003
579.30	0.0000
583.14	119.1424
585.48	65.1682
591.81	94.6013
592.07	94.6150
593.00	85.6039
595.88	101.8926
600.56	92.3104
602.52	0.0000
602.71	113.1061
602.71	113.1061
603.60	116.5442
604.41	109.8383
604.70	109.8568
609.31	126.0828

609.31	126.0828
609.31	126.0828
609.31	126.0828
610.33	122.0889
612.46	93.3765
614.37	115.5745
618.01	112.4089
621.84	105.4870
621.84	105.4870
631.29	116.3492
633.02	109.2478
633.10	109.2530
634.78	114.5148
635.90	111.4910
636.97	104.3264
645.85	113.1460
646.12	102.7802
656.30	93.9595
657.75	113.1893
657.90	0.0000
661.65	99.4694
661.65	99.4694
664.57	0.0000
666.33	99.7198
666.33	99.7198
675.00	108.6202
677.61	87.6485
685.20	101.7844
692.80	120.2860
695.00	107.6331
696.49	108.7834
696.49	108.7834
697.00	108.8133
697.49	99.2371
698.33	107.8205
698.50	108.8955
699.00	112.1290
702.63	124.1081
706.10	105.0366
706.58	0.0000
706.67	101.8490
709.31	115.9418
711.68	117.1590
713.82	93.6121
717.42	102.4080
720.50	102.5657
721.93	0.0000
722.20	97.2510
722.78	97.2795
722.78	97.2795
722.89	104.4902
722.95	104.4949
723.30	104.5114
724.18	108.1641
727.18	96.4094
733.00	82.2561
735.90	88.1251
739.58	70.8446
742.81	81.8738
744.21	109.2407
747.13	97.3611
751.79	107.4507
752.31	109.6704
753.82	99.8734
755.35	102.1433
756.15	110.9743
756.87	116.5068
763.93	131.4237
765.79	103.9443
766.42	102.1362
766.84	102.1565
776.49	94.3031
778.00	98.9955
778.57	95.3198
778.89	90.7066
783.80	84.4220
785.46	83.5583
792.07	93.1295

795.84	80.2313
796.30	85.8457
798.80	115.8388
801.93	98.2303
805.60	85.2755
810.29	92.9716
810.76	96.7490
815.85	82.8491
817.79	79.1533
818.51	82.9494
819.60	83.9318
826.30	82.2935
828.27	0.0000
831.60	86.2789
831.96	79.6558
834.83	103.4937
836.80	0.0000
846.75	89.7200
848.13	91.6855
856.28	0.0000
856.80	77.2405
860.37	80.6504
867.32	70.9863
867.82	71.0028
871.10	75.2356
873.19	77.2331
874.81	77.2868
875.33	0.0000
876.40	76.3721
879.36	70.6608
880.27	77.4658
880.51	77.4740
881.50	87.1930
883.24	90.1656
884.67	73.7286
889.25	79.7028
896.60	78.9730
898.02	87.7991
899.00	85.8820
903.28	85.4755
911.07	96.1198
911.07	96.1198
911.07	96.1198
919.63	78.7386
920.93	73.0514
925.00	72.0064
925.24	72.0138
926.50	74.0234
935.52	68.3500
937.48	90.2132
944.10	82.5002
946.00	79.5768
949.00	65.7301
962.29	72.0806
964.01	72.1289
966.15	106.5647
968.20	127.2907
969.11	115.4352
969.11	115.4352
969.11	115.4352
977.42	84.5896
980.50	104.8527
983.50	59.5534
989.30	94.0804
996.32	92.3034
1001.03	66.0474
1001.68	69.1137
1004.76	89.5451
1021.30	0.0000
1024.50	0.0000
1034.80	59.6803
1036.00	61.7651
1037.82	85.4992
1038.57	81.4012
1038.76	0.0000
1045.16	58.8740
1046.59	70.2716
1048.07	75.4803

1050.47	76.5805
1050.47	76.5805
1062.04	69.6254
1063.62	73.8225
1076.63	67.8988
1077.35	65.8250
1078.86	62.7246
1085.78	61.8304
1099.22	81.0731
1112.02	84.6061
1112.84	72.9924
1115.52	74.4212
1120.29	69.9988
1120.29	69.9988
1120.29	69.9988
1120.29	69.9988
1120.51	68.9435
1121.28	54.5633
1124.00	0.0000
1129.67	78.9268
1131.51	0.0000
1147.95	0.0000
1167.94	74.3597
1173.22	65.8525
1175.09	72.3734
1177.93	88.6598
1189.05	77.1988
1204.90	77.5954
1205.75	0.0000
1213.00	88.1053
1221.42	83.6424
1230.97	98.9795
1235.34	84.0118
1236.41	0.0000
1238.25	64.2480
1246.25	70.0899
1260.41	0.0000
1271.85	70.6448
1274.45	52.5485
1274.54	52.5504
1291.56	39.3770
1298.22	0.0000
1312.09	47.3491
1325.50	55.2983
1325.50	55.2983
1332.49	46.6641
1333.61	41.8167
1360.21	30.3805
1362.66	0.0000
1365.15	44.1635
1368.21	34.3787
1368.53	0.0000
1376.25	34.4580
1384.27	60.1937
1394.10	38.5906
1395.20	42.5621
1407.95	39.7349
1434.06	23.0128
1436.60	29.0364
1457.56	0.0000
1460.81	28.2207
1489.15	38.5911
1509.49	41.8623
1596.49	25.0555
1620.62	25.2054
1678.03	0.0000
1691.02	21.3644
1691.02	21.3644
1706.46	0.0000
1750.46	0.0000
1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1764.49	11.4097
1770.23	15.2324
1771.40	16.9298
1791.20	0.0000
1808.65	20.1662

1836.01 12.5596

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492003

Total Uranium Activity	3.6261E+00	ug/g
Total Uranium Counting Unc.	2.9882E+00	ug/g
Total Uranium Tpu	1.5246E-06	ug/g
Total Uranium Mda	1.5437E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492003
ANALYST	: MXR1	DETECTOR	: GAM13
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	5-JAN-2010 14:15:58.24	SAMPLE ALQT:	131.780 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 8.158E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.501E+00
GROSS GAMMA MDA (pCi/GRAM)	: 2.976E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.446E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:58:48.65

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492004.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:01:18.
Sample ID : G243492004 Sample quantity : 1.29110E+02 GRAM
Detector name : GAM15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.26 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.90*	54	371	1.22	126.30	122	9	7.48E-03	67.6	
2	1	74.29	259	378	1.25	149.07	142	19	3.60E-02	13.8	1.57E+00
3	1	76.63*	416	443	1.44	153.74	142	19	5.78E-02	11.4	
4	0	92.44*	196	569	1.54	185.34	181	11	2.72E-02	25.6	
5	0	128.86	54	280	1.27	258.16	255	7	7.55E-03	53.4	
6	0	185.02*	171	420	1.80	370.43	364	13	2.38E-02	26.8	
7	0	208.67	90	282	1.31	417.70	414	9	1.25E-02	35.1	
8	3	238.17*	1112	225	1.43	476.69	468	24	1.54E-01	4.0	1.17E+00
9	3	241.21*	290	218	2.02	482.75	468	24	4.02E-02	15.8	
10	0	269.55	32	265	1.36	539.41	535	10	4.51E-03	95.0	
11	0	277.34	55	137	1.42	554.99	552	8	7.69E-03	38.8	
12	0	294.78*	389	237	1.43	589.86	583	13	5.41E-02	9.7	
13	0	299.54*	95	136	1.72	599.38	596	9	1.31E-02	25.4	
14	0	327.80	107	150	1.04	655.88	650	12	1.48E-02	25.1	
15	0	337.78*	183	210	1.29	675.83	669	12	2.54E-02	17.8	
16	0	351.45*	606	182	1.54	703.15	696	14	8.41E-02	6.4	
17	0	408.88	52	96	0.88	817.97	812	12	7.16E-03	40.5	
18	0	462.42	70	129	0.81	925.01	917	14	9.73E-03	36.5	
19	0	510.33*	41	180	1.45	1020.81	1013	15	5.72E-03	82.0	
20	0	582.80*	411	57	1.61	1165.69	1159	15	5.71E-02	6.6	
21	0	608.98*	440	81	1.62	1218.04	1212	12	6.12E-02	6.5	
22	0	727.85*	45	120	2.25	1455.70	1448	20	6.26E-03	61.7	
23	3	768.01	46	70	2.51	1535.99	1529	21	6.32E-03	40.1	2.27E+00
24	3	772.52	43	44	2.37	1545.01	1529	21	5.95E-03	33.9	
25	0	860.24*	42	30	1.49	1720.41	1716	10	5.77E-03	29.8	
26	0	911.00*	225	39	2.03	1821.90	1815	13	3.12E-02	9.1	
27	2	964.47	42	57	2.40	1928.83	1923	23	5.90E-03	38.5	1.53E+00
28	2	968.75*	147	48	1.94	1937.39	1923	23	2.04E-02	13.2	
29	0	1120.59*	83	63	1.75	2241.01	2232	17	1.15E-02	25.3	
30	0	1238.25	90	63	2.28	2476.28	2466	21	1.25E-02	24.5	
31	0	1460.89*	751	72	1.98	2921.51	2915	16	1.04E-01	4.5	
32	0	1729.89	29	3	1.39	3459.47	3454	10	4.08E-03	21.0	
33	0	1764.81*	78	11	1.38	3529.31	3523	15	1.09E-02	15.6	
34	0	1847.93	24	3	3.55	3695.56	3689	14	3.32E-03	26.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 11:58:51

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492004.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:01:18
Sample ID : G243492004 Sample quantity : 129.11 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.26 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.050E+01	2.411E+00	6.859E-01	5.243E-02	29.889
CS-135	+	268.24	*	1.527E-01	2.905E-01	3.188E-01	2.726E-02	0.479
TL-208	+	277.35		6.245E-01	4.891E-01	7.658E-01	8.580E-02	0.816
	+	510.84		2.252E-01	3.701E-01	2.643E-01	2.660E-02	0.852
	+	583.14	*	6.367E-01	9.310E-02	6.734E-02	4.287E-03	9.455
	+	860.37		6.006E-01	3.616E-01	4.948E-01	4.253E-02	1.214
BI-211	+	72.87		1.875E+01	5.574E+00	6.887E+00	7.679E-01	2.722
	+	351.07	*	4.246E+00	6.131E-01	3.857E-01	2.650E-02	11.007
PB-212	+	74.81		2.225E+00	6.935E-01	7.604E-01	1.104E-01	2.927
	+	77.11		1.961E+00	4.980E-01	4.188E-01	4.651E-02	4.681
		87.30		5.420E-01	6.374E-01	9.420E-01	1.437E-01	0.575
	+	238.63	*	1.719E+00	1.977E-01	1.049E-01	8.680E-03	16.389
	+	300.09		2.248E+00	1.159E+00	1.474E+00	1.322E-01	1.525
PO-212	+	74.81		2.225E+00	6.935E-01	7.604E-01	1.104E-01	2.927
	+	77.11		1.961E+00	4.980E-01	4.188E-01	4.651E-02	4.681
		87.30		5.420E-01	6.374E-01	9.420E-01	1.437E-01	0.575
		115.19		6.240E-01	4.490E+00	7.369E+00	5.638E-01	0.085
	+	238.63	*	1.719E+00	1.977E-01	1.049E-01	8.680E-03	16.389
	+	300.09		2.248E+00	1.159E+00	1.474E+00	1.322E-01	1.525
BI-214	+	609.31	*	1.283E+00	1.913E-01	1.217E-01	9.036E-03	10.540
	+	1120.29		1.263E+00	6.507E-01	5.233E-01	4.828E-02	2.414
	+	1764.49		1.638E+00	5.202E-01	3.837E-01	2.387E-02	4.269
PB-214	+	74.81		3.834E+00	1.175E+00	1.310E+00	1.750E-01	2.927
	+	77.11		3.361E+00	8.912E-01	7.180E-01	9.669E-02	4.681
		87.30		9.286E-01	1.090E+00	1.614E+00	2.237E-01	0.575
	+	241.98		2.688E+00	8.846E-01	6.313E-01	5.642E-02	4.258
	+	295.21		1.624E+00	3.494E-01	2.685E-01	2.483E-02	6.050
	+	351.92	*	1.477E+00	2.268E-01	1.344E-01	1.159E-02	10.986
PO-214	+	74.81		3.834E+00	1.175E+00	1.310E+00	1.750E-01	2.927
	+	77.11		3.361E+00	8.912E-01	7.180E-01	9.669E-02	4.681
		87.30		9.286E-01	1.090E+00	1.614E+00	2.237E-01	0.575
	+	241.98		2.688E+00	8.846E-01	6.313E-01	5.642E-02	4.258
	+	295.21		1.624E+00	3.494E-01	2.685E-01	2.483E-02	6.050
	+	351.92	*	1.477E+00	2.268E-01	1.344E-01	1.159E-02	10.986

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-216	+	74.81		2.225E+00	6.935E-01	7.604E-01	1.104E-01	2.927
	+	77.11		1.961E+00	4.980E-01	4.188E-01	4.651E-02	4.681
		87.30		5.420E-01	6.374E-01	9.420E-01	1.437E-01	0.575
	+	238.63	*	1.719E+00	1.977E-01	1.049E-01	8.680E-03	16.389
	+	300.09		2.248E+00	1.159E+00	1.474E+00	1.322E-01	1.525
PO-218	+	74.81		3.834E+00	1.175E+00	1.310E+00	1.750E-01	2.927
	+	77.11		3.361E+00	8.912E-01	7.180E-01	9.669E-02	4.681
		87.30		9.286E-01	1.090E+00	1.614E+00	2.237E-01	0.575
	+	241.98		2.688E+00	8.846E-01	6.313E-01	5.642E-02	4.258
	+	295.21		1.624E+00	3.494E-01	2.685E-01	2.483E-02	6.050
	+	351.92	*	1.477E+00	2.268E-01	1.344E-01	1.159E-02	10.986
RA-224	+	240.98	*	5.097E+00	1.653E+00	1.193E+00	8.304E-02	4.272
RA-226	+	609.31	*	1.283E+00	1.913E-01	1.217E-01	9.036E-03	10.540
	+	1120.29		1.263E+00	6.507E-01	5.233E-01	4.828E-02	2.414
	+	1764.49		1.638E+00	5.202E-01	3.837E-01	2.387E-02	4.269
AC-228	+	338.32		1.414E+00	7.654E-01	4.649E-01	1.900E-01	3.041
	+	911.07	*	1.542E+00	3.281E-01	2.223E-01	2.472E-02	6.935
	+	969.11		1.777E+00	6.234E-01	4.489E-01	1.038E-01	3.958
RA-228	+	338.32		1.414E+00	7.654E-01	4.649E-01	1.900E-01	3.041
	+	911.07	*	1.542E+00	3.281E-01	2.223E-01	2.472E-02	6.935
	+	969.11		1.777E+00	6.234E-01	4.489E-01	1.038E-01	3.958
TH-228	+	74.81		2.263E+00	6.734E-01	7.734E-01	8.637E-02	2.927
	+	77.11		1.994E+00	5.065E-01	4.260E-01	4.730E-02	4.681
		87.30		5.513E-01	6.460E-01	9.581E-01	1.104E-01	0.575
	+	238.63	*	1.748E+00	2.011E-01	1.067E-01	8.829E-03	16.389
	+	300.09		2.287E+00	1.781E+00	1.499E+00	8.852E-01	1.525
TH-230	+	609.31	*	1.283E+00	1.913E-01	1.217E-01	9.035E-03	10.540
	+	1120.29		1.263E+00	6.507E-01	5.233E-01	4.828E-02	2.414
	+	1764.49		1.638E+00	5.202E-01	3.837E-01	2.387E-02	4.269
TH-232	+	338.32		1.414E+00	5.102E-01	4.649E-01	2.993E-02	3.041
	+	911.07	*	1.542E+00	3.281E-01	2.223E-01	2.472E-02	6.935
	+	969.11		1.777E+00	6.234E-01	4.489E-01	1.038E-01	3.958
TH-234	+	63.29	*	2.342E+00	3.201E+00	3.661E+00	7.226E-01	0.640
	+	92.38		2.176E+00	1.190E+00	1.112E+00	2.120E-01	1.957
U-234	+	609.31	*	1.283E+00	1.913E-01	1.217E-01	9.035E-03	10.540
	+	1120.29		1.263E+00	6.507E-01	5.233E-01	4.828E-02	2.414
	+	1764.49		1.638E+00	5.202E-01	3.837E-01	2.387E-02	4.269
U-238	+	63.29	*	2.342E+00	3.201E+00	3.661E+00	7.226E-01	0.640
	+	92.38		2.176E+00	1.139E+00	1.112E+00	1.170E-01	1.957
AM-243	+	74.67	*	3.608E-01	1.073E-01	1.239E-01	1.377E-02	2.912
		86.72		1.791E+00	1.451E+01	2.213E+01	2.540E+00	0.081
		117.66		-2.199E+00	4.822E+00	7.721E+00	5.767E-01	-0.285
		142.18		1.584E+00	2.216E+01	3.521E+01	2.399E+00	0.045
ANH-511	+	511.00	*	4.864E-02	7.985E-02	5.710E-02	3.224E-03	0.852

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.098E-01	3.583E-01	5.714E-01	3.808E-02	-0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	5.998E-04	5.556E-02	9.006E-02	6.181E-03	0.007
NA-24		1368.53	*	-4.842E+00	5.556E-02	Half-Life too short		
AL-26		1129.67		4.587E-01	1.947E+00	3.110E+00	1.959E-01	0.148
		1808.65	*	-5.010E-03	3.170E-02	5.036E-02	3.013E-03	-0.099
TI-44		67.85		-2.261E-02	1.180E-01	1.219E-01	1.391E-02	-0.185
		78.38	*	2.730E-01	6.457E-02	9.893E-02	1.100E-02	2.760
SC-46		889.25	*	1.321E-02	4.247E-02	7.237E-02	6.070E-03	0.182
	+	1120.51		2.198E-01	1.123E-01	1.474E-01	9.466E-03	1.490
V-48		944.10		9.615E-01	1.158E+00	2.045E+00	1.681E-01	0.470
		983.50	*	1.591E-02	8.707E-02	1.458E-01	1.152E-02	0.109
		1312.09		-1.025E-01	1.054E-01	1.494E-01	1.090E-02	-0.686
CR-51		320.08	*	1.983E-01	5.103E-01	8.442E-01	6.088E-02	0.235
MN-52		744.21		1.420E-01	3.030E-01	5.275E-01	3.236E-02	0.269
		848.13		-1.022E+00	9.445E+00	1.552E+01	1.196E+00	-0.066
		935.52		1.707E-01	3.669E-01	6.306E-01	5.224E-02	0.271
		1246.25		-2.200E+00	1.270E+01	1.716E+01	1.119E+00	-0.128
		1333.61		-3.290E+00	8.155E+00	1.252E+01	9.449E-01	-0.263
		1434.06	*	-2.774E-01	3.601E-01	5.303E-01	3.932E-02	-0.523
MN-54		834.83	*	-4.149E-02	4.905E-02	7.623E-02	5.713E-03	-0.544
CO-56		846.75	*	-2.066E-02	4.466E-02	7.094E-02	5.452E-03	-0.291
		977.42		7.677E-01	3.933E+00	6.123E+00	4.869E-01	0.125
		1037.82		1.408E-02	3.696E-01	6.084E-01	4.815E-02	0.023
		1175.09		-6.852E-01	2.613E+00	4.142E+00	2.368E-01	-0.165
	+	1238.25		3.929E-01	1.946E-01	2.206E-01	1.491E-02	1.781
		1360.21		1.527E-01	1.044E+00	1.720E+00	1.294E-01	0.089
		1771.40		-2.343E-02	3.018E-01	4.146E-01	2.565E-02	-0.057
CO-57		122.06	*	-1.460E-02	3.162E-02	5.053E-02	3.633E-03	-0.289
		136.48		1.261E-01	2.610E-01	4.318E-01	3.314E-02	0.292
CO-58		810.76	*	-1.221E-02	4.637E-02	7.541E-02	5.387E-03	-0.162
FE-59		142.65		1.053E+00	3.533E+00	5.665E+00	3.857E-01	0.186
		192.34		-2.619E-01	1.244E+00	1.978E+00	2.438E-01	-0.132
		1099.22	*	-1.826E-02	1.118E-01	1.798E-01	1.361E-02	-0.102
		1291.56		3.160E-02	1.446E-01	2.397E-01	2.023E-02	0.132
CO-60		1173.22		2.007E-02	5.269E-02	8.881E-02	5.058E-03	0.226
		1332.49	*	5.775E-04	4.865E-02	7.865E-02	5.936E-03	0.007
ZN-65		1115.52	*	2.351E-02	1.165E-01	1.676E-01	1.089E-02	0.140
GE-68		1077.35	*	4.444E-01	1.354E+00	2.290E+00	1.592E-01	0.194
AS-73		53.44	*	1.713E+00	2.115E+00	3.612E+00	4.936E-01	0.474
AS-74		595.88	*	1.641E-02	1.218E-01	1.988E-01	1.069E-02	0.083
		634.78		-9.596E-02	4.553E-01	7.200E-01	3.734E-02	-0.133
SE-75		66.05		-1.266E+01	9.477E+00	1.258E+01	1.632E+00	-1.006
		96.73		-6.937E-02	1.116E+00	1.582E+00	2.269E-01	-0.044
		121.11		-3.528E-02	1.725E-01	2.788E-01	2.844E-02	-0.127
		136.00		8.032E-03	5.050E-02	8.254E-02	5.747E-03	0.097
		198.60		-1.241E+00	2.431E+00	3.720E+00	2.969E-01	-0.334
		264.65	*	-1.380E-02	6.327E-02	9.097E-02	6.363E-03	-0.152
		279.53		8.993E-02	1.510E-01	2.285E-01	1.667E-02	0.394
		303.91		-1.433E-01	2.817E+00	4.067E+00	4.129E-01	-0.035
		400.65		1.701E-01	3.106E-01	5.267E-01	4.757E-02	0.323

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BR-77		87.88		1.032E+03	5.266E+02	7.992E+02	9.240E+01	1.292
		200.40		1.302E+01	3.761E+02	6.035E+02	4.124E+01	0.022
	+	239.00		4.899E+02	5.188E+01	8.094E+01	5.632E+00	6.052
		249.79		9.765E+01	1.493E+02	2.452E+02	1.707E+01	0.398
		281.68		1.228E+02	2.149E+02	3.252E+02	2.240E+01	0.378
		297.23		6.609E+02	1.941E+02	2.598E+02	1.768E+01	2.544
		303.76		-5.525E+01	4.195E+02	6.019E+02	4.068E+01	-0.092
		439.47		4.305E+01	3.130E+02	5.182E+02	2.961E+01	0.083
		484.57		5.363E+02	4.765E+02	8.377E+02	4.766E+01	0.640
		520.65	*	2.463E+01	2.149E+01	3.784E+01	2.129E+00	0.651
		574.64		1.884E+02	4.425E+02	7.012E+02	3.830E+01	0.269
		578.91		7.175E+01	1.973E+02	2.868E+02	1.562E+01	0.250
		585.48		2.253E+03	5.387E+02	9.589E+02	5.197E+01	2.350
		755.35		3.657E+02	3.196E+02	5.812E+02	3.657E+01	0.629
		817.79		-1.330E+02	2.821E+02	4.501E+02	3.253E+01	-0.295
SR-82		698.33		-6.636E+00	3.977E+01	6.585E+01	3.625E+00	-0.101
		776.49	*	-2.835E-01	5.332E-01	7.156E-01	4.724E-02	-0.396
		1395.20		-3.595E+00	1.249E+01	2.009E+01	1.502E+00	-0.179
RB-83		520.41	*	8.806E-02	8.137E-02	1.427E-01	8.031E-03	0.617
		529.64		2.157E-02	1.262E-01	2.078E-01	1.165E-02	0.104
		552.65		-1.076E-01	2.269E-01	3.534E-01	1.958E-02	-0.304
RB-84		881.50	*	-4.428E-02	7.954E-02	1.244E-01	1.027E-02	-0.356
KR-85		513.99	*	1.151E+01	9.851E+00	1.531E+01	8.638E-01	0.751
SR-85		513.99	*	6.023E-02	5.156E-02	8.016E-02	4.522E-03	0.751
RB-86		1076.63	*	4.834E-01	9.076E-01	1.567E+00	1.090E-01	0.309
Y-88		898.02		2.195E-02	4.830E-02	8.306E-02	7.126E-03	0.264
		1836.01	*	1.300E-02	3.664E-02	6.445E-02	3.765E-03	0.202
ZR-88		392.90	*	-1.253E-02	3.675E-02	5.930E-02	3.363E-03	-0.211
Y-91		1204.90	*	1.788E+01	2.192E+01	3.827E+01	2.315E+00	0.467
NB-94		702.63	*	1.371E-02	3.743E-02	6.442E-02	3.583E-03	0.213
		871.10		2.054E-03	3.854E-02	6.417E-02	5.187E-03	0.032
NB-95		765.79	*	6.054E-02	5.946E-02	9.454E-02	6.093E-03	0.640
NB-95M		235.69	*	1.594E+00	2.546E-01	4.109E-01	3.472E-02	3.880
ZR-95		724.18		1.091E-01	1.293E-01	2.023E-01	1.397E-02	0.539
		756.15	*	2.172E-02	8.042E-02	1.372E-01	1.023E-02	0.158
NB-97		657.90	*	-7.052E-02	8.042E-02	Half-Life too short		
		1024.50		-2.405E+01	8.042E-02	Half-Life too short		
ZR-97		254.15		2.405E+01	8.042E-02	Half-Life too short		
		355.39		9.379E+00	8.042E-02	Half-Life too short		
		507.63	*	4.597E+01	8.042E-02	Half-Life too short		
		602.52		-4.270E+01	8.042E-02	Half-Life too short		
		1021.30		3.610E+01	8.042E-02	Half-Life too short		
		1147.95		-2.628E-01	8.042E-02	Half-Life too short		
		1362.66		-7.683E+00	8.042E-02	Half-Life too short		
		1750.46		2.511E+01	8.042E-02	Half-Life too short		
MO-99		140.51		-7.122E+01	5.659E+01	8.149E+01	2.216E+01	-0.874
		181.06		2.237E+00	3.945E+01	5.557E+01	9.712E+00	0.040
		366.43		2.265E+01	1.659E+02	2.767E+02	1.680E+01	0.082
		739.58	*	-1.485E+01	2.001E+01	3.105E+01	4.314E+00	-0.478

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		778.00		-1.030E+01	7.330E+01	1.035E+02	6.856E+00	-0.100
TC-99M		140.51	*	-1.448E+13	7.330E+01	Half-Life too short		
RH-101		127.23		7.265E-02	4.634E-02	7.101E-02	5.003E-03	1.023
		198.01	*	-3.150E-02	4.397E-02	6.660E-02	4.544E-03	-0.473
		325.23		2.603E-03	3.258E-01	4.708E-01	3.096E-02	0.006
RH-102		418.52		-1.763E-01	3.386E-01	5.374E-01	3.066E-02	-0.328
		475.06	*	-1.875E-02	3.303E-02	5.165E-02	2.944E-03	-0.363
		631.29		3.595E-04	6.693E-02	1.079E-01	5.614E-03	0.003
		697.49		-4.279E-02	8.586E-02	1.385E-01	7.610E-03	-0.309
	+	766.84		2.209E-01	1.777E-01	2.337E-01	1.510E-02	0.945
		1046.59		8.338E-02	1.413E-01	2.437E-01	1.777E-02	0.342
		1112.84		1.520E-01	2.716E-01	4.120E-01	2.686E-02	0.369
RU-103		497.08	*	-1.039E-02	5.129E-02	8.242E-02	1.037E-02	-0.126
	+	610.33		1.434E+01	2.866E+00	3.483E+00	5.308E-01	4.117
RH-106		511.85		3.246E-01	2.814E-01	4.928E-01	2.782E-02	0.659
		621.84	*	5.909E-02	3.821E-01	6.236E-01	7.157E-02	0.095
		1050.47		1.781E-01	2.901E+00	4.780E+00	3.465E-01	0.037
RU-106		511.85		3.246E-01	2.814E-01	4.928E-01	2.782E-02	0.659
		621.84	*	5.909E-02	3.820E-01	6.236E-01	3.276E-02	0.095
		1050.47		1.781E-01	2.901E+00	4.780E+00	3.465E-01	0.037
AG-108M		433.93	*	-1.322E-02	3.927E-02	6.302E-02	3.918E-03	-0.210
		614.37		3.520E-02	4.872E-02	7.285E-02	4.244E-03	0.483
		722.95		-3.275E-02	5.473E-02	7.359E-02	4.655E-03	-0.445
CD-109		88.03	*	1.811E+00	1.392E+00	2.087E+00	2.413E-01	0.868
AG-110M		657.75	*	-8.923E-03	4.349E-02	6.874E-02	3.768E-03	-0.130
		677.61		1.299E-01	3.638E-01	6.015E-01	3.383E-02	0.216
		706.67		-1.865E-01	2.312E-01	3.623E-01	2.165E-02	-0.515
		763.93		1.545E-01	2.078E-01	3.239E-01	2.183E-02	0.477
		884.67		-9.013E-03	5.242E-02	8.528E-02	7.332E-03	-0.106
		937.48		-3.874E-02	1.270E-01	2.035E-01	1.749E-02	-0.190
		1384.27		-1.774E-01	1.988E-01	2.965E-01	2.304E-02	-0.599
IN-111		171.28		-4.052E-01	2.002E+00	3.196E+00	2.133E-01	-0.127
		245.39	*	-1.522E+00	2.210E+00	3.077E+00	2.142E-01	-0.495
IN-113M		391.69	*	-8.190E-03	5.222E-02	8.528E-02	5.173E-03	-0.096
SN-113		391.69	*	-8.190E-03	5.222E-02	8.528E-02	5.173E-03	-0.096
IN-114M		190.27	*	6.442E-03	2.672E-01	3.748E-01	2.541E-02	0.017
CD-115		260.90		1.448E+02	3.015E+02	5.164E+02	3.590E+01	0.280
		492.35		2.435E+00	7.720E+01	1.263E+02	7.171E+00	0.019
		527.90	*	2.192E+01	2.368E+01	4.107E+01	2.304E+00	0.534
SN-117M		156.02		-1.316E+00	3.156E+00	5.013E+00	3.359E-01	-0.263
		158.56	*	-5.126E-02	7.681E-02	1.205E-01	8.058E-03	-0.425
SB-122		563.90	*	3.605E-01	3.911E+00	6.384E+00	3.512E-01	0.056
		692.80		-2.563E+01	7.636E+01	1.246E+02	6.771E+00	-0.206
I-123		159.00	*	-3.707E+01	7.636E+01	Half-Life too short		
		528.96		3.923E+03	7.636E+01	Half-Life too short		
TE-123M		159.00	*	-1.532E-02	3.600E-02	5.709E-02	3.854E-03	-0.268
I-124		602.71	*	-6.391E-01	1.270E+00	1.668E+00	8.918E-02	-0.383
		722.78		-5.113E+00	7.897E+00	1.055E+01	6.155E-01	-0.485
		1325.50		2.177E+01	6.111E+01	1.026E+02	7.658E+00	0.212

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1376.25		1.059E+02	5.041E+01	9.958E+01	7.473E+00	1.063
		1509.49		1.183E+01	2.975E+01	5.166E+01	3.742E+00	0.229
		1691.02		1.265E+00	5.316E+00	9.193E+00	6.051E-01	0.138
SB-124		602.71		-2.742E-02	5.450E-02	7.157E-02	3.828E-03	-0.383
		645.85		-3.243E-01	6.513E-01	1.005E+00	5.984E-02	-0.323
		709.31		-4.963E-01	3.061E+00	5.063E+00	2.862E-01	-0.098
		713.82		-1.235E+00	1.881E+00	2.980E+00	3.028E-01	-0.415
		722.78		-3.180E-01	4.911E-01	6.560E-01	4.006E-02	-0.485
	+	968.20		1.871E+01	5.160E+00	8.777E+00	7.048E-01	2.132
		1045.16		2.105E+00	3.080E+00	5.355E+00	3.912E-01	0.393
		1325.50		1.446E+00	4.059E+00	6.816E+00	5.086E-01	0.212
		1368.21		-1.583E+00	1.926E+00	2.674E+00	3.422E-01	-0.592
		1436.60		-2.490E+00	4.525E+00	6.886E+00	5.103E-01	-0.362
		1691.02	*	1.856E-02	7.798E-02	1.349E-01	9.471E-03	0.138
SB-125		427.89	*	4.567E-02	1.103E-01	1.860E-01	1.108E-02	0.246
	+	463.38		7.534E-01	5.515E-01	6.400E-01	4.279E-02	1.177
		600.56		-5.130E-02	2.198E-01	3.385E-01	2.142E-02	-0.152
		635.90		-1.712E-01	3.183E-01	4.883E-01	3.062E-02	-0.351
TE-125M		109.28	*	-1.092E+01	1.179E+01	1.847E+01	1.836E+00	-0.592
I-126		388.63		5.239E-02	2.693E-01	4.497E-01	2.573E-02	0.116
		666.33	*	-1.981E-01	2.500E-01	3.752E-01	1.910E-02	-0.528
		753.82		1.384E+00	1.788E+00	3.169E+00	1.987E-01	0.437
SB-126		223.80		-1.374E+00	6.071E+00	9.583E+00	6.639E-01	-0.143
	+	278.60		4.609E+00	3.587E+00	5.859E+00	4.043E-01	0.787
		296.50		1.621E+01	3.417E+00	4.835E+00	3.292E-01	3.352
		414.70		1.288E-01	1.100E-01	1.732E-01	9.874E-03	0.744
		415.30		7.539E+00	9.068E+00	1.443E+01	8.230E-01	0.522
		555.20		6.119E+00	4.937E+00	8.774E+00	4.853E-01	0.697
		573.80		8.626E-02	1.381E+00	2.247E+00	1.228E-01	0.038
		593.00		-5.539E-02	1.277E+00	2.057E+00	1.108E-01	-0.027
		656.30		-5.965E+00	4.744E+00	6.816E+00	3.451E-01	-0.875
		666.33		-8.315E-02	1.050E-01	1.575E-01	8.016E-03	-0.528
		675.00		-6.505E-01	2.586E+00	4.057E+00	2.110E-01	-0.160
		695.00		1.699E-03	9.110E-02	1.530E-01	8.357E-03	0.011
		697.00		-6.762E-02	3.238E-01	5.342E-01	2.931E-02	-0.127
		720.50	*	1.280E-01	1.997E-01	3.095E-01	1.796E-02	0.413
		856.80		-1.187E-01	6.866E-01	9.577E-01	7.517E-02	-0.124
		989.30		-1.362E-01	1.472E+00	2.398E+00	1.882E-01	-0.057
		1034.80		-3.267E+00	1.166E+01	1.860E+01	1.379E+00	-0.176
		1213.00		1.825E+00	5.827E+00	9.748E+00	5.984E-01	0.187
SN-126	+	64.28		9.269E-01	1.264E+00	1.458E+00	2.499E-01	0.636
		86.94		1.385E-01	5.508E-01	8.389E-01	3.528E-01	0.165
		87.57	*	2.539E-01	1.350E-01	2.048E-01	2.363E-02	1.240
SB-127		61.10		1.612E+02	1.704E+02	2.584E+02	3.749E+01	0.624
		252.40		-1.559E+00	7.761E+00	1.287E+01	5.393E+00	-0.121
		290.80		3.948E+01	4.199E+01	6.464E+01	6.809E+00	0.611
		411.60		-1.250E-01	2.376E+01	3.386E+01	5.015E+00	-0.004
		444.90		-3.205E-01	1.664E+01	2.725E+01	3.099E+00	-0.012
		473.00		1.521E+00	2.632E+00	4.478E+00	5.253E-01	0.340

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		543.00		-1.844E+01	2.721E+01	4.157E+01	5.542E+00	-0.444
		603.60		-1.088E+01	2.258E+01	2.969E+01	3.314E+00	-0.366
		685.20	*	-2.599E-01	2.061E+00	3.424E+00	3.382E-01	-0.076
		698.50		-7.856E-01	2.388E+01	3.994E+01	5.926E+00	-0.020
		722.20		-3.394E+01	5.545E+01	7.427E+01	7.356E+00	-0.457
		783.80		4.945E+00	6.404E+00	1.122E+01	1.321E+00	0.441
XE-127		57.60		-5.900E+00	1.487E+01	2.115E+01	2.694E+00	-0.279
		145.22		6.282E-01	8.880E-01	1.478E+00	1.003E-01	0.425
		172.10		-1.460E-01	1.593E-01	2.460E-01	1.643E-02	-0.593
		202.84	*	3.938E-02	6.515E-02	1.035E-01	7.083E-03	0.381
		374.96		1.426E-01	2.532E-01	4.318E-01	2.567E-02	0.330
I-131		80.18		-1.268E+01	8.594E+00	1.136E+01	1.274E+00	-1.116
		284.30		-1.038E+00	2.232E+00	3.543E+00	2.639E-01	-0.293
		364.48	*	-7.389E-03	1.647E-01	2.718E-01	1.839E-02	-0.027
		636.97		-4.277E-01	2.162E+00	3.422E+00	2.041E-01	-0.125
		722.89		-6.716E+00	1.091E+01	1.463E+01	8.693E-01	-0.459
TE-132		49.72		-8.330E+01	8.882E+01	1.407E+02	2.167E+01	-0.592
		111.76		1.112E+01	5.578E+01	9.183E+01	9.993E+00	0.121
		116.30		2.263E-01	5.312E+01	8.671E+01	9.211E+00	0.003
		228.16	*	3.587E-01	1.254E+00	2.137E+00	3.261E-01	0.168
BA-133		53.15		8.589E+00	9.086E+00	1.557E+01	2.134E+00	0.552
		79.62		-2.122E+00	2.061E+00	2.789E+00	4.681E-01	-0.761
		81.00		-2.334E-01	1.554E-01	2.002E-01	3.484E-02	-1.166
	+	276.40		6.174E-01	4.858E-01	7.574E-01	1.022E-01	0.815
		302.84		-1.137E-01	1.998E-01	2.767E-01	3.366E-02	-0.411
		356.01	*	-1.167E-02	5.567E-02	7.848E-02	9.242E-03	-0.149
		383.85		8.684E-02	3.663E-01	6.131E-01	6.666E-02	0.142
I-133	+	510.53		2.386E+00	3.663E-01	Half-Life too short		
		529.87	*	3.899E-03	3.663E-01	Half-Life too short		
		706.58		-1.719E+00	3.663E-01	Half-Life too short		
		856.28		-1.513E+00	3.663E-01	Half-Life too short		
		875.33		3.216E-01	3.663E-01	Half-Life too short		
		1236.41		8.385E+00	3.663E-01	Half-Life too short		
		1298.22		-5.944E-02	3.663E-01	Half-Life too short		
CS-134		475.35		-1.100E+00	2.134E+00	3.349E+00	1.909E-01	-0.329
		563.23		-8.033E-02	4.106E-01	6.551E-01	3.689E-02	-0.123
		569.32		4.680E-02	2.306E-01	3.793E-01	2.149E-02	0.123
		604.70		-8.160E-04	4.450E-02	6.182E-02	3.321E-03	-0.013
		795.84	*	6.058E-02	5.383E-02	9.698E-02	6.758E-03	0.625
		801.93		-3.404E-01	4.429E-01	6.810E-01	4.796E-02	-0.500
		1038.57		-3.506E+00	4.612E+00	6.982E+00	5.149E-01	-0.502
		1167.94		-4.356E-01	3.007E+00	4.829E+00	2.787E-01	-0.090
		1365.15		3.968E-03	1.295E+00	2.088E+00	1.663E-01	0.002
I-135		288.45		1.699E+12	1.295E+00	Half-Life too short		
		417.63		1.826E+11	1.295E+00	Half-Life too short		
		546.56		1.875E+12	1.295E+00	Half-Life too short		
		836.80		2.742E+12	1.295E+00	Half-Life too short		
		1038.76		-2.497E+12	1.295E+00	Half-Life too short		
		1124.00		2.594E+12	1.295E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1131.51		5.399E+10	1.295E+00	Half-Life too short		
		1260.41	*	1.846E+11	1.295E+00	Half-Life too short		
		1457.56		7.015E+13	1.295E+00	Half-Life too short		
		1678.03		4.455E+11	1.295E+00	Half-Life too short		
		1706.46		3.099E+12	1.295E+00	Half-Life too short		
		1791.20		-5.791E+11	1.295E+00	Half-Life too short		
CS-136		66.91		-1.518E+00	1.779E+00	2.261E+00	3.889E-01	-0.671
		86.29		8.608E-02	1.836E+00	2.909E+00	4.334E-01	0.030
		153.22		6.665E-01	9.002E-01	1.498E+00	1.196E-01	0.445
		163.89		1.042E+00	1.485E+00	2.463E+00	1.960E-01	0.423
		176.55		3.697E-01	5.206E-01	8.621E-01	6.324E-02	0.429
		273.65		-1.545E-01	1.044E+00	1.002E+00	7.636E-02	-0.154
		340.57		2.330E-01	1.977E-01	3.076E-01	2.075E-02	0.758
		818.51		-2.794E-03	9.651E-02	1.601E-01	1.161E-02	-0.017
		1048.07	*	-3.810E-02	1.519E-01	2.434E-01	1.876E-02	-0.157
		1235.34		1.068E+00	8.784E-01	1.390E+00	1.438E-01	0.769
BA-137M		661.65	*	5.160E-02	4.507E-02	7.850E-02	3.949E-03	0.657
CS-137		661.65	*	5.455E-02	4.765E-02	8.298E-02	4.198E-03	0.657
CE-139		165.85	*	-1.548E-02	3.722E-02	5.894E-02	3.920E-03	-0.263
BA-140		162.64		7.684E-01	1.049E+00	1.742E+00	1.272E-01	0.441
		304.84		1.490E+00	1.911E+00	2.867E+00	7.888E-01	0.520
		423.70		-2.377E-01	2.541E+00	4.150E+00	1.318E+00	-0.057
		537.32	*	7.703E-02	3.219E-01	5.315E-01	1.726E-01	0.145
LA-140	+	328.77		1.136E+00	5.762E-01	7.208E-01	5.165E-02	1.576
		432.53		7.689E-01	2.739E+00	4.580E+00	2.898E-01	0.168
		487.03		2.980E-02	1.826E-01	3.016E-01	1.950E-02	0.099
		751.79		2.420E-01	2.097E+00	3.537E+00	2.639E-01	0.068
		815.85		4.539E-02	4.269E-01	7.162E-01	5.988E-02	0.063
		867.82		-1.157E+00	1.764E+00	2.581E+00	2.198E-01	-0.448
		919.63		1.558E+00	3.218E+00	5.467E+00	5.722E-01	0.285
		925.24		-2.418E-01	1.448E+00	2.326E+00	2.073E-01	-0.104
		1596.49	*	2.732E-02	1.034E-01	1.782E-01	1.242E-02	0.153
CE-141		145.44	*	4.549E-02	8.072E-02	1.337E-01	9.330E-03	0.340
CE-143		57.37		-2.273E-03	8.072E-02	Half-Life too short		
		231.56		-1.001E-02	8.072E-02	Half-Life too short		
		293.26	*	3.535E-03	8.072E-02	Half-Life too short		
	+	350.59		9.073E-02	8.072E-02	Half-Life too short		
		490.36		-6.451E-03	8.072E-02	Half-Life too short		
		664.57		-3.212E-03	8.072E-02	Half-Life too short		
		721.93		-5.840E-04	8.072E-02	Half-Life too short		
CE-144		80.11		-4.802E+00	3.359E+00	4.457E+00	4.973E-01	-1.077
		133.54	*	-1.964E-02	3.038E-01	4.303E-01	6.324E-02	-0.046
PM-144		476.78		-2.619E-02	7.446E-02	1.184E-01	8.119E-03	-0.221
		618.01		-1.526E-02	3.812E-02	5.943E-02	3.361E-03	-0.257
		696.49	*	1.452E-02	3.720E-02	6.424E-02	3.524E-03	0.226
		778.57		-1.558E+00	3.249E+00	4.406E+00	2.924E-01	-0.354
PR-144		696.49	*	9.848E-01	2.524E+00	4.358E+00	2.388E-01	0.226
		1489.15		-8.593E+00	1.134E+01	1.622E+01	1.183E+00	-0.530
PM-146		453.90	*	2.513E-02	5.544E-02	8.857E-02	7.585E-03	0.284

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		633.02		9.075E-01	1.659E+00	2.738E+00	1.006E+00	0.331
		735.90		-4.664E-02	1.846E-01	2.570E-01	7.177E-02	-0.181
		747.13		-2.284E-02	9.575E-02	1.566E-01	1.986E-02	-0.146
ND-147	+	91.11		1.240E+00	6.503E-01	8.398E-01	9.552E-02	1.476
		319.41		9.788E-01	4.770E+00	8.020E+00	5.320E-01	0.122
		439.89		3.183E+00	8.030E+00	1.351E+01	7.725E-01	0.236
		531.02	*	2.093E-01	7.451E-01	1.236E+00	1.661E-01	0.169
PM-149		285.90	*	-1.493E+02	2.066E+02	3.310E+02	4.849E+01	-0.451
EU-152		121.78		-3.351E-03	9.075E-02	1.477E-01	1.288E-02	-0.023
		244.69		-2.530E-01	4.400E-01	6.196E-01	4.313E-02	-0.408
		344.27	*	-3.964E-02	1.594E-01	1.955E-01	1.378E-02	-0.203
		443.98		5.701E-01	1.162E+00	1.966E+00	1.123E-01	0.290
		778.89		-6.175E-02	3.420E-01	5.014E-01	3.328E-02	-0.123
		867.32		-1.652E-01	9.600E-01	1.445E+00	1.159E-01	-0.114
	+	964.01		5.919E-01	4.586E-01	6.752E-01	5.445E-02	0.877
		1085.78		4.084E-01	4.366E-01	7.796E-01	5.341E-02	0.524
		1112.02		7.787E-02	3.941E-01	5.680E-01	3.708E-02	0.137
		1407.95		3.806E-02	2.253E-01	3.838E-01	2.863E-02	0.099
GD-153		69.67		2.809E+00	2.909E+00	4.400E+00	4.967E-01	0.638
		83.37		-6.004E+01	2.521E+01	3.281E+01	3.701E+00	-1.830
		97.43	*	1.422E-01	1.110E-01	1.677E-01	1.609E-02	0.848
		103.18		-3.357E-02	1.315E-01	2.132E-01	1.876E-02	-0.157
EU-154		123.07		-4.246E-02	6.662E-02	1.015E-01	1.045E-02	-0.418
		247.94		-1.350E-01	4.960E-01	7.127E-01	7.333E-02	-0.189
		591.81		-8.178E-02	7.947E-01	1.239E+00	1.181E-01	-0.066
		723.30		-1.211E-01	2.367E-01	3.223E-01	2.294E-02	-0.376
		756.87		-1.781E-01	8.512E-01	1.396E+00	1.458E-01	-0.128
		873.19		1.222E-01	3.500E-01	5.970E-01	7.103E-02	0.205
		996.32		-2.002E-01	4.074E-01	6.340E-01	1.102E-01	-0.316
		1004.76		2.649E-03	2.406E-01	3.958E-01	4.346E-02	0.007
		1274.45	*	-2.282E-03	1.547E-01	2.501E-01	2.508E-02	-0.009
EU-155		48.70		-8.074E+00	7.806E+00	1.234E+01	1.588E+00	-0.654
		60.01		3.523E+00	1.030E+01	1.531E+01	1.872E+00	0.230
		86.54		2.657E-03	1.589E-01	2.414E-01	2.784E-02	0.011
		105.31	*	7.267E-02	1.325E-01	2.213E-01	1.917E-02	0.328
TB-160		86.79		7.066E-02	4.321E-01	6.596E-01	7.575E-02	0.107
		197.04		-1.394E-01	7.334E-01	1.166E+00	7.948E-02	-0.120
		215.65		-1.049E+00	9.875E-01	1.494E+00	1.031E-01	-0.702
	+	298.57		3.334E-01	1.708E-01	2.702E-01	1.836E-02	1.234
		879.36	*	-1.096E-01	1.624E-01	2.515E-01	2.068E-02	-0.436
		962.29		1.039E+00	7.279E-01	1.190E+00	9.615E-02	0.873
		966.15		1.519E+00	3.499E-01	6.719E-01	5.406E-02	2.261
		1177.93		-1.437E-01	4.213E-01	6.623E-01	3.806E-02	-0.217
		1271.85		4.681E-01	8.447E-01	1.447E+00	9.871E-02	0.323
HO-166M		80.57		-6.809E-01	4.226E-01	5.522E-01	6.168E-02	-1.233
	+	184.41		1.386E-01	7.499E-02	8.745E-02	5.901E-03	1.585
		280.46		-8.337E-03	1.164E-01	1.686E-01	1.162E-02	-0.049
		410.95		-1.023E-01	3.467E-01	4.815E-01	2.743E-02	-0.212
		711.68	*	1.140E-02	6.679E-02	1.134E-01	6.444E-03	0.101

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		752.31		2.876E-02	3.033E-01	5.105E-01	3.190E-02	0.056
		810.29		-4.595E-02	6.950E-02	1.090E-01	7.752E-03	-0.421
TM-171		51.35		5.051E+01	8.512E+01	1.447E+02	1.999E+01	0.349
		52.39		4.965E+01	4.113E+01	7.086E+01	9.775E+00	0.701
		59.40		3.061E+01	5.604E+01	8.414E+01	1.035E+01	0.364
		66.72	*	-5.392E+01	5.827E+01	7.413E+01	8.524E+00	-0.727
LU-176		88.36		3.583E-01	3.147E-01	4.714E-01	5.409E-02	0.760
		201.83		1.433E-02	3.787E-02	6.162E-02	4.215E-03	0.233
		306.84	*	1.744E-02	3.013E-02	5.049E-02	3.401E-03	0.345
		401.10		2.627E+00	8.104E+00	1.325E+01	7.531E-01	0.198
LU-177		112.95		3.645E+00	2.465E+00	4.229E+00	3.310E-01	0.862
	+	208.36	*	3.019E+00	2.132E+00	2.983E+00	2.050E-01	1.012
LU-177M		52.97		4.050E+00	4.176E+00	7.159E+00	9.832E-01	0.566
		54.07		-1.099E-01	2.073E+00	3.442E+00	4.666E-01	-0.032
		61.30		1.915E+00	3.159E+00	4.758E+00	5.745E-01	0.403
		121.62		2.721E-02	4.711E-01	7.696E-01	5.545E-02	0.035
		147.16		-2.288E-01	7.986E-01	1.278E+00	8.647E-02	-0.179
		171.86		-4.463E-01	6.151E-01	9.583E-01	6.399E-02	-0.466
		218.09		1.899E-01	1.105E+00	1.779E+00	1.229E-01	0.107
	+	268.79		7.739E-01	1.472E+00	1.831E+00	1.269E-01	0.423
		319.02		-1.082E-02	3.288E-01	5.462E-01	3.624E-02	-0.020
		367.43		4.832E-02	1.098E+00	1.822E+00	1.103E-01	0.027
		413.65	*	1.602E-01	2.324E-01	3.521E-01	2.007E-02	0.455
HF-181		56.28		-2.162E+00	2.169E+00	3.404E+00	4.446E-01	-0.635
		57.53		-4.164E-01	1.177E+00	1.772E+00	2.260E-01	-0.235
		65.20		-1.595E+00	1.899E+00	2.620E+00	3.050E-01	-0.609
		133.02		4.641E-02	9.678E-02	1.412E-01	9.790E-03	0.329
		136.25		2.452E-01	5.934E-01	9.792E-01	6.743E-02	0.250
		345.85		1.867E-02	2.720E-01	3.938E-01	2.500E-02	0.047
		482.03	*	-1.543E-02	5.140E-02	8.210E-02	4.674E-03	-0.188
W-181		56.28		-8.287E-01	8.314E-01	1.305E+00	1.704E-01	-0.635
		57.53		-1.601E-01	4.517E-01	6.798E-01	8.670E-02	-0.235
		65.20	*	-6.071E-01	7.226E-01	9.972E-01	1.161E-01	-0.609
TA-182		67.75		-6.319E-02	2.854E-01	2.942E-01	3.359E-02	-0.215
		100.10		-1.465E-01	2.277E-01	3.631E-01	3.339E-02	-0.404
		152.43		3.479E-01	4.231E-01	7.063E-01	4.750E-02	0.493
		222.10		2.898E-01	4.593E-01	7.536E-01	5.217E-02	0.385
		1001.68		5.206E-01	2.408E+00	3.995E+00	3.091E-01	0.130
	+	1121.28		6.043E-01	3.087E-01	4.018E-01	2.576E-02	1.504
		1189.05		-3.917E-01	3.622E-01	5.235E-01	3.073E-02	-0.748
		1221.42	*	-1.294E-01	2.474E-01	3.828E-01	2.387E-02	-0.338
		1230.97		-2.379E-03	6.537E-01	9.071E-01	5.755E-02	-0.003
RE-183		57.98		4.040E-02	4.602E-01	6.734E-01	8.515E-02	0.060
		59.32		1.243E-01	2.351E-01	3.527E-01	4.347E-02	0.352
		67.20		-8.725E-02	4.395E-01	5.317E-01	6.092E-02	-0.164
		162.32	*	4.421E-02	1.418E-01	2.319E-01	1.546E-02	0.191
	+	208.81		2.258E+00	1.595E+00	2.243E+00	1.542E-01	1.007
		291.72		1.999E+00	1.403E+00	2.213E+00	1.513E-01	0.903
RE-184		57.98		1.472E-01	1.676E+00	2.453E+00	3.102E-01	0.060

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		59.32		4.525E-01	8.558E-01	1.284E+00	1.582E-01	0.352
		67.20		-3.178E-01	1.601E+00	1.936E+00	2.219E-01	-0.164
		161.27		4.435E-01	4.496E-01	7.539E-01	5.030E-02	0.588
		216.55		-1.560E-01	3.417E-01	5.338E-01	3.685E-02	-0.292
		252.85	*	-1.173E-02	2.934E-01	4.920E-01	3.425E-02	-0.024
		318.01		4.896E-02	5.583E-01	9.336E-01	6.203E-02	0.052
		792.07		4.013E-01	1.247E+00	2.124E+00	1.452E-01	0.189
		903.28		8.069E-02	1.370E+00	2.042E+00	1.737E-01	0.040
		920.93		-2.726E-01	4.909E-01	7.641E-01	6.408E-02	-0.357
OS-185		59.72		3.330E-01	6.210E-01	9.316E-01	1.142E-01	0.357
		61.14		1.645E-01	3.498E-01	5.241E-01	6.338E-02	0.314
		69.30		3.841E-01	5.294E-01	7.939E-01	8.979E-02	0.484
		592.07		3.085E-01	3.134E+00	5.105E+00	2.753E-01	0.060
		646.12	*	-2.675E-02	5.501E-02	8.500E-02	4.355E-03	-0.315
		717.42		5.610E-01	1.033E+00	1.801E+00	1.038E-01	0.312
		874.81		3.419E-01	7.009E-01	1.209E+00	9.848E-02	0.283
		880.27		-8.896E-02	8.809E-01	1.445E+00	1.190E-01	-0.062
RE-188		155.03	*	6.624E-02	2.153E-01	3.526E-01	2.365E-02	0.188
		477.96		-1.471E+00	3.422E+00	5.402E+00	3.078E-01	-0.272
		633.10		1.786E+00	3.342E+00	5.619E+00	2.920E-01	0.318
W-188	+	63.58		9.599E+01	1.303E+02	1.599E+02	1.888E+01	0.600
		227.08		3.719E+00	1.589E+01	2.705E+01	1.876E+00	0.138
		290.67	*	9.167E+00	1.035E+01	1.592E+01	1.090E+00	0.576
IR-192	+	295.96		1.262E+00	2.600E-01	3.493E-01	2.407E-02	3.612
		308.46		9.498E-02	1.163E-01	2.017E-01	1.368E-02	0.471
		316.51	*	-2.108E-02	4.333E-02	7.024E-02	4.694E-03	-0.300
		468.07		7.074E-02	8.748E-02	1.337E-01	8.834E-03	0.529
		604.41		-5.056E-02	6.093E-01	8.403E-01	9.345E-02	-0.060
		612.46		9.304E-01	1.054E+00	1.589E+00	1.144E-01	0.585
AU-195		65.12		-2.607E-01	3.346E-01	4.637E-01	5.401E-02	-0.562
		66.83		-1.713E-01	1.933E-01	2.466E-01	2.833E-02	-0.695
	+	75.70		1.743E+00	4.428E-01	6.543E-01	7.265E-02	2.664
		98.88	*	3.800E-01	3.008E-01	4.809E-01	4.507E-02	0.790
	+	129.76		3.634E+00	3.888E+00	6.134E+00	4.290E-01	0.592
TL-200		367.94	*	-4.058E-04	3.888E+00	Half-Life too short		
		579.30		2.228E-02	3.888E+00	Half-Life too short		
		828.27		9.738E-03	3.888E+00	Half-Life too short		
		1205.75		2.350E-04	3.888E+00	Half-Life too short		
TL-201		68.90		6.213E+00	1.418E+01	1.967E+01	2.229E+00	0.316
		70.82		5.668E+00	7.334E+00	1.100E+01	1.235E+00	0.515
		80.30		-1.919E+01	1.234E+01	1.621E+01	1.809E+00	-1.184
		135.34		6.448E-01	5.041E+01	8.193E+01	5.653E+00	0.008
		167.43	*	-5.984E+00	1.361E+01	2.153E+01	1.433E+00	-0.278
TL-202		68.90		3.991E-01	9.112E-01	1.263E+00	1.432E-01	0.316
		70.82		3.631E-01	4.699E-01	7.049E-01	7.915E-02	0.515
		80.30		-1.230E+00	7.908E-01	1.039E+00	1.159E-01	-1.184
		439.56	*	1.698E-02	9.569E-02	1.588E-01	9.075E-03	0.107
HG-203		70.83		1.453E+00	1.881E+00	2.814E+00	4.330E-01	0.516
	+	72.87		3.840E+00	1.204E+00	1.850E+00	2.771E-01	2.076

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		82.60		-5.448E+00	2.163E+00	2.484E+00	3.857E-01	-2.193
		279.20	*	4.021E-02	5.843E-02	8.886E-02	6.400E-03	0.452
BI-207	+	72.80		1.093E+00	3.250E-01	5.249E-01	5.854E-02	2.083
	+	74.97		6.476E-01	1.926E-01	3.604E-01	4.004E-02	1.797
		84.90		5.310E-01	2.811E-01	4.678E-01	5.316E-02	1.135
		569.67		-5.050E-04	3.657E-02	5.918E-02	3.243E-03	-0.009
		1063.62	*	-2.796E-02	6.183E-02	9.670E-02	6.871E-03	-0.289
		1770.23		3.122E-01	5.723E-01	9.236E-01	5.720E-02	0.338
TL-207		81.07		-4.017E-01	3.290E-01	4.424E-01	4.949E-02	-0.908
		83.78		-2.394E-01	1.928E-01	2.839E-01	3.209E-02	-0.843
		94.90		3.521E-01	3.206E-01	4.846E-01	4.859E-02	0.727
		122.32		-5.284E-01	2.143E+00	3.456E+00	2.736E-01	-0.153
		144.24		1.151E+00	8.560E-01	1.421E+00	1.144E-01	0.810
		154.21		2.926E-01	4.901E-01	8.112E-01	6.315E-02	0.361
	+	269.46		1.797E-01	3.417E-01	4.293E-01	3.071E-02	0.419
		323.87	*	-5.472E-01	9.650E-01	1.329E+00	2.234E-01	-0.412
	+	338.28		5.904E+00	2.193E+00	2.861E+00	3.117E-01	2.064
		445.03		-2.867E-02	2.722E+00	4.460E+00	4.559E-01	-0.006
PO-209		260.50		2.831E+00	1.209E+01	2.049E+01	1.424E+00	0.138
		262.80		-2.231E+00	3.497E+01	5.523E+01	3.837E+00	-0.040
		896.60	*	1.987E+00	8.606E+00	1.453E+01	1.237E+00	0.137
BI-210		46.50	*	-2.611E+00	1.307E+01	2.114E+01	2.196E+00	-0.123
PB-210		46.50	*	-2.611E+00	1.307E+01	2.114E+01	2.196E+00	-0.123
PO-210		46.50	*	-2.611E+00	1.307E+01	2.114E+01	2.031E+00	-0.123
PB-211		404.84	*	-1.093E+00	1.477E+00	1.706E+00	1.063E+00	-0.641
		427.08		-3.558E-01	2.541E+00	4.122E+00	2.548E+00	-0.086
		831.96		5.732E-01	1.467E+00	2.440E+00	1.525E+00	0.235
BI-212	+	727.18	*	5.955E-01	7.363E-01	7.147E-01	5.565E-02	0.833
		785.46		2.114E+00	2.186E+00	3.884E+00	2.616E-01	0.544
		1620.62		7.954E-01	1.660E+00	2.919E+00	2.008E-01	0.272
PO-215		81.07		-4.017E-01	3.290E-01	4.424E-01	4.949E-02	-0.908
		83.78		-2.394E-01	1.928E-01	2.839E-01	3.209E-02	-0.843
		94.90		3.521E-01	3.206E-01	4.846E-01	4.859E-02	0.727
		122.32		-5.284E-01	2.143E+00	3.456E+00	2.736E-01	-0.153
		144.24		1.151E+00	8.560E-01	1.421E+00	1.144E-01	0.810
		154.21		2.926E-01	4.901E-01	8.112E-01	6.315E-02	0.361
	+	269.46		1.797E-01	3.417E-01	4.293E-01	3.071E-02	0.419
		323.87	*	-5.472E-01	9.650E-01	1.329E+00	2.234E-01	-0.412
	+	338.28		5.904E+00	2.193E+00	2.861E+00	3.117E-01	2.064
		445.03		-2.867E-02	2.722E+00	4.460E+00	4.559E-01	-0.006
RN-219		271.23		4.016E-01	3.806E-01	5.587E-01	4.998E-02	0.719
		401.81	*	9.738E-02	5.464E-01	8.286E-01	1.123E-01	0.118
RN-220		549.76	*	-3.113E+01	3.012E+01	4.460E+01	2.474E+00	-0.698
RA-223		81.07		-4.017E-01	3.290E-01	4.424E-01	4.949E-02	-0.908
		83.78		-2.394E-01	1.928E-01	2.839E-01	3.209E-02	-0.843
		94.90		3.521E-01	3.206E-01	4.846E-01	4.859E-02	0.727
		122.32		-5.284E-01	2.143E+00	3.456E+00	2.736E-01	-0.153
		144.24		1.151E+00	8.560E-01	1.421E+00	1.144E-01	0.810
		154.21		2.926E-01	4.901E-01	8.112E-01	6.315E-02	0.361

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	269.46		1.797E-01	3.417E-01	4.293E-01	3.071E-02	0.419
		323.87	*	-5.472E-01	9.650E-01	1.329E+00	2.234E-01	-0.412
	+	338.28		5.904E+00	2.193E+00	2.861E+00	3.117E-01	2.064
		445.03		-2.867E-02	2.722E+00	4.460E+00	4.559E-01	-0.006
AC-227		79.80		-2.893E+00	2.644E+00	3.503E+00	7.929E-01	-0.826
		236.00		4.346E+00	6.284E-01	8.497E-01	9.461E-02	5.114
		256.20	*	-2.407E-01	4.807E-01	7.869E-01	1.139E-01	-0.306
		286.10		-1.466E+00	1.875E+00	2.998E+00	3.637E-01	-0.489
	+	299.80		4.166E+00	2.227E+00	3.251E+00	5.417E-01	1.281
		304.40		4.939E-01	2.565E+00	3.768E+00	6.647E-01	0.131
		334.20		1.349E+00	3.965E+00	4.675E+00	8.677E-01	0.289
TH-227		79.80		-2.893E+00	2.646E+00	3.503E+00	8.021E-01	-0.826
		94.00		9.223E+00	3.476E+00	4.619E+00	1.037E+00	1.997
		236.00		4.346E+00	5.861E-01	8.497E-01	8.358E-02	5.114
		256.20	*	-2.407E-01	4.813E-01	7.869E-01	1.364E-01	-0.306
		286.10		-1.466E+00	2.376E+00	2.998E+00	3.005E+00	-0.489
	+	299.80		4.166E+00	2.227E+00	3.251E+00	5.417E-01	1.281
		304.40		4.939E-01	2.565E+00	3.768E+00	6.647E-01	0.131
		334.20		1.349E+00	3.965E+00	4.675E+00	8.677E-01	0.289
TH-229		85.43		5.402E-01	2.741E-01	4.630E-01	5.277E-02	1.167
		88.47		1.831E-01	1.799E-01	2.687E-01	3.075E-02	0.681
		100.00		-6.367E-02	2.307E-01	3.739E-01	3.444E-02	-0.170
		193.63	*	5.603E-02	6.534E-01	1.052E+00	7.153E-02	0.053
		210.97		1.681E+00	1.105E+00	1.673E+00	1.152E-01	1.005
PA-231		283.67	*	2.874E-01	1.950E+00	3.106E+00	4.432E-01	0.093
		301.29		1.000E+00	8.274E-01	1.284E+00	1.415E-01	0.779
TH-231		81.07		-4.017E-01	3.290E-01	4.424E-01	4.949E-02	-0.908
		83.78		-2.394E-01	1.928E-01	2.839E-01	3.209E-02	-0.843
		94.90		3.521E-01	3.206E-01	4.846E-01	4.859E-02	0.727
		122.32		-5.284E-01	2.143E+00	3.456E+00	2.736E-01	-0.153
		144.24		1.151E+00	8.560E-01	1.421E+00	1.144E-01	0.810
		154.21		2.926E-01	4.901E-01	8.112E-01	6.315E-02	0.361
	+	269.46		1.797E-01	3.417E-01	4.293E-01	3.071E-02	0.419
		323.87	*	-5.472E-01	9.650E-01	1.329E+00	2.234E-01	-0.412
	+	338.28		5.904E+00	2.193E+00	2.861E+00	3.117E-01	2.064
		445.03		-2.867E-02	2.722E+00	4.460E+00	4.559E-01	-0.006
U-231		84.21		5.341E+00	1.071E+01	1.745E+01	1.977E+00	0.306
	+	92.29		1.149E+01	6.014E+00	7.416E+00	7.816E-01	1.549
		95.87	*	-1.401E+00	2.169E+00	2.974E+00	2.931E-01	-0.471
		108.00		-1.986E+00	3.509E+00	5.603E+00	4.636E-01	-0.354
PA-233	+	75.28		1.890E+01	6.109E+00	1.065E+01	1.797E+00	1.774
		86.59		1.198E-01	2.581E+00	3.924E+00	1.094E+00	0.031
	+	300.12		1.162E+00	6.115E-01	9.118E-01	1.267E-01	1.274
		311.98	*	-5.400E-02	7.587E-02	1.213E-01	8.500E-03	-0.445
		340.50		1.187E+00	9.116E-01	1.371E+00	3.172E-01	0.866
		398.62		7.918E-01	2.531E+00	4.225E+00	1.091E+00	0.187
		415.76		1.157E+00	2.085E+00	3.346E+00	6.880E-01	0.346
PA-234	+	63.00		2.730E+00	3.723E+00	4.719E+00	8.268E-01	0.578
		94.67		3.474E-01	2.357E-01	3.575E-01	4.809E-02	0.972

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		98.44		2.384E-01	1.842E-01	1.990E-01	1.113E-01	1.198
		99.86		1.536E-02	5.821E-01	9.552E-01	8.818E-02	0.016
		111.00		-1.845E-01	2.305E-01	3.631E-01	4.230E-02	-0.508
		131.20		7.105E-02	1.494E-01	2.180E-01	1.519E-02	0.326
		152.70		1.613E-01	4.036E-01	6.622E-01	1.071E-01	0.244
	+	186.00		4.990E+00	3.087E+00	3.130E+00	9.624E-01	1.595
		226.40		2.192E-01	4.892E-01	8.388E-01	1.021E-01	0.261
		227.20		1.204E-01	5.262E-01	8.954E-01	6.212E-02	0.134
		248.90		2.129E-02	1.080E+00	1.656E+00	3.615E-01	0.013
	+	293.70		7.797E+00	1.986E+00	2.193E+00	3.614E-01	3.555
		369.80		-4.208E-01	1.063E+00	1.711E+00	3.573E-01	-0.246
		568.70		5.408E-01	1.148E+00	1.926E+00	1.057E-01	0.281
		569.50		2.064E-02	3.226E-01	5.252E-01	2.879E-02	0.039
		574.00		3.728E-01	1.723E+00	2.838E+00	1.551E-01	0.131
		699.00		-2.728E-02	7.940E-01	1.328E+00	2.376E-01	-0.021
		706.10		-4.611E-01	1.168E+00	1.868E+00	8.241E-01	-0.247
		733.00		2.533E-03	4.761E-01	6.872E-01	1.464E-01	0.004
		742.81		-7.984E-02	1.381E+00	2.294E+00	1.536E+00	-0.035
		796.30		1.207E+00	1.060E+00	1.839E+00	4.882E-01	0.656
		805.60		1.180E+00	1.169E+00	2.014E+00	6.090E-01	0.586
		819.60		1.229E+00	1.486E+00	2.518E+00	9.505E-01	0.488
		826.30		-8.605E-01	1.006E+00	1.415E+00	6.299E-01	-0.608
		831.60		1.044E-01	7.553E-01	1.267E+00	3.742E-01	0.082
		876.40		5.913E-01	1.160E+00	1.721E+00	1.768E+00	0.344
		880.51		-8.655E-02	3.142E-01	5.067E-01	4.176E-02	-0.171
		883.24		-1.723E-01	3.258E-01	4.755E-01	3.194E-01	-0.362
		899.00		-1.980E-01	1.009E+00	1.634E+00	7.141E-01	-0.121
		925.00		-4.107E-01	1.335E+00	2.113E+00	1.766E-01	-0.194
		926.50		2.372E-02	1.982E-01	3.308E-01	8.332E-02	0.072
		946.00	*	5.039E-01	3.580E-01	6.429E-01	1.194E-01	0.784
		949.00		-1.060E-01	5.104E-01	8.249E-01	6.750E-02	-0.128
		980.50		-3.330E-01	8.797E-01	1.396E+00	1.106E-01	-0.239
		1394.10		-2.849E-01	1.232E+00	1.971E+00	1.280E+00	-0.144
PA-234M		766.42		1.312E+01	1.698E+01	2.449E+01	1.235E+01	0.536
		1001.03	*	8.540E-01	5.325E+00	8.789E+00	8.101E-01	0.097
U-235		89.95		-1.686E+00	2.025E+00	2.724E+00	8.616E-01	-0.619
	+	93.35		2.616E+00	1.537E+00	1.584E+00	4.529E-01	1.652
		105.00		1.115E+00	1.328E+00	2.176E+00	6.492E-01	0.513
		143.76	*	3.612E-01	2.686E-01	4.374E-01	7.298E-02	0.826
		163.35		4.469E-01	5.928E-01	9.778E-01	1.787E-01	0.457
	+	185.71		1.848E-01	9.999E-02	1.166E-01	7.873E-03	1.586
		205.31		-2.191E-01	7.669E-01	1.050E+00	1.927E-01	-0.209
NP-236		94.67		2.651E-01	1.773E-01	2.714E-01	2.733E-02	0.977
		98.44		1.802E-01	9.757E-02	1.504E-01	1.420E-02	1.198
		111.00		-1.396E-01	1.740E-01	2.747E-01	2.195E-02	-0.508
		160.31	*	1.402E-02	1.009E-01	1.640E-01	1.095E-02	0.086
NP-237		86.50	*	1.941E-02	3.711E-01	5.880E-01	1.388E-01	0.033
		95.87		-8.934E-01	1.399E+00	1.897E+00	4.760E-01	-0.471
NP-239		99.55		5.203E-02	1.964E-01	3.251E-01	3.016E-02	0.160

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.00	*	-1.573E-01	2.450E-01	3.893E-01	2.926E-02	-0.404
	+	209.75		1.747E+00	1.234E+00	1.764E+00	1.213E-01	0.991
		228.18		7.495E-02	2.695E-01	4.596E-01	3.189E-02	0.163
	+	277.60		3.012E-01	2.344E-01	3.695E-01	2.551E-02	0.815
		334.30		9.108E-01	2.249E+00	2.675E+00	1.734E-01	0.341
AM-241		59.54	*	1.668E-01	3.245E-01	4.863E-01	6.188E-02	0.343
CM-243		99.55		5.355E-02	2.021E-01	3.346E-01	3.104E-02	0.160
		103.76	*	9.920E-02	1.190E-01	2.008E-01	1.753E-02	0.494
		117.00		-1.619E-01	2.521E-01	4.006E-01	3.011E-02	-0.404
	+	209.75		1.723E+00	1.217E+00	1.739E+00	1.196E-01	0.991
		228.18		7.574E-02	2.724E-01	4.645E-01	3.223E-02	0.163
	+	277.60		3.037E-01	2.363E-01	3.725E-01	2.572E-02	0.815
AM-246		798.80		-3.410E-01	1.599E-01	2.120E-01	1.470E-02	-1.609
		1036.00		1.672E-01	3.458E-01	5.932E-01	4.390E-02	0.282
		1062.04		1.629E-01	2.649E-01	4.589E-01	3.269E-02	0.355
		1078.86	*	-7.006E-03	1.565E-01	2.548E-01	1.766E-02	-0.027
CM-247	+	278.00		1.249E+00	9.721E-01	1.552E+00	1.071E-01	0.805
		287.40		-7.931E-01	1.667E+00	2.457E+00	1.685E-01	-0.323
		402.60	*	-1.697E-03	5.270E-02	7.420E-02	4.220E-03	-0.023
CF-249		252.85		-4.366E-02	1.092E+00	1.831E+00	1.275E-01	-0.024
		333.44		1.777E-01	3.211E-01	3.376E-01	2.192E-02	0.526
		387.95	*	9.540E-03	4.843E-02	8.086E-02	4.636E-03	0.118
CF-251		176.60	*	1.188E-01	1.620E-01	2.685E-01	1.800E-02	0.442
		227.00		1.112E-01	4.676E-01	7.961E-01	5.522E-02	0.140
		285.00		-1.722E+00	2.122E+00	3.398E+00	2.335E-01	-0.507

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492004		
Acquisition date	: 4-JAN-2010 14:01:18	Detector SN#	:
Detector ID	: GAM15	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.26	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492004	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.2911E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 16-FEB-2009 10:54:12	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.050E+01	2.363E+00	6.862E-01	0.000E+00
CS-135	1.527E-01	2.847E-01	3.277E-01	0.000E+00
TL-208	6.367E-01	9.124E-02	6.837E-02	0.000E+00
BI-211	4.246E+00	6.009E-01	3.948E-01	0.000E+00
PB-212	1.719E+00	1.937E-01	1.080E-01	0.000E+00
PO-212	1.719E+00	1.937E-01	1.080E-01	0.000E+00
BI-214	1.283E+00	1.875E-01	1.235E-01	0.000E+00
PB-214	1.477E+00	2.222E-01	1.376E-01	0.000E+00
PO-214	1.477E+00	2.222E-01	1.376E-01	0.000E+00
PO-216	1.719E+00	1.937E-01	1.080E-01	0.000E+00
PO-218	1.477E+00	2.222E-01	1.376E-01	0.000E+00
RA-224	5.097E+00	1.620E+00	1.228E+00	0.000E+00
RA-226	1.283E+00	1.875E-01	1.235E-01	0.000E+00
AC-228	1.542E+00	3.216E-01	2.241E-01	0.000E+00
RA-228	1.542E+00	3.216E-01	2.241E-01	0.000E+00
TH-228	1.748E+00	1.970E-01	1.098E-01	0.000E+00
TH-230	1.283E+00	1.875E-01	1.235E-01	0.000E+00
TH-232	1.542E+00	3.216E-01	2.241E-01	0.000E+00
TH-234	2.342E+00	3.137E+00	3.846E+00	0.000E+00
U-234	1.283E+00	1.875E-01	1.235E-01	0.000E+00
U-238	2.342E+00	3.137E+00	3.846E+00	0.000E+00
AM-243	3.608E-01	1.051E-01	1.298E-01	0.000E+00
ANH-511	4.864E-02	7.825E-02	5.809E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM	K.L. Act error) Ided	MDA (pCi/GRAM	)	
BE-7	-1.098E-01	3.511E-01	5.820E-01	0.000E+00	NOT IDENT.
NA-22	5.998E-04	5.445E-02	9.030E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.010E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-5.010E-03	3.106E-02	5.020E-02	0.000E+00	NOT IDENT.

TI-44	0.000E+00	6.328E-02	1.036E-01	0.000E+00	NOT IDENT.
SC-46	1.321E-02	4.162E-02	7.299E-02	0.000E+00	FAIL ABUN
V-48	1.591E-02	8.533E-02	1.468E-01	0.000E+00	NOT IDENT.
CR-51	1.983E-01	5.001E-01	8.652E-01	0.000E+00	NOT IDENT.
MN-52	-2.774E-01	3.529E-01	5.307E-01	0.000E+00	NOT IDENT.
MN-54	-4.149E-02	4.807E-02	7.695E-02	0.000E+00	NOT IDENT.
CO-56	-2.066E-02	4.376E-02	7.160E-02	0.000E+00	FAIL ABUN
CO-57	-1.460E-02	3.099E-02	5.256E-02	0.000E+00	NOT IDENT.
CO-58	-1.221E-02	4.544E-02	7.616E-02	0.000E+00	NOT IDENT.
FE-59	-1.826E-02	1.096E-01	1.807E-01	0.000E+00	NOT IDENT.
CO-60	5.775E-04	4.768E-02	7.880E-02	0.000E+00	NOT IDENT.
ZN-65	2.351E-02	1.142E-01	1.684E-01	0.000E+00	NOT IDENT.
GE-68	4.444E-01	1.327E+00	2.303E+00	0.000E+00	NOT IDENT.
AS-73	1.713E+00	2.073E+00	3.804E+00	0.000E+00	NOT IDENT.
AS-74	1.641E-02	1.193E-01	2.017E-01	0.000E+00	NOT IDENT.
SE-75	-1.380E-02	6.200E-02	9.351E-02	0.000E+00	NOT IDENT.
BR-77	2.463E+01	2.106E+01	3.849E+01	0.000E+00	FAIL ABUN
SR-82	-2.835E-01	5.226E-01	7.232E-01	0.000E+00	NOT IDENT.
RB-83	8.806E-02	7.974E-02	1.452E-01	0.000E+00	NOT IDENT.
RB-84	-4.428E-02	7.795E-02	1.254E-01	0.000E+00	NOT IDENT.
KR-85	1.151E+01	9.654E+00	1.558E+01	0.000E+00	NOT IDENT.
SR-85	6.023E-02	5.053E-02	8.154E-02	0.000E+00	NOT IDENT.
RB-86	4.834E-01	8.894E-01	1.575E+00	0.000E+00	NOT IDENT.
Y-88	1.300E-02	3.591E-02	6.424E-02	0.000E+00	NOT IDENT.
ZR-88	-1.253E-02	3.601E-02	6.058E-02	0.000E+00	NOT IDENT.
Y-91	1.788E+01	2.148E+01	3.841E+01	0.000E+00	NOT IDENT.
NB-94	1.371E-02	3.668E-02	6.521E-02	0.000E+00	NOT IDENT.
NB-95	6.054E-02	5.827E-02	9.557E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.495E-01	4.231E-01	0.000E+00	NOT IDENT.
ZR-95	2.172E-02	7.881E-02	1.387E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.268E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.776E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.485E+01	1.961E+01	3.140E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.153E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-3.150E-02	4.309E-02	6.877E-02	0.000E+00	NOT IDENT.
RH-102	-1.875E-02	3.237E-02	5.261E-02	0.000E+00	FAIL ABUN
RU-103	-1.039E-02	5.026E-02	8.389E-02	0.000E+00	FAIL ABUN
RH-106	5.909E-02	3.744E-01	6.325E-01	0.000E+00	NOT IDENT.
RU-106	5.909E-02	3.744E-01	6.325E-01	0.000E+00	NOT IDENT.
AG-108M	-1.322E-02	3.849E-02	6.428E-02	0.000E+00	NOT IDENT.
CD-109	1.811E+00	1.365E+00	2.182E+00	0.000E+00	NOT IDENT.
AG-110M	-8.923E-03	4.262E-02	6.966E-02	0.000E+00	NOT IDENT.
IN-111	-1.522E+00	2.166E+00	3.166E+00	0.000E+00	NOT IDENT.
IN-113M	-8.190E-03	5.118E-02	8.713E-02	0.000E+00	NOT IDENT.
SN-113	-8.190E-03	5.118E-02	8.713E-02	0.000E+00	NOT IDENT.
IN-114M	6.442E-03	2.619E-01	3.872E-01	0.000E+00	NOT IDENT.
CD-115	2.192E+01	2.321E+01	4.177E+01	0.000E+00	NOT IDENT.
SN-117M	-5.126E-02	7.528E-02	1.249E-01	0.000E+00	NOT IDENT.
SB-122	3.605E-01	3.833E+00	6.485E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	8.537E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.532E-02	3.528E-02	5.914E-02	0.000E+00	NOT IDENT.
I-124	-6.391E-01	1.245E+00	1.693E+00	0.000E+00	NOT IDENT.
SB-124	1.856E-02	7.642E-02	1.346E-01	0.000E+00	FAIL ABUN
SB-125	4.567E-02	1.081E-01	1.897E-01	0.000E+00	FAIL ABUN
TE-125M	-1.092E+01	1.155E+01	1.924E+01	0.000E+00	NOT IDENT.
I-126	-1.981E-01	2.450E-01	3.801E-01	0.000E+00	NOT IDENT.
SB-126	1.280E-01	1.957E-01	3.132E-01	0.000E+00	FAIL ABUN
SN-126	0.000E+00	1.323E-01	2.141E-01	0.000E+00	FAIL ABUN
SB-127	-2.599E-01	2.020E+00	3.467E+00	0.000E+00	NOT IDENT.
XE-127	3.938E-02	6.384E-02	1.068E-01	0.000E+00	NOT IDENT.
I-131	-7.389E-03	1.614E-01	2.780E-01	0.000E+00	NOT IDENT.
TE-132	3.587E-01	1.229E+00	2.202E+00	0.000E+00	NOT IDENT.
BA-133	-1.167E-02	5.455E-02	8.030E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	3.405E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	6.058E-02	5.275E-02	9.797E-02	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.451E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.810E-02	1.489E-01	2.448E-01	0.000E+00	NOT IDENT.
BA-137M	5.160E-02	4.417E-02	7.954E-02	0.000E+00	NOT IDENT.
CS-137	5.455E-02	4.670E-02	8.408E-02	0.000E+00	NOT IDENT.
CE-139	-1.548E-02	3.648E-02	6.103E-02	0.000E+00	NOT IDENT.
BA-140	7.703E-02	3.155E-01	5.403E-01	0.000E+00	NOT IDENT.
LA-140	2.732E-02	1.013E-01	1.780E-01	0.000E+00	FAIL ABUN
CE-141	4.549E-02	7.911E-02	1.387E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	9.988E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.964E-02	2.977E-01	4.469E-01	0.000E+00	NOT IDENT.
PM-144	1.452E-02	3.646E-02	6.504E-02	0.000E+00	NOT IDENT.
PR-144	9.848E-01	2.473E+00	4.412E+00	0.000E+00	NOT IDENT.
PM-146	2.513E-02	5.433E-02	9.028E-02	0.000E+00	NOT IDENT.

ND-147	2.093E-01	7.302E-01	1.257E+00	0.000E+00	FAIL ABUN
PM-149	-1.493E+02	2.025E+02	3.398E+02	0.000E+00	NOT IDENT.
EU-152	-3.964E-02	1.562E-01	2.001E-01	0.000E+00	FAIL ABUN
GD-153	1.422E-01	1.088E-01	1.750E-01	0.000E+00	NOT IDENT.
EU-154	-2.282E-03	1.516E-01	2.507E-01	0.000E+00	NOT IDENT.
EU-155	7.267E-02	1.299E-01	2.307E-01	0.000E+00	NOT IDENT.
TB-160	-1.096E-01	1.592E-01	2.537E-01	0.000E+00	FAIL ABUN
HO-166M	1.140E-02	6.545E-02	1.147E-01	0.000E+00	FAIL ABUN
TM-171	-5.392E+01	5.711E+01	7.780E+01	0.000E+00	NOT IDENT.
LU-176	1.744E-02	2.953E-02	5.178E-02	0.000E+00	NOT IDENT.
LU-177	3.019E+00	2.089E+00	3.077E+00	0.000E+00	FAIL ABUN
LU-177M	1.602E-01	2.277E-01	3.594E-01	0.000E+00	FAIL ABUN
HF-181	-1.543E-02	5.037E-02	8.361E-02	0.000E+00	NOT IDENT.
W-181	-6.071E-01	7.082E-01	1.047E+00	0.000E+00	NOT IDENT.
TA-182	-1.294E-01	2.425E-01	3.841E-01	0.000E+00	FAIL ABUN
RE-183	4.421E-02	1.390E-01	2.402E-01	0.000E+00	FAIL ABUN
RE-184	-1.173E-02	2.876E-01	5.061E-01	0.000E+00	NOT IDENT.
OS-185	-2.675E-02	5.391E-02	8.616E-02	0.000E+00	NOT IDENT.
RE-188	6.624E-02	2.110E-01	3.654E-01	0.000E+00	NOT IDENT.
W-188	9.167E+00	1.014E+01	1.634E+01	0.000E+00	FAIL ABUN
IR-192	-2.108E-02	4.247E-02	7.200E-02	0.000E+00	FAIL ABUN
AU-195	3.800E-01	2.947E-01	5.017E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.924E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-5.984E+00	1.334E+01	2.229E+01	0.000E+00	NOT IDENT.
TL-202	1.698E-02	9.378E-02	1.619E-01	0.000E+00	NOT IDENT.
HG-203	4.021E-02	5.726E-02	9.127E-02	0.000E+00	FAIL ABUN
BI-207	-2.796E-02	6.060E-02	9.724E-02	0.000E+00	FAIL ABUN
TL-207	-5.472E-01	9.457E-01	1.362E+00	0.000E+00	FAIL ABUN
PO-209	1.987E+00	8.434E+00	1.465E+01	0.000E+00	NOT IDENT.
BI-210	-2.611E+00	1.281E+01	2.231E+01	0.000E+00	NOT IDENT.
PB-210	-2.611E+00	1.281E+01	2.231E+01	0.000E+00	NOT IDENT.
PO-210	-2.611E+00	1.281E+01	2.231E+01	0.000E+00	NOT IDENT.
PB-211	-1.093E+00	1.447E+00	1.742E+00	0.000E+00	NOT IDENT.
BI-212	5.955E-01	7.216E-01	7.231E-01	0.000E+00	FAIL ABUN
PO-215	-5.472E-01	9.457E-01	1.362E+00	0.000E+00	FAIL ABUN
RN-219	9.738E-02	5.355E-01	8.462E-01	0.000E+00	NOT IDENT.
RN-220	-3.113E+01	2.951E+01	4.532E+01	0.000E+00	NOT IDENT.
RA-223	-5.472E-01	9.457E-01	1.362E+00	0.000E+00	FAIL ABUN
AC-227	-2.407E-01	4.711E-01	8.093E-01	0.000E+00	FAIL ABUN
TH-227	-2.407E-01	4.717E-01	8.093E-01	0.000E+00	FAIL ABUN
TH-229	5.603E-02	6.403E-01	1.087E+00	0.000E+00	NOT IDENT.
PA-231	2.874E-01	1.911E+00	3.190E+00	0.000E+00	NOT IDENT.
TH-231	-5.472E-01	9.457E-01	1.362E+00	0.000E+00	FAIL ABUN
U-231	-1.401E+00	2.125E+00	3.104E+00	0.000E+00	FAIL ABUN
PA-233	-5.400E-02	7.435E-02	1.243E-01	0.000E+00	FAIL ABUN
PA-234	5.039E-01	3.508E-01	6.477E-01	0.000E+00	FAIL ABUN
PA-234M	8.540E-01	5.218E+00	8.847E+00	0.000E+00	NOT IDENT.
U-235	3.612E-01	2.632E-01	4.538E-01	0.000E+00	FAIL ABUN
NP-236	1.402E-02	9.892E-02	1.698E-01	0.000E+00	NOT IDENT.
NP-237	1.941E-02	3.637E-01	6.148E-01	0.000E+00	NOT IDENT.
NP-239	-1.573E-01	2.401E-01	4.052E-01	0.000E+00	FAIL ABUN
AM-241	1.668E-01	3.180E-01	5.113E-01	0.000E+00	NOT IDENT.
CM-243	9.920E-02	1.166E-01	2.094E-01	0.000E+00	FAIL ABUN
AM-246	-7.006E-03	1.534E-01	2.562E-01	0.000E+00	NOT IDENT.
CM-247	-1.697E-03	5.165E-02	7.578E-02	0.000E+00	FAIL ABUN
CF-249	9.540E-03	4.747E-02	8.263E-02	0.000E+00	NOT IDENT.
CF-251	1.188E-01	1.587E-01	2.777E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:58:49.77

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492004.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:01:18.
Sample ID : G243492004 Sample quantity : 1.29110E+02 GRAM
Detector name : GAM15 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.26 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	751	10.67*	9.987E-01	2.050E+01	2.050E+01	11.76
CS-135	268.24	32	16.00*	3.866E+00	1.527E-01	1.527E-01	190.27
TL-208	277.35	55	6.80	3.788E+00	6.245E-01	6.245E-01	78.32
	510.84	41	21.60	2.462E+00	2.252E-01	2.252E-01	164.38
	583.14	411	84.20*	2.230E+00	6.367E-01	6.367E-01	14.62
	860.37	42	12.46	1.613E+00	6.006E-01	6.006E-01	60.20
BI-211	72.87	259	1.27	3.161E+00	1.875E+01	1.875E+01	29.73
	351.07	606	12.94*	3.206E+00	4.246E+00	4.246E+00	14.44
PB-212	74.81	259	10.70	3.161E+00	2.225E+00	2.225E+00	31.17
	77.11	416	18.00	3.428E+00	1.961E+00	1.961E+00	25.40
	87.30	------	8.00	4.461E+00	------ Line Not Found		------
	238.63	1112	44.60*	4.219E+00	1.719E+00	1.719E+00	11.50
	300.09	95	3.41	3.587E+00	2.248E+00	2.248E+00	51.57
PO-212	74.81	259	10.70	3.161E+00	2.225E+00	2.225E+00	31.17
	77.11	416	18.00	3.428E+00	1.961E+00	1.961E+00	25.40
	87.30	------	8.00	4.461E+00	------ Line Not Found		------
	115.19	------	0.60	5.666E+00	------ Line Not Found		------
	238.63	1112	44.60*	4.219E+00	1.719E+00	1.719E+00	11.50
	300.09	95	3.41	3.587E+00	2.248E+00	2.248E+00	51.57
BI-214	609.31	440	46.30*	2.155E+00	1.283E+00	1.283E+00	14.91
	1120.29	83	15.10	1.263E+00	1.263E+00	1.263E+00	51.52
	1764.49	78	15.80	8.814E-01	1.638E+00	1.638E+00	31.77
PB-214	74.81	259	6.21	3.161E+00	3.834E+00	3.834E+00	30.64
	77.11	416	10.50	3.428E+00	3.361E+00	3.361E+00	26.52
	87.30	------	4.67	4.461E+00	------ Line Not Found		------
	241.98	290	7.49	4.182E+00	2.688E+00	2.688E+00	32.91
	295.21	389	19.20	3.628E+00	1.624E+00	1.624E+00	21.51
	351.92	606	37.20*	3.206E+00	1.477E+00	1.477E+00	15.36
PO-214	74.81	259	6.21	3.161E+00	3.834E+00	3.834E+00	30.64
	77.11	416	10.50	3.428E+00	3.361E+00	3.361E+00	26.52
	87.30	------	4.67	4.461E+00	------ Line Not Found		------
	241.98	290	7.49	4.182E+00	2.688E+00	2.688E+00	32.91

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	389	19.20	3.628E+00	1.624E+00	1.624E+00	21.51
	351.92	606	37.20*	3.206E+00	1.477E+00	1.477E+00	15.36
PO-216	74.81	259	10.70	3.161E+00	2.225E+00	2.225E+00	31.17
	77.11	416	18.00	3.428E+00	1.961E+00	1.961E+00	25.40
	87.30	------	8.00	4.461E+00	------ Line Not Found		------
	238.63	1112	44.60*	4.219E+00	1.719E+00	1.719E+00	11.50
	300.09	95	3.41	3.587E+00	2.248E+00	2.248E+00	51.57
PO-218	74.81	259	6.21	3.161E+00	3.834E+00	3.834E+00	30.64
	77.11	416	10.50	3.428E+00	3.361E+00	3.361E+00	26.52
	87.30	------	4.67	4.461E+00	------ Line Not Found		------
	241.98	290	7.49	4.182E+00	2.688E+00	2.688E+00	32.91
	295.21	389	19.20	3.628E+00	1.624E+00	1.624E+00	21.51
	351.92	606	37.20*	3.206E+00	1.477E+00	1.477E+00	15.36
RA-224	240.98	290	3.95*	4.182E+00	5.097E+00	5.097E+00	32.43
RA-226	609.31	440	46.30*	2.155E+00	1.283E+00	1.283E+00	14.91
	1120.29	83	15.10	1.263E+00	1.263E+00	1.263E+00	51.52
	1764.49	78	15.80	8.814E-01	1.638E+00	1.638E+00	31.77
AC-228	338.32	183	11.40	3.296E+00	1.414E+00	1.414E+00	54.13
	911.07	225	27.70*	1.531E+00	1.542E+00	1.542E+00	21.28
	969.11	147	16.60	1.447E+00	1.777E+00	1.777E+00	35.08
RA-228	338.32	183	11.40	3.296E+00	1.414E+00	1.414E+00	54.13
	911.07	225	27.70*	1.531E+00	1.542E+00	1.542E+00	21.28
	969.11	147	16.60	1.447E+00	1.777E+00	1.777E+00	35.08
TH-228	74.81	259	10.70	3.161E+00	2.225E+00	2.263E+00	29.75
	77.11	416	18.00	3.428E+00	1.961E+00	1.994E+00	25.40
	87.30	------	8.00	4.461E+00	------ Line Not Found		------
	238.63	1112	44.60*	4.219E+00	1.719E+00	1.748E+00	11.50
	300.09	95	3.41	3.587E+00	2.248E+00	2.287E+00	77.88
TH-230	609.31	440	46.30*	2.155E+00	1.283E+00	1.283E+00	14.91
	1120.29	83	15.10	1.263E+00	1.263E+00	1.263E+00	51.52
	1764.49	78	15.80	8.814E-01	1.638E+00	1.638E+00	31.77
TH-232	338.32	183	11.40	3.296E+00	1.414E+00	1.414E+00	36.09
	911.07	225	27.70*	1.531E+00	1.542E+00	1.542E+00	21.28
	969.11	147	16.60	1.447E+00	1.777E+00	1.777E+00	35.08
TH-234	63.29	54	3.80*	1.760E+00	2.342E+00	2.342E+00	136.70
	92.38	196	5.41	4.835E+00	2.176E+00	2.176E+00	54.70
U-234	609.31	440	46.30*	2.155E+00	1.283E+00	1.283E+00	14.91
	1120.29	83	15.10	1.263E+00	1.263E+00	1.263E+00	51.52
	1764.49	78	15.80	8.814E-01	1.638E+00	1.638E+00	31.77
U-238	63.29	54	3.80*	1.760E+00	2.342E+00	2.342E+00	136.70
	92.38	196	5.41	4.835E+00	2.176E+00	2.176E+00	52.34
AM-243	74.67	259	66.00*	3.161E+00	3.608E-01	3.608E-01	29.73
	86.72	------	0.34	4.414E+00	------ Line Not Found		------
	117.66	------	0.55	5.694E+00	------ Line Not Found		------
	142.18	------	0.13	5.637E+00	------ Line Not Found		------
ANH-511	511.00	41	100.00*	2.462E+00	4.864E-02	4.864E-02	164.17

Flag: "*" = Keyline

Sample ID : G243492004 Acquisition date : 4-JAN-2010 14:01:18

Total number of lines in spectrum 34
Number of unidentified lines 4
Number of lines tentatively identified by NID 30 88.24%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.050E+01	2.050E+01	0.241E+01	11.76	
CS-135	2.30E+06Y	1.00	1.527E-01	1.527E-01	2.905E-01	190.27	
TL-208	1.41E+10Y	1.00	6.367E-01	6.367E-01	0.931E-01	14.62	
BI-211	7.04E+08Y	1.00	4.246E+00	4.246E+00	0.613E+00	14.44	
PB-212	1.41E+10Y	1.00	1.719E+00	1.719E+00	0.198E+00	11.50	
PO-212	1.41E+10Y	1.00	1.719E+00	1.719E+00	0.198E+00	11.50	
BI-214	1600.00Y	1.00	1.283E+00	1.283E+00	0.191E+00	14.91	
PB-214	1600.00Y	1.00	1.477E+00	1.477E+00	0.227E+00	15.36	
PO-214	1600.00Y	1.00	1.477E+00	1.477E+00	0.227E+00	15.36	
PO-216	1.41E+10Y	1.00	1.719E+00	1.719E+00	0.198E+00	11.50	
PO-218	1600.00Y	1.00	1.477E+00	1.477E+00	0.227E+00	15.36	
RA-224	1.41E+10Y	1.00	5.097E+00	5.097E+00	1.653E+00	32.43	
RA-226	1600.00Y	1.00	1.283E+00	1.283E+00	0.191E+00	14.91	
AC-228	1.41E+10Y	1.00	1.542E+00	1.542E+00	0.328E+00	21.28	
RA-228	1.41E+10Y	1.00	1.542E+00	1.542E+00	0.328E+00	21.28	
TH-228	1.91Y	1.02	1.719E+00	1.748E+00	0.201E+00	11.50	
TH-230	4.47E+09Y	1.00	1.283E+00	1.283E+00	0.191E+00	14.91	
TH-232	1.41E+10Y	1.00	1.542E+00	1.542E+00	0.328E+00	21.28	
TH-234	4.47E+09Y	1.00	2.342E+00	2.342E+00	3.201E+00	136.70	
U-234	4.47E+09Y	1.00	1.283E+00	1.283E+00	0.191E+00	14.91	
U-238	4.47E+09Y	1.00	2.342E+00	2.342E+00	3.201E+00	136.70	
AM-243	7380.00Y	1.00	3.608E-01	3.608E-01	1.073E-01	29.73	
ANH-511	1.00E+09Y	1.00	4.864E-02	4.864E-02	7.985E-02	164.17	
	Total Activity :		5.679E+01	5.682E+01			

Grand Total Activity : 5.679E+01 5.682E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	128.86	54	280	1.27	258.16	255	7	7.55E-03	****	5.73E+00	T
0	185.02	171	420	1.80	370.43	364	13	2.38E-02	53.7	4.99E+00	T
0	208.67	90	282	1.31	417.70	414	9	1.25E-02	70.3	4.62E+00	T
0	327.80	107	150	1.04	655.88	650	12	1.48E-02	50.2	3.37E+00	T
0	408.88	52	96	0.88	817.97	812	12	7.16E-03	81.1	2.88E+00	
0	462.42	70	129	0.81	925.01	917	14	9.73E-03	72.9	2.64E+00	T
0	727.85	45	120	2.25	1455.70	1448	20	6.26E-03	****	1.87E+00	T
3	768.01	46	70	2.51	1535.99	1529	21	6.32E-03	80.2	1.78E+00	T
3	772.52	43	44	2.37	1545.01	1529	21	5.95E-03	67.8	1.77E+00	
2	964.47	42	57	2.40	1928.83	1923	23	5.90E-03	77.0	1.45E+00	T
0	1238.25	90	63	2.28	2476.28	2466	21	1.25E-02	49.1	1.15E+00	T
0	1729.89	29	3	1.39	3459.47	3454	10	4.08E-03	42.1	8.91E-01	
0	1847.93	24	3	3.55	3695.56	3689	14	3.32E-03	52.4	8.64E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:58:54.86

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492004.CNF;1		
Acquisition date	: 4-JAN-2010 14:01:18.	Detector SN#	:
Detector ID	: GAM15	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:01.26	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492004	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.29110E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 16-FEB-2009 10:54:12.9	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.050E+01	2.411E+00	6.859E-01	5.243E-02	29.889
CS-135	1.527E-01	2.905E-01	3.188E-01	2.726E-02	0.479
TL-208	6.367E-01	9.310E-02	6.734E-02	4.287E-03	9.455
BI-211	4.246E+00	6.131E-01	3.857E-01	2.650E-02	11.007
PB-212	1.719E+00	1.977E-01	1.049E-01	8.680E-03	16.389
PO-212	1.719E+00	1.977E-01	1.049E-01	8.680E-03	16.389
BI-214	1.283E+00	1.913E-01	1.217E-01	9.036E-03	10.540
PB-214	1.477E+00	2.268E-01	1.344E-01	1.159E-02	10.986
PO-214	1.477E+00	2.268E-01	1.344E-01	1.159E-02	10.986
PO-216	1.719E+00	1.977E-01	1.049E-01	8.680E-03	16.389
PO-218	1.477E+00	2.268E-01	1.344E-01	1.159E-02	10.986
RA-224	5.097E+00	1.653E+00	1.193E+00	8.304E-02	4.272
RA-226	1.283E+00	1.913E-01	1.217E-01	9.036E-03	10.540
AC-228	1.542E+00	3.281E-01	2.223E-01	2.472E-02	6.935
RA-228	1.542E+00	3.281E-01	2.223E-01	2.472E-02	6.935
TH-228	1.748E+00	2.011E-01	1.067E-01	8.829E-03	16.389
TH-230	1.283E+00	1.913E-01	1.217E-01	9.035E-03	10.540
TH-232	1.542E+00	3.281E-01	2.223E-01	2.472E-02	6.935

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-234	2.342E+00	3.201E+00	3.661E+00	7.226E-01	0.640
U-234	1.283E+00	1.913E-01	1.217E-01	9.035E-03	10.540
U-238	2.342E+00	3.201E+00	3.661E+00	7.226E-01	0.640
AM-243	3.608E-01	1.073E-01	1.239E-01	1.377E-02	2.912
ANH-511	4.864E-02	7.985E-02	5.710E-02	3.224E-03	0.852

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.098E-01		3.583E-01	5.714E-01	3.808E-02	-0.192
NA-22	5.998E-04		5.556E-02	9.006E-02	6.181E-03	0.007
NA-24	-4.842E+00		3.577E+00	Half-Life too short		
AL-26	-5.010E-03		3.170E-02	5.036E-02	3.013E-03	-0.099
TI-44	2.730E-01		6.457E-02	9.893E-02	1.100E-02	2.760
SC-46	1.321E-02		4.247E-02	7.237E-02	6.070E-03	0.182
V-48	1.591E-02		8.707E-02	1.458E-01	1.152E-02	0.109
CR-51	1.983E-01		5.103E-01	8.442E-01	6.088E-02	0.235
MN-52	-2.774E-01		3.601E-01	5.303E-01	3.932E-02	-0.523
MN-54	-4.149E-02		4.905E-02	7.623E-02	5.713E-03	-0.544
CO-56	-2.066E-02		4.466E-02	7.094E-02	5.452E-03	-0.291
CO-57	-1.460E-02		3.162E-02	5.053E-02	3.633E-03	-0.289
CO-58	-1.221E-02		4.637E-02	7.541E-02	5.387E-03	-0.162
FE-59	-1.826E-02		1.118E-01	1.798E-01	1.361E-02	-0.102
CO-60	5.775E-04		4.865E-02	7.865E-02	5.936E-03	0.007
ZN-65	2.351E-02		1.165E-01	1.676E-01	1.089E-02	0.140
GE-68	4.444E-01		1.354E+00	2.290E+00	1.592E-01	0.194
AS-73	1.713E+00		2.115E+00	3.612E+00	4.936E-01	0.474
AS-74	1.641E-02		1.218E-01	1.988E-01	1.069E-02	0.083
SE-75	-1.380E-02		6.327E-02	9.097E-02	6.363E-03	-0.152
BR-77	2.463E+01		2.149E+01	3.784E+01	2.129E+00	0.651
SR-82	-2.835E-01		5.332E-01	7.156E-01	4.724E-02	-0.396
RB-83	8.806E-02		8.137E-02	1.427E-01	8.031E-03	0.617
RB-84	-4.428E-02		7.954E-02	1.244E-01	1.027E-02	-0.356
KR-85	1.151E+01		9.851E+00	1.531E+01	8.638E-01	0.751
SR-85	6.023E-02		5.156E-02	8.016E-02	4.522E-03	0.751
RB-86	4.834E-01		9.076E-01	1.567E+00	1.090E-01	0.309
Y-88	1.300E-02		3.664E-02	6.445E-02	3.765E-03	0.202
ZR-88	-1.253E-02		3.675E-02	5.930E-02	3.363E-03	-0.211
Y-91	1.788E+01		2.192E+01	3.827E+01	2.315E+00	0.467
NB-94	1.371E-02		3.743E-02	6.442E-02	3.583E-03	0.213
NB-95	6.054E-02		5.946E-02	9.454E-02	6.093E-03	0.640
NB-95M	1.594E+00		2.546E-01	4.109E-01	3.472E-02	3.880
ZR-95	2.172E-02		8.042E-02	1.372E-01	1.023E-02	0.158
NB-97	-7.052E-02		4.218E-01	Half-Life too short		
ZR-97	4.597E+01		9.062E+00	Half-Life too short		
MO-99	-1.485E+01		2.001E+01	3.105E+01	4.314E+00	-0.478
TC-99M	-1.448E+13		5.885E+12	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	-3.150E-02		4.397E-02	6.660E-02	4.544E-03	-0.473
RH-102	-1.875E-02		3.303E-02	5.165E-02	2.944E-03	-0.363
RU-103	-1.039E-02		5.129E-02	8.242E-02	1.037E-02	-0.126
RH-106	5.909E-02		3.821E-01	6.236E-01	7.157E-02	0.095
RU-106	5.909E-02		3.820E-01	6.236E-01	3.276E-02	0.095
AG-108M	-1.322E-02		3.927E-02	6.302E-02	3.918E-03	-0.210
CD-109	1.811E+00		1.392E+00	2.087E+00	2.413E-01	0.868
AG-110M	-8.923E-03		4.349E-02	6.874E-02	3.768E-03	-0.130
IN-111	-1.522E+00		2.210E+00	3.077E+00	2.142E-01	-0.495
IN-113M	-8.190E-03		5.222E-02	8.528E-02	5.173E-03	-0.096
SN-113	-8.190E-03		5.222E-02	8.528E-02	5.173E-03	-0.096
IN-114M	6.442E-03		2.672E-01	3.748E-01	2.541E-02	0.017
CD-115	2.192E+01		2.368E+01	4.107E+01	2.304E+00	0.534
SN-117M	-5.126E-02		7.681E-02	1.205E-01	8.058E-03	-0.425
SB-122	3.605E-01		3.911E+00	6.384E+00	3.512E-01	0.056
I-123	-3.707E+01		4.356E+01	Half-Life too short		
TE-123M	-1.532E-02		3.600E-02	5.709E-02	3.854E-03	-0.268
I-124	-6.391E-01		1.270E+00	1.668E+00	8.918E-02	-0.383
SB-124	1.856E-02		7.798E-02	1.349E-01	9.471E-03	0.138
SB-125	4.567E-02		1.103E-01	1.860E-01	1.108E-02	0.246
TE-125M	-1.092E+01		1.179E+01	1.847E+01	1.836E+00	-0.592
I-126	-1.981E-01		2.500E-01	3.752E-01	1.910E-02	-0.528
SB-126	1.280E-01		1.997E-01	3.095E-01	1.796E-02	0.413
SN-126	2.539E-01		1.350E-01	2.048E-01	2.363E-02	1.240
SB-127	-2.599E-01		2.061E+00	3.424E+00	3.382E-01	-0.076
XE-127	3.938E-02		6.515E-02	1.035E-01	7.083E-03	0.381
I-131	-7.389E-03		1.647E-01	2.718E-01	1.839E-02	-0.027
TE-132	3.587E-01		1.254E+00	2.137E+00	3.261E-01	0.168
BA-133	-1.167E-02		5.567E-02	7.848E-02	9.242E-03	-0.149
I-133	3.899E-03		1.737E-02	Half-Life too short		
CS-134	6.058E-02		5.383E-02	9.698E-02	6.758E-03	0.625
I-135	1.846E+11		4.312E+11	Half-Life too short		
CS-136	-3.810E-02		1.519E-01	2.434E-01	1.876E-02	-0.157
BA-137M	5.160E-02		4.507E-02	7.850E-02	3.949E-03	0.657
CS-137	5.455E-02		4.765E-02	8.298E-02	4.198E-03	0.657
CE-139	-1.548E-02		3.722E-02	5.894E-02	3.920E-03	-0.263
BA-140	7.703E-02		3.219E-01	5.315E-01	1.726E-01	0.145
LA-140	2.732E-02		1.034E-01	1.782E-01	1.242E-02	0.153
CE-141	4.549E-02		8.072E-02	1.337E-01	9.330E-03	0.340
CE-143	3.535E-03		5.096E-04	Half-Life too short		
CE-144	-1.964E-02		3.038E-01	4.303E-01	6.324E-02	-0.046
PM-144	1.452E-02		3.720E-02	6.424E-02	3.524E-03	0.226
PR-144	9.848E-01		2.524E+00	4.358E+00	2.388E-01	0.226
PM-146	2.513E-02		5.544E-02	8.857E-02	7.585E-03	0.284
ND-147	2.093E-01		7.451E-01	1.236E+00	1.661E-01	0.169
PM-149	-1.493E+02		2.066E+02	3.310E+02	4.849E+01	-0.451
EU-152	-3.964E-02		1.594E-01	1.955E-01	1.378E-02	-0.203
GD-153	1.422E-01		1.110E-01	1.677E-01	1.609E-02	0.848

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
EU-154	-2.282E-03		1.547E-01	2.501E-01	2.508E-02	-0.009
EU-155	7.267E-02		1.325E-01	2.213E-01	1.917E-02	0.328
TB-160	-1.096E-01		1.624E-01	2.515E-01	2.068E-02	-0.436
HO-166M	1.140E-02		6.679E-02	1.134E-01	6.444E-03	0.101
TM-171	-5.392E+01		5.827E+01	7.413E+01	8.524E+00	-0.727
LU-176	1.744E-02		3.013E-02	5.049E-02	3.401E-03	0.345
LU-177	3.019E+00	+	2.132E+00	2.983E+00	2.050E-01	1.012
LU-177M	1.602E-01		2.324E-01	3.521E-01	2.007E-02	0.455
HF-181	-1.543E-02		5.140E-02	8.210E-02	4.674E-03	-0.188
W-181	-6.071E-01		7.226E-01	9.972E-01	1.161E-01	-0.609
TA-182	-1.294E-01		2.474E-01	3.828E-01	2.387E-02	-0.338
RE-183	4.421E-02		1.418E-01	2.319E-01	1.546E-02	0.191
RE-184	-1.173E-02		2.934E-01	4.920E-01	3.425E-02	-0.024
OS-185	-2.675E-02		5.501E-02	8.500E-02	4.355E-03	-0.315
RE-188	6.624E-02		2.153E-01	3.526E-01	2.365E-02	0.188
W-188	9.167E+00		1.035E+01	1.592E+01	1.090E+00	0.576
IR-192	-2.108E-02		4.333E-02	7.024E-02	4.694E-03	-0.300
AU-195	3.800E-01		3.008E-01	4.809E-01	4.507E-02	0.790
TL-200	-4.058E-04		9.815E-04	Half-Life too short		
TL-201	-5.984E+00		1.361E+01	2.153E+01	1.433E+00	-0.278
TL-202	1.698E-02		9.569E-02	1.588E-01	9.075E-03	0.107
HG-203	4.021E-02		5.843E-02	8.886E-02	6.400E-03	0.452
BI-207	-2.796E-02		6.183E-02	9.670E-02	6.871E-03	-0.289
TL-207	-5.472E-01		9.650E-01	1.329E+00	2.234E-01	-0.412
PO-209	1.987E+00		8.606E+00	1.453E+01	1.237E+00	0.137
BI-210	-2.611E+00		1.307E+01	2.114E+01	2.196E+00	-0.123
PB-210	-2.611E+00		1.307E+01	2.114E+01	2.196E+00	-0.123
PO-210	-2.611E+00		1.307E+01	2.114E+01	2.031E+00	-0.123
PB-211	-1.093E+00		1.477E+00	1.706E+00	1.063E+00	-0.641
BI-212	5.955E-01	+	7.363E-01	7.147E-01	5.565E-02	0.833
PO-215	-5.472E-01		9.650E-01	1.329E+00	2.234E-01	-0.412
RN-219	9.738E-02		5.464E-01	8.286E-01	1.123E-01	0.118
RN-220	-3.113E+01		3.012E+01	4.460E+01	2.474E+00	-0.698
RA-223	-5.472E-01		9.650E-01	1.329E+00	2.234E-01	-0.412
AC-227	-2.407E-01		4.807E-01	7.869E-01	1.139E-01	-0.306
TH-227	-2.407E-01		4.813E-01	7.869E-01	1.364E-01	-0.306
TH-229	5.603E-02		6.534E-01	1.052E+00	7.153E-02	0.053
PA-231	2.874E-01		1.950E+00	3.106E+00	4.432E-01	0.093
TH-231	-5.472E-01		9.650E-01	1.329E+00	2.234E-01	-0.412
U-231	-1.401E+00		2.169E+00	2.974E+00	2.931E-01	-0.471
PA-233	-5.400E-02		7.587E-02	1.213E-01	8.500E-03	-0.445
PA-234	5.039E-01		3.580E-01	6.429E-01	1.194E-01	0.784
PA-234M	8.540E-01		5.325E+00	8.789E+00	8.101E-01	0.097
U-235	3.612E-01		2.686E-01	4.374E-01	7.298E-02	0.826
NP-236	1.402E-02		1.009E-01	1.640E-01	1.095E-02	0.086
NP-237	1.941E-02		3.711E-01	5.880E-01	1.388E-01	0.033
NP-239	-1.573E-01		2.450E-01	3.893E-01	2.926E-02	-0.404
AM-241	1.668E-01		3.245E-01	4.863E-01	6.188E-02	0.343

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	9.920E-02		1.190E-01	2.008E-01	1.753E-02	0.494
AM-246	-7.006E-03		1.565E-01	2.548E-01	1.766E-02	-0.027
CM-247	-1.697E-03		5.270E-02	7.420E-02	4.220E-03	-0.023
CF-249	9.540E-03		4.843E-02	8.086E-02	4.636E-03	0.118
CF-251	1.188E-01		1.620E-01	2.685E-01	1.800E-02	0.442

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492004		
Acquisition date	: 4-JAN-2010 14:01:18	Detector SN#	:
Detector ID	: GAM15	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.26	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492004	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.2911E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 16-FEB-2009 10:54:12	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.050E+01	2.363E+00	3.433E-01	1.205E+00
CS-135	1.527E-01	2.847E-01	1.639E-01	1.453E-01
TL-208	6.367E-01	9.124E-02	3.420E-02	4.655E-02
BI-211	4.246E+00	6.009E-01	1.975E-01	3.066E-01
PB-212	1.719E+00	1.937E-01	5.401E-02	9.884E-02
PO-212	1.719E+00	1.937E-01	5.401E-02	9.884E-02
BI-214	1.283E+00	1.875E-01	6.177E-02	9.564E-02
PB-214	1.477E+00	2.222E-01	6.883E-02	1.134E-01
PO-214	1.477E+00	2.222E-01	6.883E-02	1.134E-01
PO-216	1.719E+00	1.937E-01	5.401E-02	9.884E-02
PO-218	1.477E+00	2.222E-01	6.883E-02	1.134E-01
RA-224	5.097E+00	1.620E+00	6.145E-01	8.264E-01
RA-226	1.283E+00	1.875E-01	6.177E-02	9.564E-02
AC-228	1.542E+00	3.216E-01	1.121E-01	1.641E-01
RA-228	1.542E+00	3.216E-01	1.121E-01	1.641E-01
TH-228	1.748E+00	1.970E-01	5.494E-02	1.005E-01
TH-230	1.283E+00	1.875E-01	6.177E-02	9.564E-02
TH-232	1.542E+00	3.216E-01	1.121E-01	1.641E-01
TH-234	2.342E+00	3.137E+00	1.924E+00	1.601E+00
U-234	1.283E+00	1.875E-01	6.177E-02	9.564E-02
U-238	2.342E+00	3.137E+00	1.924E+00	1.601E+00
AM-243	3.608E-01	1.051E-01	6.494E-02	5.363E-02
ANH-511	4.864E-02	7.825E-02	2.906E-02	3.992E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.098E-01	3.511E-01	2.912E-01	1.791E-01	NOT IDENT.
NA-22	5.998E-04	5.445E-02	4.517E-02	2.778E-02	NOT IDENT.
NA-24	-4.842E+06	7.010E+06	0.000E+00	3.577E+06	SHORT HLIF
AL-26	-5.010E-03	3.106E-02	2.512E-02	1.585E-02	NOT IDENT.

TI-44	2.730E-01	6.328E-02	5.182E-02	3.228E-02 NOT IDENT.
SC-46	1.321E-02	4.162E-02	3.651E-02	2.123E-02 FAIL ABUN
V-48	1.591E-02	8.533E-02	7.344E-02	4.354E-02 NOT IDENT.
CR-51	1.983E-01	5.001E-01	4.329E-01	2.552E-01 NOT IDENT.
MN-52	-2.774E-01	3.529E-01	2.655E-01	1.800E-01 NOT IDENT.
MN-54	-4.149E-02	4.807E-02	3.850E-02	2.453E-02 NOT IDENT.
CO-56	-2.066E-02	4.376E-02	3.582E-02	2.233E-02 FAIL ABUN
CO-57	-1.460E-02	3.099E-02	2.629E-02	1.581E-02 NOT IDENT.
CO-58	-1.221E-02	4.544E-02	3.810E-02	2.319E-02 NOT IDENT.
FE-59	-1.826E-02	1.096E-01	9.042E-02	5.590E-02 NOT IDENT.
CO-60	5.775E-04	4.768E-02	3.943E-02	2.433E-02 NOT IDENT.
ZN-65	2.351E-02	1.142E-01	8.427E-02	5.825E-02 NOT IDENT.
GE-68	4.444E-01	1.327E+00	1.152E+00	6.769E-01 NOT IDENT.
AS-73	1.713E+00	2.073E+00	1.903E+00	1.058E+00 NOT IDENT.
AS-74	1.641E-02	1.193E-01	1.009E-01	6.089E-02 NOT IDENT.
SE-75	-1.380E-02	6.200E-02	4.678E-02	3.163E-02 NOT IDENT.
BR-77	2.463E+01	2.106E+01	1.926E+01	1.074E+01 FAIL ABUN
SR-82	-2.835E-01	5.226E-01	3.618E-01	2.666E-01 NOT IDENT.
RB-83	8.806E-02	7.974E-02	7.263E-02	4.069E-02 NOT IDENT.
RB-84	-4.428E-02	7.795E-02	6.276E-02	3.977E-02 NOT IDENT.
KR-85	1.151E+01	9.654E+00	7.794E+00	4.925E+00 NOT IDENT.
SR-85	6.023E-02	5.053E-02	4.080E-02	2.578E-02 NOT IDENT.
RB-86	4.834E-01	8.894E-01	7.880E-01	4.538E-01 NOT IDENT.
Y-88	1.300E-02	3.591E-02	3.214E-02	1.832E-02 NOT IDENT.
ZR-88	-1.253E-02	3.601E-02	3.031E-02	1.837E-02 NOT IDENT.
Y-91	1.788E+01	2.148E+01	1.922E+01	1.096E+01 NOT IDENT.
NB-94	1.371E-02	3.668E-02	3.263E-02	1.871E-02 NOT IDENT.
NB-95	6.054E-02	5.827E-02	4.781E-02	2.973E-02 NOT IDENT.
NB-95M	1.594E+00	2.495E-01	2.117E-01	1.273E-01 NOT IDENT.
ZR-95	2.172E-02	7.881E-02	6.940E-02	4.021E-02 NOT IDENT.
NB-97	-7.052E+04	8.268E+05	0.000E+00	4.218E+05 SHORT HLIF
ZR-97	4.597E+07	1.776E+07	0.000E+00	9.062E+06 SHORT HLIF
MO-99	-1.485E+01	1.961E+01	1.571E+01	1.001E+01 NOT IDENT.
TC-99M	-1.448E+19	1.153E+19	0.000E+00	0.000E+00 SHORT HLIF
RH-101	-3.150E-02	4.309E-02	3.440E-02	2.198E-02 NOT IDENT.
RH-102	-1.875E-02	3.237E-02	2.632E-02	1.651E-02 FAIL ABUN
RU-103	-1.039E-02	5.026E-02	4.197E-02	2.565E-02 FAIL ABUN
RH-106	5.909E-02	3.744E-01	3.164E-01	1.910E-01 NOT IDENT.
RU-106	5.909E-02	3.744E-01	3.164E-01	1.910E-01 NOT IDENT.
AG-108M	-1.322E-02	3.849E-02	3.216E-02	1.964E-02 NOT IDENT.
CD-109	1.811E+00	1.365E+00	1.091E+00	6.962E-01 NOT IDENT.
AG-110M	-8.923E-03	4.262E-02	3.485E-02	2.175E-02 NOT IDENT.
IN-111	-1.522E+00	2.166E+00	1.584E+00	1.105E+00 NOT IDENT.
IN-113M	-8.190E-03	5.118E-02	4.359E-02	2.611E-02 NOT IDENT.
SN-113	-8.190E-03	5.118E-02	4.359E-02	2.611E-02 NOT IDENT.
IN-114M	6.442E-03	2.619E-01	1.937E-01	1.336E-01 NOT IDENT.
CD-115	2.192E+01	2.321E+01	2.090E+01	1.184E+01 NOT IDENT.
SN-117M	-5.126E-02	7.528E-02	6.246E-02	3.841E-02 NOT IDENT.
SB-122	3.605E-01	3.833E+00	3.245E+00	1.955E+00 NOT IDENT.
I-123	-3.707E+07	8.537E+07	0.000E+00	4.356E+07 SHORT HLIF
TE-123M	-1.532E-02	3.528E-02	2.959E-02	1.800E-02 NOT IDENT.
I-124	-6.391E-01	1.245E+00	8.469E-01	6.352E-01 NOT IDENT.
SB-124	1.856E-02	7.642E-02	6.733E-02	3.899E-02 FAIL ABUN
SB-125	4.567E-02	1.081E-01	9.493E-02	5.515E-02 FAIL ABUN
TE-125M	-1.092E+01	1.155E+01	9.626E+00	5.893E+00 NOT IDENT.
I-126	-1.981E-01	2.450E-01	1.902E-01	1.250E-01 NOT IDENT.
SB-126	1.280E-01	1.957E-01	1.567E-01	9.986E-02 FAIL ABUN
SN-126	2.539E-01	1.323E-01	1.071E-01	6.752E-02 FAIL ABUN
SB-127	-2.599E-01	2.020E+00	1.735E+00	1.030E+00 NOT IDENT.
XE-127	3.938E-02	6.384E-02	5.343E-02	3.257E-02 NOT IDENT.
I-131	-7.389E-03	1.614E-01	1.391E-01	8.235E-02 NOT IDENT.
TE-132	3.587E-01	1.229E+00	1.101E+00	6.269E-01 NOT IDENT.
BA-133	-1.167E-02	5.455E-02	4.018E-02	2.783E-02 FAIL ABUN
I-133	3.899E+03	3.405E+04	0.000E+00	1.737E+04 SHORT HLIF
CS-134	6.058E-02	5.275E-02	4.902E-02	2.691E-02 NOT IDENT.
I-135	1.846E+17	8.451E+17	0.000E+00	0.000E+00 SHORT HLIF
CS-136	-3.810E-02	1.489E-01	1.225E-01	7.597E-02 NOT IDENT.
BA-137M	5.160E-02	4.417E-02	3.979E-02	2.254E-02 NOT IDENT.
CS-137	5.455E-02	4.670E-02	4.206E-02	2.382E-02 NOT IDENT.
CE-139	-1.548E-02	3.648E-02	3.053E-02	1.861E-02 NOT IDENT.
BA-140	7.703E-02	3.155E-01	2.703E-01	1.610E-01 NOT IDENT.
LA-140	2.732E-02	1.013E-01	8.907E-02	5.168E-02 FAIL ABUN
CE-141	4.549E-02	7.911E-02	6.938E-02	4.036E-02 NOT IDENT.
CE-143	3.535E+03	9.988E+02	0.000E+00	5.096E+02 SHORT HLIF
CE-144	-1.964E-02	2.977E-01	2.236E-01	1.519E-01 NOT IDENT.
PM-144	1.452E-02	3.646E-02	3.254E-02	1.860E-02 NOT IDENT.
PR-144	9.848E-01	2.473E+00	2.207E+00	1.262E+00 NOT IDENT.
PM-146	2.513E-02	5.433E-02	4.516E-02	2.772E-02 NOT IDENT.

ND-147	2.093E-01	7.302E-01	6.289E-01	3.726E-01 FAIL ABUN
PM-149	-1.493E+02	2.025E+02	1.700E+02	1.033E+02 NOT IDENT.
EU-152	-3.964E-02	1.562E-01	1.001E-01	7.971E-02 FAIL ABUN
GD-153	1.422E-01	1.088E-01	8.754E-02	5.551E-02 NOT IDENT.
EU-154	-2.282E-03	1.516E-01	1.254E-01	7.733E-02 NOT IDENT.
EU-155	7.267E-02	1.299E-01	1.154E-01	6.625E-02 NOT IDENT.
TB-160	-1.096E-01	1.592E-01	1.269E-01	8.121E-02 FAIL ABUN
HO-166M	1.140E-02	6.545E-02	5.741E-02	3.339E-02 FAIL ABUN
TM-171	-5.392E+01	5.711E+01	3.892E+01	2.914E+01 NOT IDENT.
LU-176	1.744E-02	2.953E-02	2.590E-02	1.507E-02 NOT IDENT.
LU-177	3.019E+00	2.089E+00	1.540E+00	1.066E+00 FAIL ABUN
LU-177M	1.602E-01	2.277E-01	1.798E-01	1.162E-01 FAIL ABUN
HF-181	-1.543E-02	5.037E-02	4.183E-02	2.570E-02 NOT IDENT.
W-181	-6.071E-01	7.082E-01	5.238E-01	3.613E-01 NOT IDENT.
TA-182	-1.294E-01	2.425E-01	1.922E-01	1.237E-01 FAIL ABUN
RE-183	4.421E-02	1.390E-01	1.202E-01	7.092E-02 FAIL ABUN
RE-184	-1.173E-02	2.876E-01	2.532E-01	1.467E-01 NOT IDENT.
OS-185	-2.675E-02	5.391E-02	4.310E-02	2.750E-02 NOT IDENT.
RE-188	6.624E-02	2.110E-01	1.828E-01	1.077E-01 NOT IDENT.
W-188	9.167E+00	1.014E+01	8.176E+00	5.173E+00 FAIL ABUN
IR-192	-2.108E-02	4.247E-02	3.602E-02	2.167E-02 FAIL ABUN
AU-195	3.800E-01	2.947E-01	2.510E-01	1.504E-01 FAIL ABUN
TL-200	-4.058E+02	1.924E+03	0.000E+00	9.815E+02 SHORT HLIF
TL-201	-5.984E+00	1.334E+01	1.115E+01	6.807E+00 NOT IDENT.
TL-202	1.698E-02	9.378E-02	8.102E-02	4.785E-02 NOT IDENT.
HG-203	4.021E-02	5.726E-02	4.566E-02	2.922E-02 FAIL ABUN
BI-207	-2.796E-02	6.060E-02	4.865E-02	3.092E-02 FAIL ABUN
TL-207	-5.472E-01	9.457E-01	6.812E-01	4.825E-01 FAIL ABUN
PO-209	1.987E+00	8.434E+00	7.329E+00	4.303E+00 NOT IDENT.
BI-210	-2.611E+00	1.281E+01	1.116E+01	6.535E+00 NOT IDENT.
PB-210	-2.611E+00	1.281E+01	1.116E+01	6.535E+00 NOT IDENT.
PO-210	-2.611E+00	1.281E+01	1.116E+01	6.535E+00 NOT IDENT.
PB-211	-1.093E+00	1.447E+00	8.714E-01	7.384E-01 NOT IDENT.
BI-212	5.955E-01	7.216E-01	3.618E-01	3.682E-01 FAIL ABUN
PO-215	-5.472E-01	9.457E-01	6.812E-01	4.825E-01 FAIL ABUN
RN-219	9.738E-02	5.355E-01	4.233E-01	2.732E-01 NOT IDENT.
RN-220	-3.113E+01	2.951E+01	2.268E+01	1.506E+01 NOT IDENT.
RA-223	-5.472E-01	9.457E-01	6.812E-01	4.825E-01 FAIL ABUN
AC-227	-2.407E-01	4.711E-01	4.049E-01	2.404E-01 FAIL ABUN
TH-227	-2.407E-01	4.717E-01	4.049E-01	2.406E-01 FAIL ABUN
TH-229	5.603E-02	6.403E-01	5.437E-01	3.267E-01 NOT IDENT.
PA-231	2.874E-01	1.911E+00	1.596E+00	9.752E-01 NOT IDENT.
TH-231	-5.472E-01	9.457E-01	6.812E-01	4.825E-01 FAIL ABUN
U-231	-1.401E+00	2.125E+00	1.553E+00	1.084E+00 FAIL ABUN
PA-233	-5.400E-02	7.435E-02	6.221E-02	3.794E-02 FAIL ABUN
PA-234	5.039E-01	3.508E-01	3.240E-01	1.790E-01 FAIL ABUN
PA-234M	8.540E-01	5.218E+00	4.426E+00	2.662E+00 NOT IDENT.
U-235	3.612E-01	2.632E-01	2.271E-01	1.343E-01 FAIL ABUN
NP-236	1.402E-02	9.892E-02	8.497E-02	5.047E-02 NOT IDENT.
NP-237	1.941E-02	3.637E-01	3.076E-01	1.856E-01 NOT IDENT.
NP-239	-1.573E-01	2.401E-01	2.027E-01	1.225E-01 FAIL ABUN
AM-241	1.668E-01	3.180E-01	2.558E-01	1.622E-01 NOT IDENT.
CM-243	9.920E-02	1.166E-01	1.047E-01	5.951E-02 FAIL ABUN
AM-246	-7.006E-03	1.534E-01	1.282E-01	7.824E-02 NOT IDENT.
CM-247	-1.697E-03	5.165E-02	3.791E-02	2.635E-02 FAIL ABUN
CF-249	9.540E-03	4.747E-02	4.134E-02	2.422E-02 NOT IDENT.
CF-251	1.188E-01	1.587E-01	1.390E-01	8.099E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	272.5161
46.50	272.5161
46.50	272.5161
48.70	300.9189
49.72	297.6635
51.35	268.1588
52.39	243.9419
52.97	258.4256
53.15	260.4026
53.44	267.1812
54.07	287.4423
56.28	314.2464
56.28	314.2477
57.37	0.0000
57.53	298.5949
57.53	298.5961
57.60	303.2219
57.98	280.4159
57.98	280.4159
59.32	277.9246
59.32	277.9246
59.40	277.9588
59.54	281.0900
59.72	281.1676
60.01	293.5885
61.10	312.5486
61.14	312.5672
61.30	312.6422
63.00	333.8930
63.29	346.0064
63.29	346.0064
63.58	347.6998
64.28	369.7133
65.12	398.0437
65.20	398.0896
65.20	398.0896
66.05	417.1880
66.72	415.2585
66.83	415.3254
66.91	415.3728
67.20	385.7700
67.20	385.7700
67.75	404.2076
67.85	404.2648
68.90	379.5591
68.90	379.5591
69.30	373.9292
69.67	367.8872
70.82	391.8918
70.82	391.8918
70.83	391.8979
72.80	374.7540
72.87	374.7890
72.87	374.7890
74.67	375.6978
74.81	375.7679
74.81	375.7679
74.81	375.7679
74.81	375.7679
74.81	375.7679
74.81	375.7679
74.81	375.7679
74.97	375.8483
75.28	376.0031
75.70	376.2121
77.11	376.9104
77.11	376.9104

77.11	376.9104
77.11	376.9104
77.11	376.9104
77.11	376.9104
77.11	376.9104
78.38	335.9365
79.62	456.5314
79.80	456.6373
79.80	456.6373
80.11	466.3031
80.18	466.3445
80.30	466.4165
80.30	466.4165
80.57	461.8319
81.00	462.0850
81.07	441.5519
81.07	441.5519
81.07	441.5519
81.07	441.5519
82.60	608.9016
83.37	597.8480
83.78	530.8540
83.78	530.8540
83.78	530.8540
83.78	530.8540
84.21	453.8219
84.90	430.3572
85.43	445.5562
86.29	562.0839
86.50	562.2282
86.54	565.6708
86.59	565.7054
86.72	565.7943
86.79	565.8419
86.94	565.9459
87.30	537.4866
87.30	537.4866
87.30	537.4866
87.30	537.4866
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87.30	537.4866
87.30	537.4866
87.57	472.2486
87.88	472.4257
88.03	523.5948
88.36	523.8030
88.47	523.8731
89.95	716.8027
91.11	562.3776
92.29	462.2802
92.38	462.3295
92.38	462.3295
93.35	462.8535
94.00	337.6073
94.67	333.0408
94.67	333.0421
94.90	333.1305
94.90	333.1305
94.90	333.1305
94.90	333.1305
95.87	370.5591
95.87	370.5591
96.73	333.8324
97.43	275.9932
98.44	258.5352
98.44	258.5352
98.88	286.9544
99.55	327.6177
99.55	327.6177
99.86	327.7314
100.00	337.8988
100.10	355.1387
103.18	334.0151
103.76	296.6394
105.00	293.9886
105.31	308.3331
108.00	344.9458
109.28	354.6126

111.00	356.2797
111.00	356.2797
111.76	329.9240
112.95	292.3744
115.19	338.2935
116.30	341.7658
117.00	364.6729
117.00	364.6729
117.66	348.4232
121.11	328.9419
121.62	315.6552
121.78	315.7052
122.06	330.2879
122.32	315.8727
122.32	315.8727
122.32	315.8727
122.32	315.8727
123.07	335.2062
127.23	314.6843
129.76	343.8222
131.20	325.9061
133.02	324.7913
133.54	358.4500
135.34	342.9019
136.00	338.9144
136.25	323.2505
136.48	314.9208
140.51	369.8177
140.51	0.0000
142.18	321.8356
142.65	319.8604
143.76	280.0239
144.24	282.2575
144.24	282.2575
144.24	282.2575
144.24	282.2575
145.22	314.2460
145.44	316.4237
147.16	325.3841
152.43	303.4539
152.70	315.2407
153.22	301.5296
154.21	306.0498
154.21	306.0498
154.21	306.0498
154.21	306.0498
155.03	309.4658
156.02	339.6315
158.56	338.2212
159.00	0.0000
159.00	324.4249
160.31	318.3496
161.27	289.6394
162.32	313.5115
162.64	296.4128
163.35	291.2125
163.89	294.5680
165.85	311.1923
167.43	311.5925
171.28	290.9289
171.86	318.1150
172.10	331.1623
176.55	287.8018
176.60	287.8119
181.06	292.9541
184.41	292.8326
185.71	293.1230
186.00	287.0601
190.27	287.9850
192.34	298.9817
193.63	295.9663
197.04	305.5322
198.01	321.2030
198.60	318.0256
200.40	299.6461
201.83	302.1679
202.84	282.2908
205.31	307.1383

208.36	298.0159
208.81	290.3235
209.75	281.3893
209.75	281.3893
210.97	256.6740
215.65	298.4174
216.55	275.1153
218.09	261.9717
222.10	255.9521
223.80	288.8387
226.40	244.9843
227.00	251.3895
227.08	251.4031
227.20	251.4218
228.16	238.0576
228.18	238.0608
228.18	238.0608
231.56	0.0000
235.69	235.6139
236.00	212.0954
236.00	212.0954
238.63	212.4567
238.63	212.4567
238.63	212.4567
238.63	212.4567
239.00	212.5067
240.98	212.7780
241.98	212.9137
241.98	212.9137
241.98	212.9137
244.69	227.8656
245.39	208.2092
247.94	214.6340
248.90	210.1937
249.79	195.4526
252.40	228.0560
252.85	225.3714
252.85	225.3714
254.15	0.0000
256.20	236.8548
256.20	236.8548
260.50	215.3888
260.90	208.0762
262.80	212.0032
264.65	213.7770
268.24	214.2379
268.79	209.6833
269.46	225.8102
269.46	225.8102
269.46	225.8102
269.46	225.8102
271.23	227.8983
273.65	222.6592
276.40	202.1115
277.35	212.9152
277.60	204.5769
277.60	204.5769
278.00	197.1843
278.60	192.2918
279.20	189.2574
279.53	184.6374
280.46	192.4987
281.68	170.8858
283.67	181.9698
284.30	200.1883
285.00	201.7222
285.90	199.9563
286.10	202.7832
286.10	202.7832
287.40	200.3959
288.45	0.0000
290.67	171.7676
290.80	171.7810
291.72	189.0576
293.26	0.0000
293.70	190.8335
295.21	190.9948
295.21	190.9948

295.21	190.9948
295.96	150.3535
296.50	150.4004
297.23	150.4609
298.57	150.5742
299.80	180.4970
299.80	180.4970
300.09	177.3878
300.09	177.3878
300.09	177.3878
300.09	177.3878
300.12	177.3901
301.29	186.9301
302.84	191.8065
303.76	165.1627
303.91	165.1776
304.40	169.9409
304.40	169.9409
304.84	146.3740
306.84	152.3121
308.46	146.6635
311.98	170.6440
316.51	177.7139
318.01	167.3934
319.02	176.9997
319.41	175.1324
320.08	172.4447
323.87	192.4031
323.87	192.4031
323.87	192.4031
323.87	192.4031
325.23	189.3585
328.77	153.0430
333.44	134.2373
334.20	156.6720
334.20	156.6720
334.30	156.6800
338.28	166.6133
338.28	166.6133
338.28	166.6133
338.28	166.6133
338.32	166.6175
338.32	166.6175
338.32	166.6175
340.50	163.5939
340.57	163.6001
344.27	166.3176
345.85	147.9558
350.59	0.0000
351.07	140.2829
351.92	140.3413
351.92	140.3413
351.92	140.3413
355.39	0.0000
356.01	129.3115
364.48	137.3167
366.43	131.5986
367.43	134.5887
367.94	0.0000
369.80	151.3407
374.96	132.1392
383.85	132.6978
387.95	132.9516
388.63	127.0836
391.69	125.2916
391.69	125.2916
392.90	131.2839
398.62	122.7225
400.65	117.8829
401.10	117.7975
401.81	128.8479
402.60	125.5905
404.84	133.9882
410.95	142.6527
411.60	127.7600
413.65	104.6270
414.70	96.3681
415.30	108.2653

415.76	112.2061
417.63	0.0000
418.52	125.8247
423.70	122.1087
427.08	127.3023
427.89	111.3035
432.53	110.5237
433.93	120.6431
439.47	118.9161
439.56	118.9204
439.89	111.8821
443.98	108.0384
444.90	112.1206
445.03	112.1273
445.03	112.1273
445.03	112.1273
445.03	112.1273
453.90	105.1963
463.38	110.2773
468.07	86.6923
473.00	81.7578
475.06	102.2827
475.35	99.2261
476.78	94.1664
477.59	91.1250
477.96	93.1872
482.03	103.5965
484.57	83.1674
487.03	99.6938
490.36	0.0000
492.35	93.7249
497.08	107.3147
507.63	0.0000
510.53	0.0000
510.84	107.8911
511.00	107.8981
511.85	95.1338
511.85	95.1338
513.99	102.1361
513.99	102.1361
520.41	76.0102
520.65	74.9760
527.90	80.4026
528.96	0.0000
529.64	89.8591
529.87	0.0000
531.02	86.7690
537.32	78.5907
543.00	94.5088
546.56	0.0000
549.76	98.9547
552.65	87.4681
555.20	63.2886
563.23	88.8624
563.90	85.7085
568.70	81.6170
569.32	87.9970
569.50	92.2421
569.67	94.3691
573.80	91.3225
574.00	83.8951
574.64	77.0100
578.91	79.7864
579.30	0.0000
583.14	87.3632
585.48	97.7427
591.81	97.3661
592.07	90.8417
593.00	94.0801
595.88	94.1725
600.56	98.8507
602.52	0.0000
602.71	101.9047
602.71	101.9047
603.60	101.9348
604.41	91.2308
604.70	91.2401
609.31	80.6323

609.31	80.6323
609.31	80.6323
609.31	80.6323
610.33	95.0015
612.46	100.4495
614.37	66.4121
618.01	90.5748
621.84	82.0544
621.84	82.0544
631.29	85.5634
633.02	71.5252
633.10	71.5269
634.78	82.4106
635.90	84.6098
636.97	81.3849
645.85	96.8592
646.12	96.8679
656.30	109.2017
657.75	91.7725
657.90	0.0000
661.65	78.7605
661.65	78.7605
664.57	0.0000
666.33	101.8845
666.33	101.8845
675.00	77.9977
677.61	71.4667
685.20	68.8812
692.80	74.5697
695.00	70.0146
696.49	69.1254
696.49	69.1254
697.00	77.4324
697.49	86.6639
698.33	81.1519
698.50	79.3127
699.00	80.2474
702.63	74.7971
706.10	81.3470
706.58	0.0000
706.67	85.9841
709.31	73.0998
711.68	70.3748
713.82	82.4651
717.42	68.6418
720.50	62.0746
721.93	0.0000
722.20	85.9928
722.78	87.6006
722.78	87.6006
722.89	87.6045
722.95	87.6064
723.30	92.3950
724.18	78.0784
727.18	71.6361
733.00	68.6992
735.90	65.5597
739.58	64.4320
742.81	57.0162
744.21	49.5592
747.13	62.7035
751.79	65.6008
752.31	66.5480
753.82	57.2012
755.35	51.5972
756.15	64.7465
756.87	69.4533
763.93	62.8785
765.79	70.9782
766.42	75.8308
766.84	79.0679
776.49	76.0521
778.00	69.6096
778.57	84.1917
778.89	73.6757
783.80	75.6706
785.46	72.8674
792.07	83.4328

795.84	60.7422
796.30	56.0039
798.80	94.9890
801.93	66.5507
805.60	51.3918
810.29	76.2354
810.76	69.5752
815.85	66.8099
817.79	73.5300
818.51	65.9032
819.60	52.5472
826.30	71.7880
828.27	0.0000
831.60	72.8503
831.96	66.1475
834.83	103.6165
836.80	0.0000
846.75	64.4878
848.13	57.7722
856.28	0.0000
856.80	64.5244
860.37	54.0973
867.32	54.1964
867.82	60.3992
871.10	56.1887
873.19	57.1887
874.81	56.2430
875.33	0.0000
876.40	55.2964
879.36	65.0480
880.27	56.3244
880.51	58.2703
881.50	58.2849
883.24	55.3962
884.67	50.5559
889.25	46.7227
896.60	56.5639
898.02	53.6572
899.00	66.3578
903.28	67.4067
911.07	48.6634
911.07	48.6634
911.07	48.6634
919.63	39.5966
920.93	54.9541
925.00	55.0111
925.24	55.0145
926.50	53.0662
935.52	52.2021
937.48	60.1102
944.10	50.3391
946.00	40.4878
949.00	58.3062
962.29	56.0903
964.01	62.9150
966.15	63.5156
968.20	63.5469
969.11	63.5612
969.11	63.5612
969.11	63.5612
977.42	58.3826
980.50	62.7411
983.50	49.8311
989.30	44.9103
996.32	55.9829
1001.03	51.0415
1001.68	52.0508
1004.76	53.0906
1021.30	0.0000
1024.50	0.0000
1034.80	57.5010
1036.00	47.4265
1037.82	53.5046
1038.57	63.6101
1038.76	0.0000
1045.16	51.5728
1046.59	53.6125
1048.07	66.7842

1050.47	61.7595
1050.47	61.7595
1062.04	46.6963
1063.62	59.9147
1076.63	39.7220
1077.35	42.7844
1078.86	47.8931
1085.78	37.7618
1099.22	58.3499
1112.02	45.7557
1112.84	40.4842
1115.52	52.8348
1120.29	54.5074
1120.29	54.5074
1120.29	54.5074
1120.29	54.5074
1120.51	54.5096
1121.28	49.3750
1124.00	0.0000
1129.67	46.9935
1131.51	0.0000
1147.95	0.0000
1167.94	62.3438
1173.22	54.0926
1175.09	58.2764
1177.93	59.3518
1189.05	69.9280
1204.90	49.2165
1205.75	0.0000
1213.00	53.4944
1221.42	77.7548
1230.97	64.9713
1235.34	55.9972
1236.41	0.0000
1238.25	54.8268
1246.25	57.9330
1260.41	0.0000
1271.85	40.3379
1274.45	54.1647
1274.54	54.1647
1291.56	38.3643
1298.22	0.0000
1312.09	49.2175
1325.50	38.6177
1325.50	38.6177
1332.49	38.6704
1333.61	44.0513
1360.21	22.6774
1362.66	0.0000
1365.15	23.7796
1368.21	30.2821
1368.53	0.0000
1376.25	17.3301
1384.27	42.7704
1394.10	25.1505
1395.20	27.9513
1407.95	33.6207
1434.06	31.9046
1436.60	29.1036
1457.56	0.0000
1460.81	29.2301
1489.15	19.9014
1509.49	33.2886
1596.49	18.3420
1620.62	23.2617
1678.03	0.0000
1691.02	10.7848
1691.02	10.7848
1706.46	0.0000
1750.46	0.0000
1764.49	15.6220
1764.49	15.6220
1764.49	15.6220
1764.49	15.6220
1770.23	10.4238
1771.40	13.9009
1791.20	0.0000
1808.65	11.9833

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492004

Total Uranium Activity	7.1339E+00	ug/g
Total Uranium Counting Unc.	9.3337E+00	ug/g
Total Uranium Tpu	4.7621E-06	ug/g
Total Uranium Mda	5.7247E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492004
ANALYST	: MXR1	DETECTOR	: GAM15
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 14:01:18.13	SAMPLE ALQT:	129.110 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 8.652E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.722E+00
GROSS GAMMA MDA (pCi/GRAM)	: 4.099E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.984E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:59:38.81

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492005.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:01:43.
Sample ID : G243492005 Sample quantity : 1.32800E+02 GRAM
Detector name : GAM16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.05 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.22*	80	520	0.98	126.63	123	9	1.11E-02	53.9	
2	3	74.72*	458	427	1.08	149.64	144	18	6.36E-02	8.7	1.60E+00
3	3	77.10*	680	341	0.85	154.39	144	18	9.44E-02	5.7	
4	0	84.25	148	322	1.13	168.68	166	6	2.06E-02	20.8	
5	4	87.27	305	317	1.05	174.74	172	11	4.23E-02	10.8	1.78E+00
6	4	89.78*	177	328	1.28	179.74	172	11	2.46E-02	18.1	
7	0	93.03*	297	518	1.17	186.25	183	10	4.12E-02	16.1	
8	0	129.01	101	369	0.89	258.22	254	8	1.41E-02	34.3	
9	0	185.76*	200	385	1.20	371.71	367	10	2.77E-02	20.5	
10	0	208.94	114	284	1.08	418.08	414	8	1.59E-02	27.1	
11	5	238.46*	1391	216	0.94	477.11	473	15	1.93E-01	3.2	9.06E-01
12	5	241.39	359	265	1.74	482.97	473	15	4.99E-02	12.1	
13	0	270.25	139	287	1.82	540.69	534	13	1.94E-02	26.5	
14	0	277.12	81	190	1.00	554.43	551	9	1.12E-02	32.8	
15	0	294.98*	473	222	1.05	590.15	584	12	6.57E-02	7.9	
16	1	299.99	125	127	1.25	600.16	596	11	1.74E-02	18.2	3.57E-01
17	1	301.92	37	85	1.03	604.04	596	11	5.19E-03	46.9	
18	0	328.09	96	218	1.38	656.38	650	11	1.33E-02	31.7	
19	0	338.39*	296	227	1.12	676.97	670	14	4.11E-02	12.5	
20	0	351.70*	773	163	1.15	703.59	699	11	1.07E-01	4.9	
21	0	408.91	54	84	1.30	817.99	815	8	7.43E-03	32.5	
22	0	462.34	73	133	1.14	924.85	920	10	1.01E-02	31.8	
23	0	510.51*	194	156	1.67	1021.18	1013	16	2.70E-02	17.6	
24	0	582.89*	432	129	1.32	1165.91	1160	14	5.99E-02	7.5	
25	0	608.95*	549	83	1.52	1218.04	1212	13	7.63E-02	5.6	
26	0	727.05	60	72	1.78	1454.19	1453	6	8.28E-03	28.9	
27	0	767.89	55	57	1.01	1535.85	1531	9	7.69E-03	27.9	
28	0	795.33	51	86	0.85	1590.72	1584	15	7.02E-03	43.7	
29	0	861.00	73	62	1.79	1722.04	1716	13	1.01E-02	25.1	
30	0	910.80*	325	70	1.53	1821.61	1814	17	4.51E-02	8.3	
31	2	963.99	56	46	1.94	1927.95	1923	25	7.72E-03	25.4	1.21E+00
32	2	968.42	191	42	1.94	1936.82	1923	25	2.66E-02	10.2	
33	0	1120.01*	123	71	1.90	2239.91	2231	14	1.70E-02	17.4	
34	0	1237.65	58	72	1.39	2475.09	2469	12	8.01E-03	32.2	
35	0	1377.48	37	4	1.21	2754.64	2750	10	5.09E-03	20.0	
36	0	1460.01*	1423	41	1.84	2919.62	2910	18	1.98E-01	2.9	
37	0	1629.09*	16	15	1.03	3257.61	3250	13	2.28E-03	57.3	
38	0	1728.33	38	11	1.39	3455.99	3448	14	5.32E-03	24.2	

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
39	0	1763.37*	92	8	2.04	3526.01	3518	15	1.28E-02	13.1	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 11:59:41

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492005.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:01:43
Sample ID : G243492005 Sample quantity : 132.80 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.05 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.120E+01	3.275E+00	4.799E-01	4.218E-02	65.013
CD-109	+	88.03	*	3.793E+00	8.980E-01	9.907E-01	9.547E-02	3.829
SN-126	+	64.28		6.657E-01	7.241E-01	6.272E-01	9.138E-02	1.061
	+	86.94		1.545E+00	7.243E-01	3.879E-01	1.612E-01	3.985
	+	87.57	*	3.718E-01	8.801E-02	9.753E-02	9.351E-03	3.812
TL-208	+	277.35		7.152E-01	4.806E-01	5.073E-01	7.541E-02	1.410
	+	510.84		8.569E-01	3.213E-01	1.914E-01	2.420E-02	4.477
	+	583.14	*	5.428E-01	9.761E-02	5.067E-02	5.022E-03	10.713
	+	860.37		8.622E-01	4.419E-01	4.426E-01	4.432E-02	1.948
BI-211		72.87		3.160E+00	2.780E+00	4.477E+00	3.640E-01	0.706
	+	351.07	*	4.284E+00	6.290E-01	2.779E-01	3.038E-02	15.418
PB-212	+	74.81		2.376E+00	5.072E-01	4.699E-01	5.871E-02	5.056
	+	77.11		1.990E+00	2.840E-01	2.666E-01	2.264E-02	7.466
	+	87.30		1.719E+00	4.418E-01	4.523E-01	6.256E-02	3.801
	+	238.63	*	1.686E+00	2.271E-01	8.557E-02	1.013E-02	19.709
	+	300.09		2.341E+00	9.054E-01	9.509E-01	1.246E-01	2.462
PO-212	+	74.81		2.376E+00	5.072E-01	4.699E-01	5.871E-02	5.056
	+	77.11		1.990E+00	2.840E-01	2.666E-01	2.264E-02	7.466
	+	87.30		1.719E+00	4.418E-01	4.523E-01	6.256E-02	3.801
		115.19		-2.847E-01	2.861E+00	4.785E+00	3.992E-01	-0.059
	+	238.63	*	1.686E+00	2.271E-01	8.557E-02	1.013E-02	19.709
	+	300.09		2.341E+00	9.054E-01	9.509E-01	1.246E-01	2.462
BI-214	+	609.31	*	1.302E+00	1.998E-01	9.999E-02	1.057E-02	13.017
	+	1120.29		1.513E+00	5.509E-01	3.943E-01	4.233E-02	3.837
	+	1764.49		1.559E+00	4.280E-01	2.049E-01	1.696E-02	7.611
PB-214	+	74.81		4.093E+00	8.423E-01	8.097E-01	9.002E-02	5.056
	+	77.11		3.412E+00	5.520E-01	4.570E-01	5.215E-02	7.466
	+	87.30		2.945E+00	7.333E-01	7.748E-01	9.513E-02	3.801
	+	241.98		2.615E+00	7.101E-01	5.154E-01	6.385E-02	5.073
	+	295.21		1.551E+00	3.200E-01	1.990E-01	2.656E-02	7.795
	+	351.92	*	1.490E+00	2.322E-01	9.687E-02	1.172E-02	15.386
PO-214	+	74.81		4.093E+00	8.423E-01	8.097E-01	9.002E-02	5.056
	+	77.11		3.412E+00	5.520E-01	4.570E-01	5.215E-02	7.466
	+	87.30		2.945E+00	7.333E-01	7.748E-01	9.513E-02	3.801

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		2.615E+00	7.101E-01	5.154E-01	6.385E-02	5.073
	+	295.21		1.551E+00	3.200E-01	1.990E-01	2.656E-02	7.795
	+	351.92	*	1.490E+00	2.322E-01	9.687E-02	1.172E-02	15.386
PO-216	+	74.81		2.376E+00	5.072E-01	4.699E-01	5.871E-02	5.056
	+	77.11		1.990E+00	2.840E-01	2.666E-01	2.264E-02	7.466
	+	87.30		1.719E+00	4.418E-01	4.523E-01	6.256E-02	3.801
	+	238.63	*	1.686E+00	2.271E-01	8.557E-02	1.013E-02	19.709
	+	300.09		2.341E+00	9.054E-01	9.509E-01	1.246E-01	2.462
PO-218	+	74.81		4.093E+00	8.423E-01	8.097E-01	9.002E-02	5.056
	+	77.11		3.412E+00	5.520E-01	4.570E-01	5.215E-02	7.466
	+	87.30		2.945E+00	7.333E-01	7.748E-01	9.513E-02	3.801
	+	241.98		2.615E+00	7.101E-01	5.154E-01	6.385E-02	5.073
	+	295.21		1.551E+00	3.200E-01	1.990E-01	2.656E-02	7.795
	+	351.92	*	1.490E+00	2.322E-01	9.687E-02	1.172E-02	15.386
RA-224	+	240.98	*	4.958E+00	1.317E+00	9.740E-01	1.073E-01	5.091
RA-226	+	609.31	*	1.302E+00	1.998E-01	9.999E-02	1.057E-02	13.017
	+	1120.29		1.513E+00	5.509E-01	3.943E-01	4.233E-02	3.837
	+	1764.49		1.559E+00	4.280E-01	2.049E-01	1.696E-02	7.611
AC-228	+	338.32		1.809E+00	8.808E-01	3.385E-01	1.415E-01	5.345
	+	911.07	*	1.817E+00	3.703E-01	1.891E-01	2.246E-02	9.611
	+	969.11		1.886E+00	5.878E-01	3.307E-01	7.799E-02	5.703
RA-228	+	338.32		1.809E+00	8.808E-01	3.385E-01	1.415E-01	5.345
	+	911.07	*	1.817E+00	3.703E-01	1.891E-01	2.246E-02	9.611
	+	969.11		1.886E+00	5.878E-01	3.307E-01	7.799E-02	5.703
TH-228	+	74.81		2.416E+00	4.647E-01	4.780E-01	3.999E-02	5.056
	+	77.11		2.025E+00	2.889E-01	2.712E-01	2.303E-02	7.466
	+	87.30		1.749E+00	4.140E-01	4.601E-01	4.396E-02	3.801
	+	238.63	*	1.715E+00	2.310E-01	8.704E-02	1.031E-02	19.709
	+	300.09		2.381E+00	1.667E+00	9.672E-01	5.785E-01	2.462
TH-230	+	609.31	*	1.301E+00	1.997E-01	9.999E-02	1.057E-02	13.017
	+	1120.29		1.513E+00	5.509E-01	3.943E-01	4.233E-02	3.837
	+	1764.49		1.559E+00	4.280E-01	2.049E-01	1.696E-02	7.611
TH-232	+	338.32		1.809E+00	4.927E-01	3.385E-01	3.695E-02	5.345
	+	911.07	*	1.817E+00	3.703E-01	1.891E-01	2.246E-02	9.611
	+	969.11		1.886E+00	5.878E-01	3.307E-01	7.799E-02	5.703
TH-234	+	63.29	*	1.682E+00	1.836E+00	1.650E+00	2.878E-01	1.019
	+	92.38		2.347E+00	8.693E-01	6.319E-01	1.162E-01	3.714
U-234	+	609.31	*	1.301E+00	1.997E-01	9.999E-02	1.057E-02	13.017
	+	1120.29		1.513E+00	5.509E-01	3.943E-01	4.233E-02	3.837
	+	1764.49		1.559E+00	4.280E-01	2.049E-01	1.696E-02	7.611
NP-237	+	86.50	*	1.092E+00	3.428E-01	2.752E-01	6.248E-02	3.966
		95.87		2.685E-01	8.497E-01	1.300E+00	3.219E-01	0.207
U-238	+	63.29	*	1.682E+00	1.836E+00	1.650E+00	2.878E-01	1.019
	+	92.38		2.347E+00	7.851E-01	6.319E-01	5.831E-02	3.714
AM-243	+	74.67	*	3.851E-01	7.394E-02	7.641E-02	6.326E-03	5.040
	+	86.72		4.094E+01	9.691E+00	1.030E+01	9.771E-01	3.975
		117.66		-1.411E+00	3.089E+00	5.079E+00	4.226E-01	-0.278
		142.18		-1.480E+00	1.582E+01	2.620E+01	2.234E+00	-0.056
ANH-511	+	511.00	*	1.851E-01	6.767E-02	4.135E-02	3.933E-03	4.476

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	1.935E-01	3.007E-01	5.191E-01	5.251E-02	0.373
NA-22		1274.54	*	-1.670E-02	4.515E-02	7.044E-02	5.861E-03	-0.237
NA-24		1368.53	*	1.076E+00	4.515E-02	Half-Life too short		
AL-26		1129.67		-3.634E-01	1.601E+00	2.566E+00	2.151E-01	-0.142
		1808.65	*	-1.350E-02	3.303E-02	5.055E-02	4.134E-03	-0.267
TI-44		67.85		1.329E-03	4.206E-02	6.004E-02	4.649E-03	0.022
	+	78.38	*	3.673E-01	5.242E-02	6.404E-02	5.515E-03	5.736
SC-46		889.25	*	-2.330E-02	3.761E-02	5.924E-02	5.600E-03	-0.393
	+	1120.51		2.632E-01	9.425E-02	1.366E-01	1.154E-02	1.927
V-48		944.10		-2.017E-01	8.336E-01	1.352E+00	1.263E-01	-0.149
		983.50	*	-1.897E-02	6.614E-02	1.063E-01	9.787E-03	-0.178
		1312.09		-1.472E-02	8.516E-02	1.349E-01	1.133E-02	-0.109
CR-51		320.08	*	2.544E-01	3.487E-01	5.772E-01	6.748E-02	0.441
MN-52		744.21		-1.823E-01	2.915E-01	4.385E-01	4.026E-02	-0.416
		848.13		-9.752E+00	7.973E+00	1.180E+01	1.111E+00	-0.826
		935.52		3.520E-02	2.923E-01	4.916E-01	4.605E-02	0.072
		1246.25		3.522E+00	9.236E+00	1.552E+01	1.279E+00	0.227
		1333.61		5.464E+00	6.136E+00	1.093E+01	9.224E-01	0.500
		1434.06	*	1.755E-01	2.486E-01	4.436E-01	3.785E-02	0.396
MN-54		834.83	*	-4.738E-02	3.429E-02	5.027E-02	4.722E-03	-0.942
CO-56		846.75	*	-9.453E-03	3.622E-02	5.934E-02	5.584E-03	-0.159
		977.42		-4.380E-01	2.727E+00	4.018E+00	3.708E-01	-0.109
		1037.82		-8.062E-02	2.998E-01	4.817E-01	4.528E-02	-0.167
		1175.09		9.108E-01	2.226E+00	3.767E+00	3.031E-01	0.242
	+	1238.25		2.039E-01	1.326E-01	1.797E-01	1.524E-02	1.135
		1360.21		2.545E-02	8.058E-01	1.306E+00	1.106E-01	0.019
		1771.40		-2.724E-02	1.896E-01	3.031E-01	2.504E-02	-0.090
CO-57		122.06	*	-1.142E-02	2.139E-02	3.498E-02	2.907E-03	-0.326
		136.48		1.860E-02	1.799E-01	3.010E-01	2.737E-02	0.062
CO-58		810.76	*	-2.948E-02	3.540E-02	5.298E-02	4.963E-03	-0.556
FE-59		142.65		1.608E+00	2.505E+00	4.261E+00	3.638E-01	0.377
		192.34		-3.969E-01	8.685E-01	1.387E+00	1.963E-01	-0.286
		1099.22	*	-2.496E-02	9.076E-02	1.451E-01	1.349E-02	-0.172
		1291.56		4.411E-02	1.240E-01	2.084E-01	1.990E-02	0.212
CO-60		1173.22		2.457E-02	4.409E-02	7.551E-02	6.071E-03	0.325
		1332.49	*	1.958E-02	3.910E-02	6.678E-02	5.633E-03	0.293
ZN-65		1115.52	*	-8.268E-02	1.012E-01	1.273E-01	1.081E-02	-0.649
GE-68		1077.35	*	-4.916E-01	1.191E+00	1.879E+00	1.641E-01	-0.262
AS-73		53.44	*	5.713E-02	7.817E-01	1.230E+00	9.381E-02	0.046
AS-74		595.88	*	2.753E-02	8.746E-02	1.462E-01	1.357E-02	0.188
		634.78		-1.473E-01	3.314E-01	5.149E-01	4.668E-02	-0.286
SE-75		66.05		-3.774E+00	4.537E+00	6.124E+00	5.892E-01	-0.616
		96.73		-4.160E-01	7.021E-01	1.033E+00	1.428E-01	-0.403
		121.11		3.458E-02	1.140E-01	1.933E-01	2.123E-02	0.179
		136.00		1.978E-02	3.379E-02	5.759E-02	4.887E-03	0.343
		198.60		4.576E-01	1.648E+00	2.667E+00	2.859E-01	0.172
		264.65	*	-5.238E-03	4.526E-02	6.399E-02	7.467E-03	-0.082
		279.53		-6.280E-02	1.120E-01	1.515E-01	1.854E-02	-0.415
		303.91		7.631E-01	2.001E+00	2.918E+00	4.055E-01	0.262

---- Non-Identified Nuclides ----

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		400.65		-1.737E-01	2.301E-01	3.659E-01	4.260E-02	-0.475
BR-77	+	87.88		1.451E+03	3.434E+02	5.301E+02	5.102E+01	2.737
		200.40		-1.636E+02	2.617E+02	4.135E+02	4.109E+01	-0.396
	+	239.00		4.807E+02	6.105E+01	6.624E+01	7.265E+00	7.258
		249.79		-3.979E+01	1.048E+02	1.648E+02	1.854E+01	-0.241
		281.68		1.735E+02	1.512E+02	2.334E+02	2.797E+01	0.743
		297.23		1.533E+02	1.110E+02	1.431E+02	1.683E+01	1.071
		303.76		1.271E+02	2.998E+02	4.388E+02	5.114E+01	0.290
		439.47		9.071E+00	2.282E+02	3.814E+02	3.599E+01	0.024
		484.57		-4.206E+01	3.617E+02	5.937E+02	5.647E+01	-0.071
		520.65	*	1.224E+01	1.556E+01	2.715E+01	2.580E+00	0.451
		574.64		-1.707E+02	3.055E+02	4.737E+02	4.439E+01	-0.360
		578.91		6.175E+01	1.413E+02	2.126E+02	1.988E+01	0.291
		585.48		7.753E+02	3.384E+02	5.723E+02	5.338E+01	1.355
		755.35		-8.921E+01	2.954E+02	4.597E+02	4.236E+01	-0.194
		817.79		-2.073E+02	2.123E+02	3.239E+02	3.033E+01	-0.640
SR-82		698.33		-2.643E+01	3.304E+01	4.924E+01	4.443E+00	-0.537
		776.49	*	5.791E-02	3.784E-01	6.126E-01	5.680E-02	0.095
		1395.20		-5.086E-01	9.020E+00	1.437E+01	1.222E+00	-0.035
RB-83		520.41	*	5.441E-02	5.959E-02	1.048E-01	9.954E-03	0.519
		529.64		6.702E-02	9.116E-02	1.583E-01	1.502E-02	0.423
		552.65		-1.291E-01	1.782E-01	2.738E-01	2.585E-02	-0.471
RB-84		881.50	*	-3.589E-02	7.318E-02	1.172E-01	1.108E-02	-0.306
KR-85		513.99	*	9.785E+00	6.575E+00	1.083E+01	1.030E+00	0.903
SR-85		513.99	*	5.122E-02	3.442E-02	5.671E-02	5.392E-03	0.903
RB-86		1076.63	*	-4.527E-01	7.975E-01	1.236E+00	1.080E-01	-0.366
Y-88		898.02		-1.206E-02	3.510E-02	5.656E-02	5.372E-03	-0.213
		1836.01	*	1.541E-02	2.959E-02	5.362E-02	4.353E-03	0.287
ZR-88		392.90	*	-1.199E-02	2.590E-02	4.210E-02	3.895E-03	-0.285
Y-91		1204.90	*	4.419E+00	1.851E+01	3.081E+01	2.505E+00	0.143
NB-94		702.63	*	1.292E-02	3.086E-02	5.141E-02	4.647E-03	0.251
		871.10		1.930E-03	2.898E-02	4.880E-02	4.606E-03	0.040
NB-95		765.79	*	3.841E-02	4.642E-02	7.078E-02	6.543E-03	0.543
NB-95M		235.69	*	6.727E-02	1.325E-01	1.963E-01	2.335E-02	0.343
ZR-95		724.18		3.439E-02	1.076E-01	1.561E-01	1.533E-02	0.220
		756.15	*	8.962E-03	7.342E-02	1.157E-01	1.162E-02	0.077
NB-97		657.90	*	-1.872E-01	7.342E-02	Half-Life too short		
		1024.50		5.902E+00	7.342E-02	Half-Life too short		
ZR-97		254.15		6.030E+00	7.342E-02	Half-Life too short		
		355.39		-2.648E+01	7.342E-02	Half-Life too short		
		507.63	*	1.059E+01	7.342E-02	Half-Life too short		
		602.52		1.484E+00	7.342E-02	Half-Life too short		
		1021.30		-2.432E+01	7.342E-02	Half-Life too short		
		1147.95		2.639E+01	7.342E-02	Half-Life too short		
		1362.66		1.355E+01	7.342E-02	Half-Life too short		
		1750.46		-1.254E+01	7.342E-02	Half-Life too short		
MO-99		140.51		-1.050E+01	3.803E+01	6.140E+01	1.698E+01	-0.171
		181.06		-2.423E-01	2.746E+01	4.025E+01	7.522E+00	-0.006
		366.43		2.118E+00	1.188E+02	2.005E+02	2.028E+01	0.011

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		739.58	*	1.342E+01	1.876E+01	3.175E+01	4.922E+00	0.423
		778.00		2.725E+01	5.144E+01	8.616E+01	7.992E+00	0.316
TC-99M		140.51	*	-2.136E+12	5.144E+01	Half-Life too short		
RH-101		127.23		5.863E-03	3.041E-02	4.609E-02	3.838E-03	0.127
		198.01	*	-1.166E-02	3.027E-02	4.750E-02	4.690E-03	-0.245
		325.23		6.342E-02	2.382E-01	3.416E-01	3.835E-02	0.186
RH-102		418.52		3.204E-03	2.569E-01	4.299E-01	4.027E-02	0.007
		475.06	*	6.895E-03	2.577E-02	4.352E-02	4.137E-03	0.158
		631.29		3.277E-02	4.748E-02	8.160E-02	7.415E-03	0.402
		697.49		-8.893E-02	7.100E-02	1.004E-01	9.058E-03	-0.886
	+	766.84		2.197E-01	1.242E-01	1.982E-01	1.832E-02	1.109
		1046.59		-4.590E-02	1.081E-01	1.707E-01	1.521E-02	-0.269
		1112.84		3.841E-02	2.644E-01	3.822E-01	3.250E-02	0.101
RU-103		497.08	*	4.050E-02	3.748E-02	6.597E-02	9.714E-03	0.614
	+	610.33		1.455E+01	2.956E+00	2.860E+00	4.861E-01	5.087
RH-106	+	511.85		9.280E-01	3.392E-01	4.042E-01	3.844E-02	2.296
		621.84	*	-1.501E-01	2.972E-01	4.610E-01	6.317E-02	-0.326
		1050.47		-5.808E-01	2.130E+00	3.416E+00	3.036E-01	-0.170
RU-106	+	511.85		9.280E-01	3.392E-01	4.042E-01	3.844E-02	2.296
		621.84	*	-1.501E-01	2.968E-01	4.610E-01	4.216E-02	-0.326
		1050.47		-5.808E-01	2.130E+00	3.416E+00	3.036E-01	-0.170
AG-108M		433.93	*	-1.337E-02	2.902E-02	4.684E-02	4.560E-03	-0.285
		614.37		-6.328E-03	3.775E-02	5.262E-02	5.002E-03	-0.120
		722.95		-3.843E-02	4.361E-02	5.818E-02	5.487E-03	-0.661
AG-110M		657.75	*	-9.952E-03	3.120E-02	4.901E-02	4.486E-03	-0.203
		677.61		4.737E-02	2.852E-01	4.671E-01	4.286E-02	0.101
		706.67		1.054E-01	2.015E-01	3.311E-01	3.073E-02	0.318
		763.93		-2.579E-02	1.676E-01	2.286E-01	2.164E-02	-0.113
		884.67		1.099E-02	4.830E-02	8.225E-02	7.981E-03	0.134
		937.48		-5.527E-02	1.075E-01	1.652E-01	1.594E-02	-0.334
		1384.27		6.188E-03	1.807E-01	2.750E-01	2.404E-02	0.023
IN-111		171.28		2.361E-01	1.440E+00	2.387E+00	2.194E-01	0.099
		245.39	*	6.074E-01	1.677E+00	2.470E+00	2.751E-01	0.246
IN-113M		391.69	*	-1.458E-03	3.798E-02	6.363E-02	6.040E-03	-0.023
SN-113		391.69	*	-1.458E-03	3.798E-02	6.363E-02	6.040E-03	-0.023
IN-114M		190.27	*	-5.440E-02	1.851E-01	2.656E-01	2.568E-02	-0.205
CD-115		260.90		-2.428E+02	2.294E+02	3.430E+02	3.959E+01	-0.708
		492.35		-1.376E+01	5.992E+01	9.737E+01	9.265E+00	-0.141
		527.90	*	5.843E-01	1.655E+01	2.730E+01	2.592E+00	0.021
SN-117M		156.02		6.213E-01	2.198E+00	3.678E+00	3.244E-01	0.169
		158.56	*	-1.775E-03	5.284E-02	8.721E-02	7.746E-03	-0.020
SB-122		563.90	*	1.688E+00	3.134E+00	5.333E+00	5.017E-01	0.316
		692.80		-8.244E+00	6.687E+01	1.043E+02	9.392E+00	-0.079
I-123		159.00	*	-3.696E+01	6.687E+01	Half-Life too short		
		528.96		1.793E+03	6.687E+01	Half-Life too short		
TE-123M		159.00	*	-1.527E-02	2.511E-02	4.032E-02	3.605E-03	-0.379
I-124		602.71	*	5.532E-02	9.602E-01	1.377E+00	1.274E-01	0.040
		722.78		-6.358E+00	6.430E+00	8.474E+00	7.721E-01	-0.750
		1325.50		3.874E+01	4.502E+01	8.005E+01	6.741E+00	0.484

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1376.25		8.634E+01	3.525E+01	7.369E+01	6.254E+00	1.172
		1509.49		2.306E+01	1.946E+01	3.726E+01	3.186E+00	0.619
		1691.02		7.300E+00	4.554E+00	9.496E+00	7.984E-01	0.769
SB-124		602.71		2.373E-03	4.119E-02	5.910E-02	5.466E-03	0.040
		645.85		5.098E-01	4.595E-01	8.110E-01	7.694E-02	0.629
		709.31		-7.525E-01	2.757E+00	4.231E+00	3.835E-01	-0.178
		713.82		-4.688E-01	1.561E+00	2.439E+00	3.018E-01	-0.192
		722.78		-3.954E-01	3.999E-01	5.270E-01	4.895E-02	-0.750
	+	968.20		1.986E+01	4.445E+00	7.305E+00	6.766E-01	2.719
		1045.16		-3.622E-01	2.414E+00	3.924E+00	3.500E-01	-0.092
		1325.50		2.573E+00	2.990E+00	5.317E+00	4.478E-01	0.484
		1368.21		8.773E-02	1.628E+00	2.642E+00	3.537E-01	0.033
		1436.60		-9.014E-01	3.064E+00	4.915E+00	4.195E-01	-0.183
		1691.02	*	1.071E-01	6.685E-02	1.393E-01	1.220E-02	0.769
SB-125		427.89	*	4.667E-02	7.829E-02	1.358E-01	1.297E-02	0.344
	+	463.38		6.284E-01	4.049E-01	5.367E-01	5.424E-02	1.171
		600.56		5.881E-03	1.676E-01	2.738E-01	2.698E-02	0.021
		635.90		-6.960E-02	2.391E-01	3.775E-01	3.670E-02	-0.184
TE-125M		109.28	*	9.856E-01	7.828E+00	1.325E+01	1.349E+00	0.074
I-126		388.63		-6.523E-02	2.050E-01	3.377E-01	3.159E-02	-0.193
		666.33	*	4.492E-02	1.856E-01	3.061E-01	2.722E-02	0.147
		753.82		2.652E-01	1.613E+00	2.618E+00	2.411E-01	0.101
SB-126		223.80		-1.067E+00	4.093E+00	6.542E+00	6.910E-01	-0.163
	+	278.60		5.278E+00	3.516E+00	4.320E+00	5.182E-01	1.222
		296.50		1.123E+01	2.514E+00	3.533E+00	4.160E-01	3.178
		414.70		-4.412E-03	7.533E-02	1.214E-01	1.135E-02	-0.036
		415.30		-1.774E-01	6.104E+00	1.019E+01	9.534E-01	-0.017
		555.20		-2.100E+00	3.819E+00	5.957E+00	5.619E-01	-0.353
		573.80		-1.524E-01	9.584E-01	1.545E+00	1.448E-01	-0.099
		593.00		-1.923E-01	8.947E-01	1.432E+00	1.331E-01	-0.134
		656.30		-1.271E+00	3.441E+00	5.386E+00	4.802E-01	-0.236
		666.33		1.886E-02	7.793E-02	1.285E-01	1.143E-02	0.147
		675.00		-9.705E-01	2.158E+00	3.348E+00	2.990E-01	-0.290
		695.00		7.859E-02	7.417E-02	1.303E-01	1.174E-02	0.603
		697.00		-2.959E-01	2.749E-01	3.968E-01	3.579E-02	-0.746
		720.50	*	-7.445E-02	1.559E-01	2.396E-01	2.182E-02	-0.311
		856.80		-1.905E-01	5.561E-01	7.762E-01	7.314E-02	-0.245
		989.30		-3.760E-01	1.236E+00	1.983E+00	1.820E-01	-0.190
		1034.80		-5.911E+00	9.245E+00	1.426E+01	1.280E+00	-0.414
		1213.00		-5.266E-01	5.302E+00	8.561E+00	6.981E-01	-0.062
SB-127		61.10		-5.702E+01	7.721E+01	1.054E+02	1.138E+01	-0.541
		252.40		-7.368E-02	5.500E+00	8.839E+00	3.786E+00	-0.008
		290.80		-2.723E+01	3.281E+01	4.304E+01	6.160E+00	-0.633
		411.60		-5.858E+00	1.667E+01	2.373E+01	3.928E+00	-0.247
		444.90		4.180E-01	1.201E+01	1.986E+01	2.708E+00	0.021
		473.00		-1.876E+00	2.083E+00	3.191E+00	4.460E-01	-0.588
		543.00		-5.155E+00	2.103E+01	3.382E+01	5.199E+00	-0.152
		603.60		1.107E+00	1.736E+01	2.491E+01	3.356E+00	0.044
		685.20	*	9.710E-02	1.739E+00	2.819E+00	3.448E-01	0.034

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		698.50		-8.812E+00	1.971E+01	3.039E+01	5.004E+00	-0.290
		722.20		-3.185E+01	4.255E+01	6.086E+01	7.382E+00	-0.523
		783.80		4.198E+00	4.888E+00	8.347E+00	1.120E+00	0.503
XE-127		57.60		-4.631E+00	5.805E+00	8.704E+00	6.292E-01	-0.532
		145.22		-2.574E-01	6.623E-01	1.061E+00	9.110E-02	-0.243
		172.10		4.842E-02	1.090E-01	1.827E-01	1.684E-02	0.265
		202.84	*	2.800E-02	4.282E-02	7.180E-02	7.181E-03	0.390
		374.96		4.914E-02	1.888E-01	3.226E-01	3.173E-02	0.152
I-131		80.18		-1.410E+00	5.065E+00	7.036E+00	6.229E-01	-0.200
		284.30		-1.763E+00	1.631E+00	2.401E+00	2.949E-01	-0.734
		364.48	*	7.656E-03	1.202E-01	2.035E-01	2.155E-02	0.038
		636.97		1.663E-01	1.656E+00	2.710E+00	2.581E-01	0.061
		722.89		-9.035E+00	8.848E+00	1.160E+01	1.065E+00	-0.779
TE-132		49.72		1.048E+01	2.663E+01	4.266E+01	4.692E+00	0.246
		111.76		-1.156E+00	3.775E+01	6.341E+01	7.118E+00	-0.018
		116.30		-1.930E+01	3.347E+01	5.468E+01	6.113E+00	-0.353
		228.16	*	8.082E-01	9.389E-01	1.569E+00	2.713E-01	0.515
BA-133		53.15		3.294E-01	3.279E+00	5.166E+00	3.958E-01	0.064
		79.62		-8.519E-01	1.118E+00	1.648E+00	2.520E-01	-0.517
		81.00		7.845E-03	1.043E-01	1.290E-01	2.065E-02	0.061
	+	276.40		7.070E-01	4.781E-01	6.071E-01	1.010E-01	1.165
	+	302.84		1.349E-01	1.283E-01	2.023E-01	3.124E-02	0.667
		356.01	*	-4.966E-02	4.076E-02	5.308E-02	7.670E-03	-0.936
		383.85		-3.582E-02	2.794E-01	4.664E-01	6.175E-02	-0.077
I-133	+	510.53		9.084E+00	2.794E-01	Half-Life too short		
		529.87	*	5.927E-03	2.794E-01	Half-Life too short		
		706.58		9.465E-01	2.794E-01	Half-Life too short		
		856.28		-1.986E+00	2.794E-01	Half-Life too short		
		875.33		1.041E-01	2.794E-01	Half-Life too short		
	+	1236.41		7.005E+00	2.794E-01	Half-Life too short		
		1298.22		6.170E-01	2.794E-01	Half-Life too short		
CS-134		475.35		9.843E-01	1.692E+00	2.915E+00	2.771E-01	0.338
		563.23		1.679E-01	3.370E-01	5.714E-01	5.420E-02	0.294
		569.32		1.174E-02	1.722E-01	2.832E-01	2.689E-02	0.041
		604.70		1.160E-03	3.518E-02	5.031E-02	4.658E-03	0.023
	+	795.84	*	9.186E-02	8.078E-02	8.465E-02	7.936E-03	1.085
		801.93		-3.819E-01	4.208E-01	5.476E-01	5.134E-02	-0.698
		1038.57		1.693E-01	3.754E+00	6.220E+00	5.569E-01	0.027
		1167.94		-3.036E+00	2.462E+00	3.520E+00	2.845E-01	-0.863
		1365.15		-6.679E-01	1.133E+00	1.663E+00	1.476E-01	-0.402
CS-135		268.24	*	1.676E-01	1.643E-01	2.495E-01	3.181E-02	0.672
I-135		288.45		4.476E+10	1.643E-01	Half-Life too short		
		417.63		6.524E+10	1.643E-01	Half-Life too short		
		546.56		-2.396E+11	1.643E-01	Half-Life too short		
		836.80		-9.492E+11	1.643E-01	Half-Life too short		
		1038.76		1.186E+11	1.643E-01	Half-Life too short		
		1124.00		1.183E+12	1.643E-01	Half-Life too short		
		1131.51		3.744E+11	1.643E-01	Half-Life too short		
		1260.41	*	5.133E+10	1.643E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1457.56		1.347E+14	1.643E-01	Half-Life too short		
		1678.03		-5.083E+11	1.643E-01	Half-Life too short		
		1706.46		1.474E+11	1.643E-01	Half-Life too short		
		1791.20		1.114E+12	1.643E-01	Half-Life too short		
CS-136		66.91		-6.932E-01	8.138E-01	1.091E+00	1.629E-01	-0.635
	+	86.29		5.381E+00	1.373E+00	1.878E+00	2.520E-01	2.865
		153.22		2.038E-01	6.527E-01	1.094E+00	1.068E-01	0.186
		163.89		-8.480E-02	1.059E+00	1.707E+00	1.709E-01	-0.050
		176.55		9.124E-02	3.621E-01	6.015E-01	5.886E-02	0.152
		273.65		2.368E-01	5.552E-01	6.549E-01	8.049E-02	0.362
		340.57		7.671E-02	1.272E-01	1.988E-01	2.199E-02	0.386
		818.51		-8.060E-02	7.443E-02	1.123E-01	1.052E-02	-0.718
		1048.07	*	-1.535E-02	1.106E-01	1.798E-01	1.665E-02	-0.085
		1235.34		4.588E-01	8.014E-01	1.192E+00	1.378E-01	0.385
BA-137M		661.65	*	3.673E-03	3.162E-02	5.165E-02	4.583E-03	0.071
CS-137		661.65	*	3.883E-03	3.342E-02	5.460E-02	4.854E-03	0.071
CE-139		165.85	*	2.644E-03	2.628E-02	4.351E-02	3.946E-03	0.061
BA-140		162.64		-1.915E-01	7.446E-01	1.190E+00	1.127E-01	-0.161
		304.84		1.556E+00	1.370E+00	2.024E+00	5.890E-01	0.769
		423.70		-3.054E-02	1.858E+00	3.100E+00	1.012E+00	-0.010
		537.32	*	-4.534E-03	2.510E-01	4.117E-01	1.374E-01	-0.011
LA-140	+	328.77		8.050E-01	5.180E-01	5.831E-01	6.720E-02	1.381
		432.53		-5.207E-01	2.010E+00	3.294E+00	3.228E-01	-0.158
		487.03		-4.386E-02	1.520E-01	2.286E-01	2.286E-02	-0.192
		751.79		3.112E-01	1.883E+00	3.057E+00	3.079E-01	0.102
		815.85		2.606E-02	3.041E-01	5.154E-01	5.298E-02	0.051
		867.82		-5.026E-01	1.438E+00	2.093E+00	2.062E-01	-0.240
		919.63		-1.483E+00	2.710E+00	4.125E+00	4.660E-01	-0.360
		925.24		2.821E-01	1.042E+00	1.782E+00	1.764E-01	0.158
		1596.49	*	-5.991E-02	8.329E-02	1.223E-01	1.041E-02	-0.490
CE-141		145.44	*	-2.880E-02	6.019E-02	9.601E-02	8.398E-03	-0.300
CE-143		57.37		-3.062E-03	6.019E-02	Half-Life too short		
		231.56		-5.611E-03	6.019E-02	Half-Life too short		
		293.26	*	1.715E-03	6.019E-02	Half-Life too short		
	+	350.59		9.157E-02	6.019E-02	Half-Life too short		
		490.36		3.901E-03	6.019E-02	Half-Life too short		
		664.57		3.823E-04	6.019E-02	Half-Life too short		
		721.93		-2.581E-03	6.019E-02	Half-Life too short		
CE-144		80.11		-6.506E-01	1.974E+00	2.734E+00	2.400E-01	-0.238
		133.54	*	-8.678E-02	1.919E-01	2.984E-01	4.608E-02	-0.291
PM-144		476.78		3.564E-02	6.069E-02	1.045E-01	1.071E-02	0.341
		618.01		4.907E-03	2.908E-02	4.793E-02	4.502E-03	0.102
		696.49	*	-1.582E-02	3.150E-02	4.839E-02	4.365E-03	-0.327
		778.57		2.034E+00	2.127E+00	3.685E+00	3.419E-01	0.552
PR-144		696.49	*	-1.073E+00	2.137E+00	3.283E+00	2.960E-01	-0.327
		1489.15		1.725E+00	8.609E+00	1.492E+01	1.275E+00	0.116
PM-146		453.90	*	2.117E-02	3.688E-02	6.369E-02	7.274E-03	0.332
		633.02		-7.582E-01	1.235E+00	1.834E+00	6.875E-01	-0.413
		735.90		-1.279E-01	1.517E-01	2.172E-01	6.248E-02	-0.589

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		747.13		-6.667E-02	8.794E-02	1.298E-01	1.869E-02	-0.514
ND-147	+	91.11		8.202E-01	3.082E-01	4.601E-01	4.599E-02	1.783
		319.41		-1.772E+00	3.378E+00	5.141E+00	5.838E-01	-0.345
		439.89		-9.210E-01	5.984E+00	9.869E+00	9.316E-01	-0.093
		531.02	*	6.664E-02	5.542E-01	9.198E-01	1.423E-01	0.072
PM-149		285.90	*	-2.627E+01	1.560E+02	2.461E+02	4.331E+01	-0.107
EU-152		121.78		-9.119E-03	6.053E-02	1.007E-01	9.724E-03	-0.091
		244.69		8.376E-02	3.186E-01	4.661E-01	5.182E-02	0.180
		344.27	*	4.661E-02	9.181E-02	1.427E-01	1.595E-02	0.327
		443.98		-4.141E-01	8.347E-01	1.326E+00	1.253E-01	-0.312
		778.89		2.271E-01	2.440E-01	4.220E-01	3.915E-02	0.538
		867.32		-1.815E-01	8.246E-01	1.165E+00	1.099E-01	-0.156
	+	964.01		6.303E-01	3.251E-01	5.412E-01	5.021E-02	1.165
		1085.78		-1.091E-01	3.672E-01	5.855E-01	5.083E-02	-0.186
		1112.02		1.951E-01	3.613E-01	5.473E-01	4.656E-02	0.356
		1407.95		1.791E-01	1.641E-01	3.020E-01	2.572E-02	0.593
GD-153		69.67		9.895E-01	1.408E+00	2.247E+00	1.771E-01	0.440
	+	83.37		3.319E+01	1.417E+01	2.139E+01	1.950E+00	1.552
		97.43	*	-1.924E-02	7.308E-02	1.088E-01	9.667E-03	-0.177
		103.18		-8.044E-02	8.814E-02	1.430E-01	1.232E-02	-0.563
EU-154		123.07		-3.388E-02	4.365E-02	7.040E-02	7.833E-03	-0.481
		247.94		-3.689E-02	3.278E-01	5.243E-01	7.091E-02	-0.070
		591.81		-1.866E-01	5.403E-01	8.542E-01	1.041E-01	-0.218
		723.30		-1.602E-01	1.970E-01	2.478E-01	2.472E-02	-0.646
		756.87		-3.215E-02	7.782E-01	1.208E+00	1.500E-01	-0.027
		873.19		-9.577E-02	2.683E-01	4.337E-01	5.567E-02	-0.221
		996.32		-3.659E-01	3.550E-01	5.194E-01	9.364E-02	-0.704
		1004.76		-6.356E-02	2.147E-01	3.459E-01	4.154E-02	-0.184
		1274.45	*	-4.061E-02	1.266E-01	1.985E-01	2.199E-02	-0.205
EU-155		48.70		-8.729E-01	2.256E+00	3.479E+00	2.858E-01	-0.251
		60.01		2.121E+00	4.638E+00	6.826E+00	4.875E-01	0.311
	+	86.54		4.481E-01	1.062E-01	1.597E-01	1.525E-02	2.806
		105.31	*	1.251E-01	9.003E-02	1.588E-01	1.374E-02	0.788
TB-160	+	86.79		1.219E+00	2.885E-01	4.382E-01	4.162E-02	2.781
		197.04		-5.739E-02	5.165E-01	8.215E-01	8.090E-02	-0.070
		215.65		3.127E-01	6.972E-01	1.155E+00	1.195E-01	0.271
	+	298.57		3.471E-01	1.327E-01	1.878E-01	2.204E-02	1.849
		879.36	*	4.914E-02	1.339E-01	2.308E-01	2.180E-02	0.213
		962.29		4.783E-01	6.250E-01	9.712E-01	9.015E-02	0.493
		966.15		1.114E+00	2.680E-01	5.123E-01	4.749E-02	2.174
		1177.93		-4.115E-01	3.831E-01	5.624E-01	4.529E-02	-0.732
		1271.85		8.048E-01	7.382E-01	1.317E+00	1.094E-01	0.611
HO-166M		80.57		-6.602E-02	2.935E-01	3.551E-01	3.134E-02	-0.186
	+	184.41		1.274E-01	5.367E-02	6.049E-02	5.758E-03	2.107
		280.46		1.460E-02	8.439E-02	1.215E-01	1.458E-02	0.120
		410.95		5.308E-02	2.413E-01	3.626E-01	3.385E-02	0.146
		711.68	*	2.425E-05	5.582E-02	8.975E-02	8.143E-03	0.000
		752.31		1.953E-01	2.631E-01	4.478E-01	4.122E-02	0.436
		810.29		-3.697E-02	5.243E-02	7.967E-02	7.448E-03	-0.464

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		51.35		-1.733E+01	2.812E+01	4.271E+01	3.366E+00	-0.406
		52.39		-2.325E-01	1.438E+01	2.254E+01	1.747E+00	-0.010
		59.40		2.749E+01	2.483E+01	3.782E+01	2.686E+00	0.727
		66.72	*	-2.434E+01	2.654E+01	3.565E+01	2.731E+00	-0.683
LU-176	+	88.36		8.817E-01	2.087E-01	3.117E-01	2.992E-02	2.829
		201.83		2.813E-03	2.572E-02	4.214E-02	4.204E-03	0.067
		306.84	*	-7.169E-03	2.223E-02	3.449E-02	4.001E-03	-0.208
		401.10		-5.890E+00	6.017E+00	9.427E+00	8.758E-01	-0.625
LU-177		112.95		4.154E-01	1.635E+00	2.776E+00	2.324E-01	0.150
	+	208.36	*	3.020E+00	1.665E+00	2.245E+00	2.278E-01	1.345
LU-177M		52.97		1.553E-02	1.492E+00	2.341E+00	1.798E-01	0.007
		54.07		1.606E-01	8.049E-01	1.273E+00	9.622E-02	0.126
		61.30		-8.918E-01	1.412E+00	1.945E+00	1.411E-01	-0.458
		121.62		-2.971E-02	3.149E-01	5.254E-01	4.361E-02	-0.057
		147.16		7.273E-02	5.673E-01	9.463E-01	8.160E-02	0.077
		171.86		1.756E-01	4.259E-01	7.132E-01	6.568E-02	0.246
		218.09		-4.523E-01	7.859E-01	1.237E+00	1.287E-01	-0.366
	+	268.79		2.609E+00	1.417E+00	1.358E+00	1.595E-01	1.922
		319.02		-1.226E-01	2.294E-01	3.485E-01	3.959E-02	-0.352
		367.43		-5.977E-01	8.078E-01	1.297E+00	1.308E-01	-0.461
		413.65	*	1.921E-02	1.689E-01	2.515E-01	2.351E-02	0.076
HF-181		56.28		-1.748E-02	8.958E-01	1.400E+00	1.027E-01	-0.012
		57.53		-4.008E-01	4.856E-01	7.270E-01	5.259E-02	-0.551
		65.20		4.363E-01	8.659E-01	1.269E+00	9.582E-02	0.344
		133.02		1.132E-02	6.522E-02	9.851E-02	8.261E-03	0.115
		136.25		9.516E-02	4.074E-01	6.851E-01	5.775E-02	0.139
		345.85		1.375E-02	1.755E-01	2.890E-01	3.098E-02	0.048
		482.03	*	-1.160E-02	3.885E-02	6.290E-02	5.982E-03	-0.184
W-181		56.28		-7.401E-03	3.433E-01	5.364E-01	3.937E-02	-0.014
		57.53		-1.539E-01	1.863E-01	2.789E-01	2.018E-02	-0.552
		65.20	*	1.661E-01	3.296E-01	4.829E-01	3.647E-02	0.344
TA-182		67.75		-3.733E-04	1.015E-01	1.446E-01	1.119E-02	-0.003
		100.10		-1.469E-02	1.503E-01	2.493E-01	2.180E-02	-0.059
		152.43		1.060E-01	3.015E-01	5.063E-01	4.424E-02	0.209
		222.10		1.248E-01	3.119E-01	5.153E-01	5.419E-02	0.242
		1001.68		1.606E+00	2.064E+00	3.623E+00	3.307E-01	0.443
	+	1121.28		7.238E-01	2.592E-01	3.670E-01	3.098E-02	1.973
		1189.05		1.761E-01	3.172E-01	5.425E-01	4.387E-02	0.325
		1221.42	*	5.737E-02	2.151E-01	3.574E-01	2.923E-02	0.160
		1230.97		-2.840E-03	5.592E-01	7.850E-01	6.440E-02	-0.004
RE-183		57.98		-2.549E-02	1.829E-01	2.837E-01	2.043E-02	-0.090
		59.32		1.442E-01	1.025E-01	1.585E-01	1.126E-02	0.910
		67.20		-8.390E-02	1.869E-01	2.586E-01	1.991E-02	-0.324
		162.32	*	-4.297E-02	9.993E-02	1.584E-01	1.422E-02	-0.271
	+	208.81		2.259E+00	1.245E+00	1.698E+00	1.725E-01	1.330
		291.72		-4.250E-01	9.997E-01	1.365E+00	1.617E-01	-0.311
RE-184		57.98		-9.286E-02	6.663E-01	1.034E+00	7.441E-02	-0.090
		59.32		5.248E-01	3.730E-01	5.769E-01	4.100E-02	0.910
		67.20		-3.056E-01	6.805E-01	9.420E-01	7.250E-02	-0.324

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		161.27		-6.814E-02	3.102E-01	5.072E-01	4.539E-02	-0.134
		216.55		1.597E-01	2.402E-01	4.018E-01	4.165E-02	0.398
		252.85	*	7.475E-02	2.093E-01	3.432E-01	3.889E-02	0.218
		318.01		-2.738E-02	3.935E-01	6.200E-01	7.057E-02	-0.044
		792.07		4.103E-01	1.036E+00	1.587E+00	1.478E-01	0.258
		903.28		4.026E-01	9.579E-01	1.526E+00	1.441E-01	0.264
		920.93		-1.914E-01	3.804E-01	6.001E-01	5.645E-02	-0.319
OS-185		59.72		1.632E-01	2.820E-01	4.177E-01	2.972E-02	0.391
		61.14		-1.121E-01	1.562E-01	2.139E-01	1.549E-02	-0.524
		69.30		1.071E-01	2.416E-01	4.036E-01	3.169E-02	0.265
		592.07		-1.156E+00	2.206E+00	3.427E+00	3.187E-01	-0.337
		646.12	*	3.765E-02	3.946E-02	6.885E-02	6.188E-03	0.547
		717.42		4.149E-01	8.692E-01	1.453E+00	1.321E-01	0.286
		874.81		-4.824E-02	5.523E-01	9.168E-01	8.657E-02	-0.053
		880.27		1.609E-01	7.671E-01	1.305E+00	1.232E-01	0.123
RE-188		155.03	*	-2.579E-02	1.560E-01	2.563E-01	2.255E-02	-0.101
		477.96		1.595E+00	2.873E+00	4.935E+00	4.692E-01	0.323
		633.10		-1.743E+00	2.504E+00	3.792E+00	3.441E-01	-0.460
W-188	+	63.58		6.894E+01	7.448E+01	7.972E+01	5.925E+00	0.865
		227.08		7.589E+00	1.173E+01	1.956E+01	2.083E+00	0.388
		290.67	*	-6.409E+00	8.125E+00	1.073E+01	1.273E+00	-0.597
IR-192	+	295.96		1.205E+00	2.372E-01	2.824E-01	3.340E-02	4.266
		308.46		-4.667E-02	9.033E-02	1.382E-01	1.603E-02	-0.338
		316.51	*	-7.560E-03	2.902E-02	4.504E-02	5.147E-03	-0.168
		468.07		-3.361E-02	6.184E-02	9.019E-02	9.075E-03	-0.373
		604.41		1.231E-02	4.833E-01	6.907E-01	9.282E-02	0.018
		612.46		-6.502E-02	6.736E-01	9.477E-01	9.863E-02	-0.069
AU-195		65.12		8.319E-02	1.524E-01	2.238E-01	1.689E-02	0.372
		66.83		-7.784E-02	8.825E-02	1.188E-01	9.115E-03	-0.655
	+	75.70		1.256E+00	2.411E-01	3.910E-01	3.272E-02	3.211
		98.88	*	-8.680E-02	2.024E-01	3.172E-01	2.793E-02	-0.274
	+	129.76		5.292E+00	3.653E+00	4.615E+00	3.853E-01	1.147
TL-200		367.94	*	-1.302E-03	3.653E+00	Half-Life too short		
		579.30		4.347E-03	3.653E+00	Half-Life too short		
		828.27		-3.608E-03	3.653E+00	Half-Life too short		
		1205.75		1.165E-04	3.653E+00	Half-Life too short		
TL-201		68.90		7.828E-01	5.786E+00	9.980E+00	7.806E-01	0.078
		70.82		5.844E-01	3.723E+00	5.801E+00	4.622E-01	0.101
		80.30		-1.396E+00	7.308E+00	1.020E+01	8.977E-01	-0.137
		135.34		8.146E+00	3.423E+01	5.759E+01	4.848E+00	0.141
		167.43	*	-1.940E+00	9.534E+00	1.556E+01	1.417E+00	-0.125
TL-202		68.90		5.028E-02	3.717E-01	6.411E-01	5.014E-02	0.078
		70.82		3.744E-02	2.385E-01	3.716E-01	2.961E-02	0.101
		80.30		-8.943E-02	4.683E-01	6.540E-01	5.753E-02	-0.137
		439.56	*	-2.485E-02	7.115E-02	1.158E-01	1.093E-02	-0.215
HG-203		70.83		1.544E-01	9.522E-01	1.484E+00	1.959E-01	0.104
		72.87		6.472E-01	5.730E-01	9.170E-01	1.182E-01	0.706
		82.60		-1.731E-02	1.249E+00	1.533E+00	2.146E-01	-0.011
		279.20	*	-1.418E-02	4.364E-02	6.039E-02	7.359E-03	-0.235

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-207		72.80		1.715E-01	1.618E-01	2.601E-01	2.113E-02	0.659
	+	74.97		6.914E-01	1.327E-01	2.022E-01	1.679E-02	3.420
	+	84.90		4.269E-01	1.822E-01	2.645E-01	2.455E-02	1.614
		569.67		4.409E-03	2.648E-02	4.391E-02	4.122E-03	0.100
		1063.62	*	4.248E-02	5.112E-02	9.021E-02	7.952E-03	0.471
		1770.23		-9.527E-01	5.058E-01	5.265E-01	4.351E-02	-1.810
TL-207		81.07		1.775E-02	2.300E-01	2.845E-01	2.525E-02	0.062
	+	83.78		2.815E-01	1.201E-01	1.812E-01	1.659E-02	1.553
		94.90		2.382E-01	2.062E-01	3.274E-01	2.960E-02	0.727
		122.32		-7.513E-01	1.479E+00	2.421E+00	2.168E-01	-0.310
		144.24		-4.479E-02	6.349E-01	1.032E+00	9.903E-02	-0.043
		154.21		-8.729E-02	3.572E-01	5.852E-01	5.631E-02	-0.149
	+	269.46		6.056E-01	3.292E-01	3.300E-01	3.926E-02	1.835
		323.87	*	-2.538E-01	7.184E-01	9.758E-01	1.866E-01	-0.260
	+	338.28		7.555E+00	2.162E+00	2.342E+00	3.283E-01	3.226
		445.03		3.041E-02	1.961E+00	3.237E+00	4.109E-01	0.009
PO-209		260.50		-2.575E+00	8.939E+00	1.410E+01	1.626E+00	-0.183
		262.80		9.556E+00	2.428E+01	3.979E+01	4.613E+00	0.240
		896.60	*	-2.640E+00	5.991E+00	9.533E+00	9.017E-01	-0.277
BI-210		46.50	*	5.162E-01	3.264E+00	5.187E+00	4.837E-01	0.100
PB-210		46.50	*	5.162E-01	3.264E+00	5.187E+00	4.837E-01	0.100
PO-210		46.50	*	5.162E-01	3.264E+00	5.187E+00	4.381E-01	0.100
PB-211		404.84	*	5.900E-01	9.433E-01	1.360E+00	8.536E-01	0.434
		427.08		-2.147E-01	1.780E+00	2.940E+00	1.830E+00	-0.073
		831.96		6.452E-01	1.162E+00	1.917E+00	1.203E+00	0.337
BI-212	+	727.18	*	6.432E-01	3.772E-01	6.437E-01	6.725E-02	0.999
		785.46		1.447E+00	1.643E+00	2.941E+00	2.734E-01	0.492
		1620.62		8.378E-01	1.262E+00	2.169E+00	1.843E-01	0.386
PO-215		81.07		1.775E-02	2.300E-01	2.845E-01	2.525E-02	0.062
	+	83.78		2.815E-01	1.201E-01	1.812E-01	1.659E-02	1.553
		94.90		2.382E-01	2.062E-01	3.274E-01	2.960E-02	0.727
		122.32		-7.513E-01	1.479E+00	2.421E+00	2.168E-01	-0.310
		144.24		-4.479E-02	6.349E-01	1.032E+00	9.903E-02	-0.043
		154.21		-8.729E-02	3.572E-01	5.852E-01	5.631E-02	-0.149
	+	269.46		6.056E-01	3.292E-01	3.300E-01	3.926E-02	1.835
		323.87	*	-2.538E-01	7.184E-01	9.758E-01	1.866E-01	-0.260
	+	338.28		7.555E+00	2.162E+00	2.342E+00	3.283E-01	3.226
		445.03		3.041E-02	1.961E+00	3.237E+00	4.109E-01	0.009
RN-219	+	271.23		7.770E-01	4.244E-01	4.005E-01	5.244E-02	1.940
		401.81	*	-1.408E-01	3.632E-01	5.930E-01	9.146E-02	-0.237
RN-220		549.76	*	4.176E+00	2.344E+01	3.898E+01	3.683E+00	0.107
RA-223		81.07		1.775E-02	2.300E-01	2.845E-01	2.525E-02	0.062
	+	83.78		2.815E-01	1.201E-01	1.812E-01	1.659E-02	1.553
		94.90		2.382E-01	2.062E-01	3.274E-01	2.960E-02	0.727
		122.32		-7.513E-01	1.479E+00	2.421E+00	2.168E-01	-0.310
		144.24		-4.479E-02	6.349E-01	1.032E+00	9.903E-02	-0.043
		154.21		-8.729E-02	3.572E-01	5.852E-01	5.631E-02	-0.149
	+	269.46		6.056E-01	3.292E-01	3.300E-01	3.926E-02	1.835
		323.87	*	-2.538E-01	7.184E-01	9.758E-01	1.866E-01	-0.260

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	338.28		7.555E+00	2.162E+00	2.342E+00	3.283E-01	3.226
		445.03		3.041E-02	1.961E+00	3.237E+00	4.109E-01	0.009
AC-227		79.80		-1.106E+00	1.427E+00	2.086E+00	4.495E-01	-0.530
		236.00		1.435E-01	2.460E-01	3.654E-01	5.092E-02	0.393
		256.20	*	-9.705E-02	3.602E-01	5.695E-01	9.726E-02	-0.170
		286.10		1.768E-01	1.413E+00	2.271E+00	3.534E-01	0.078
	+	299.80		4.338E+00	1.785E+00	2.528E+00	4.856E-01	1.716
		304.40		1.615E+00	1.744E+00	2.628E+00	5.262E-01	0.615
		334.20		1.409E+00	2.269E+00	3.529E+00	7.265E-01	0.399
TH-227		79.80		-1.106E+00	1.427E+00	2.086E+00	4.553E-01	-0.530
	+	94.00		9.070E+00	3.535E+00	3.307E+00	7.267E-01	2.743
		236.00		1.435E-01	2.459E-01	3.654E-01	4.721E-02	0.393
		256.20	*	-9.705E-02	3.603E-01	5.695E-01	1.114E-01	-0.170
		286.10		1.768E-01	1.424E+00	2.271E+00	2.287E+00	0.078
	+	299.80		4.338E+00	1.785E+00	2.528E+00	4.856E-01	1.716
		304.40		1.615E+00	1.744E+00	2.628E+00	5.262E-01	0.615
		334.20		1.409E+00	2.269E+00	3.529E+00	7.265E-01	0.399
TH-229	+	85.43		4.213E-01	1.798E-01	2.515E-01	2.349E-02	1.675
	+	88.47		5.076E-01	1.202E-01	1.783E-01	1.710E-02	2.846
		100.00		-1.712E-02	1.541E-01	2.554E-01	2.235E-02	-0.067
		193.63	*	1.607E-02	4.412E-01	7.224E-01	7.049E-02	0.022
		210.97		5.751E-01	7.596E-01	1.151E+00	1.176E-01	0.500
PA-231		283.67	*	-4.410E-01	1.355E+00	2.113E+00	3.655E-01	-0.209
	+	301.29		5.203E-01	4.942E-01	9.912E-01	1.445E-01	0.525
TH-231		81.07		1.775E-02	2.300E-01	2.845E-01	2.525E-02	0.062
	+	83.78		2.815E-01	1.201E-01	1.812E-01	1.659E-02	1.553
		94.90		2.382E-01	2.062E-01	3.274E-01	2.960E-02	0.727
		122.32		-7.513E-01	1.479E+00	2.421E+00	2.168E-01	-0.310
		144.24		-4.479E-02	6.349E-01	1.032E+00	9.903E-02	-0.043
		154.21		-8.729E-02	3.572E-01	5.852E-01	5.631E-02	-0.149
	+	269.46		6.056E-01	3.292E-01	3.300E-01	3.926E-02	1.835
		323.87	*	-2.538E-01	7.184E-01	9.758E-01	1.866E-01	-0.260
	+	338.28		7.555E+00	2.162E+00	2.342E+00	3.283E-01	3.226
		445.03		3.041E-02	1.961E+00	3.237E+00	4.109E-01	0.009
U-231	+	84.21		1.677E+01	7.157E+00	1.082E+01	9.961E-01	1.550
	+	92.29		1.239E+01	4.146E+00	4.840E+00	4.469E-01	2.561
		95.87	*	4.210E-01	1.329E+00	2.038E+00	1.830E-01	0.207
		108.00		-2.975E+00	2.385E+00	3.795E+00	3.214E-01	-0.784
PA-233	+	75.28		2.017E+01	4.643E+00	5.903E+00	8.966E-01	3.417
	+	86.59		7.278E+00	2.527E+00	2.599E+00	7.044E-01	2.801
	+	300.12		1.209E+00	4.851E-01	7.135E-01	1.203E-01	1.695
		311.98	*	2.558E-02	5.891E-02	9.594E-02	1.121E-02	0.267
		340.50		3.702E-01	5.642E-01	8.761E-01	2.167E-01	0.423
		398.62		1.260E+00	1.894E+00	3.253E+00	8.735E-01	0.387
		415.76		-2.491E-01	1.441E+00	2.382E+00	5.206E-01	-0.105
PA-234	+	63.00		1.960E+00	2.133E+00	2.321E+00	3.448E-01	0.845
		94.67		2.140E-01	1.544E-01	2.448E-01	3.112E-02	0.874
		98.44		1.862E-02	8.408E-02	1.274E-01	7.109E-02	0.146
		99.86		-5.386E-02	3.920E-01	6.495E-01	5.688E-02	-0.083

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		111.00		3.740E-02	1.542E-01	2.619E-01	3.126E-02	0.143
		131.20		1.045E-01	1.014E-01	1.596E-01	1.335E-02	0.655
		152.70		9.027E-02	2.877E-01	4.820E-01	8.246E-02	0.187
	+	186.00		4.587E+00	2.372E+00	2.417E+00	7.611E-01	1.898
		226.40		5.974E-02	3.669E-01	5.988E-01	8.739E-02	0.100
		227.20		2.470E-01	3.882E-01	6.471E-01	6.893E-02	0.382
		248.90		1.028E-01	7.239E-01	1.174E+00	2.764E-01	0.088
	+	293.70		7.446E+00	1.841E+00	1.659E+00	3.169E-01	4.487
		369.80		1.242E-01	7.588E-01	1.290E+00	2.886E-01	0.096
		568.70		2.152E-01	8.775E-01	1.463E+00	1.374E-01	0.147
		569.50		1.282E-02	2.375E-01	3.902E-01	3.664E-02	0.033
		574.00		-2.589E-01	1.228E+00	1.970E+00	1.846E-01	-0.131
		699.00		-2.595E-01	6.544E-01	1.014E+00	1.953E-01	-0.256
		706.10		1.597E-01	1.001E+00	1.627E+00	7.270E-01	0.098
		733.00		2.187E-01	3.516E-01	5.731E-01	1.284E-01	0.382
		742.81		1.728E-01	1.348E+00	2.175E+00	1.464E+00	0.079
	+	796.30		1.782E+00	1.632E+00	1.576E+00	4.299E-01	1.131
		805.60		8.130E-01	8.801E-01	1.536E+00	4.739E-01	0.529
		819.60		-9.656E-02	1.113E+00	1.857E+00	7.093E-01	-0.052
		826.30		-9.212E-01	8.950E-01	1.204E+00	5.403E-01	-0.765
		831.60		4.391E-01	5.960E-01	1.034E+00	3.109E-01	0.425
		876.40		3.546E-01	8.501E-01	1.336E+00	1.374E+00	0.265
		880.51		1.702E-02	2.756E-01	4.632E-01	4.376E-02	0.037
		883.24		-8.076E-02	2.887E-01	4.626E-01	3.115E-01	-0.175
		899.00		-7.145E-03	7.160E-01	1.194E+00	5.240E-01	-0.006
		925.00		3.488E-01	9.723E-01	1.677E+00	1.576E-01	0.208
		926.50		-8.821E-02	1.468E-01	2.260E-01	5.775E-02	-0.390
		946.00	*	-2.689E-01	2.663E-01	3.883E-01	7.417E-02	-0.693
		949.00		3.543E-01	3.885E-01	6.983E-01	6.513E-02	0.507
		980.50		1.213E-01	6.118E-01	1.035E+00	9.538E-02	0.117
		1394.10		-1.062E-01	9.421E-01	1.482E+00	9.645E-01	-0.072
PA-234M	+	766.42		2.308E+01	1.742E+01	2.097E+01	1.066E+01	1.101
		1001.03	*	3.538E+00	4.625E+00	8.105E+00	8.439E-01	0.437
U-235	+	89.95		2.885E+00	1.377E+00	1.633E+00	5.078E-01	1.767
	+	93.35		2.822E+00	1.207E+00	1.117E+00	3.150E-01	2.525
		105.00		9.451E-01	9.260E-01	1.549E+00	4.620E-01	0.610
		143.76	*	7.775E-02	1.974E-01	3.261E-01	5.699E-02	0.238
		163.35		-1.887E-01	4.256E-01	6.725E-01	1.295E-01	-0.281
	+	185.71		1.699E-01	7.155E-02	8.949E-02	8.549E-03	1.898
		205.31		-5.455E-01	5.355E-01	7.047E-01	1.394E-01	-0.774
NP-236		94.67		1.638E-01	1.163E-01	1.859E-01	1.684E-02	0.881
		98.44		1.411E-02	6.309E-02	9.628E-02	8.500E-03	0.147
		111.00		2.829E-02	1.166E-01	1.981E-01	1.665E-02	0.143
		160.31	*	3.399E-03	6.903E-02	1.143E-01	1.020E-02	0.030
NP-239		99.55		-1.983E-02	1.321E-01	2.189E-01	1.920E-02	-0.091
		117.00	*	-7.481E-02	1.527E-01	2.507E-01	2.087E-02	-0.298
	+	209.75		1.748E+00	9.636E-01	1.318E+00	1.343E-01	1.326
		228.18		1.730E-01	2.006E-01	3.376E-01	3.605E-02	0.512
	+	277.60		3.449E-01	2.298E-01	2.953E-01	3.535E-02	1.168

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		334.30		8.595E-01	1.282E+00	2.011E+00	2.215E-01	0.427
AM-241		59.54	*	9.361E-02	1.470E-01	2.184E-01	1.714E-02	0.429
CM-243		99.55		-2.041E-02	1.360E-01	2.253E-01	1.976E-02	-0.091
		103.76	*	-5.658E-02	8.151E-02	1.336E-01	1.148E-02	-0.424
		117.00		-7.698E-02	1.572E-01	2.580E-01	2.148E-02	-0.298
	+	209.75		1.723E+00	9.500E-01	1.300E+00	1.324E-01	1.326
		228.18		1.748E-01	2.027E-01	3.412E-01	3.644E-02	0.512
	+	277.60		3.478E-01	2.317E-01	2.978E-01	3.564E-02	1.168
AM-246		798.80		-1.191E-02	1.270E-01	1.841E-01	1.717E-02	-0.065
		1036.00		-2.100E-01	2.796E-01	4.256E-01	3.816E-02	-0.493
		1062.04		2.442E-02	2.211E-01	3.679E-01	3.247E-02	0.066
		1078.86	*	1.094E-01	1.317E-01	2.331E-01	2.034E-02	0.469
CM-247	+	278.00		1.430E+00	9.529E-01	1.204E+00	1.443E-01	1.188
		287.40		1.216E+00	1.146E+00	1.928E+00	2.296E-01	0.631
		402.60	*	-6.310E-03	3.190E-02	5.280E-02	4.909E-03	-0.120
CF-249		252.85		2.782E-01	7.791E-01	1.277E+00	1.448E-01	0.218
		333.44		1.338E-02	1.778E-01	2.507E-01	2.767E-02	0.053
		387.95	*	1.789E-02	3.636E-02	6.278E-02	5.889E-03	0.285
CF-251		176.60	*	2.559E-02	1.124E-01	1.866E-01	1.740E-02	0.137
		227.00		1.564E-01	3.483E-01	5.760E-01	6.133E-02	0.272
		285.00		-2.000E+00	1.666E+00	2.431E+00	2.903E-01	-0.822

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492005		
Acquisition date	: 4-JAN-2010 14:01:43	Detector SN#	:
Detector ID	: GAM16	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:02.05	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492005	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3280E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 16-NOV-2009 11:22:16	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.120E+01	3.210E+00	4.806E-01	0.000E+00
CD-109	3.793E+00	8.800E-01	1.041E+00	0.000E+00
SN-126	3.718E-01	8.625E-02	1.025E-01	0.000E+00
TL-208	5.428E-01	9.565E-02	5.158E-02	0.000E+00
BI-211	4.284E+00	6.164E-01	2.854E-01	0.000E+00
PB-212	1.686E+00	2.226E-01	8.846E-02	0.000E+00
PO-212	1.686E+00	2.226E-01	8.846E-02	0.000E+00
BI-214	1.302E+00	1.958E-01	1.017E-01	0.000E+00
PB-214	1.490E+00	2.276E-01	9.947E-02	0.000E+00
PO-214	1.490E+00	2.276E-01	9.947E-02	0.000E+00
PO-216	1.686E+00	2.226E-01	8.846E-02	0.000E+00
PO-218	1.490E+00	2.276E-01	9.947E-02	0.000E+00
RA-224	4.958E+00	1.291E+00	1.007E+00	0.000E+00
RA-226	1.302E+00	1.958E-01	1.017E-01	0.000E+00
AC-228	1.817E+00	3.629E-01	1.910E-01	0.000E+00
RA-228	1.817E+00	3.629E-01	1.910E-01	0.000E+00
TH-228	1.715E+00	2.264E-01	8.997E-02	0.000E+00
TH-230	1.301E+00	1.958E-01	1.017E-01	0.000E+00
TH-232	1.817E+00	3.629E-01	1.910E-01	0.000E+00
TH-234	1.682E+00	1.800E+00	1.744E+00	0.000E+00
U-234	1.301E+00	1.958E-01	1.017E-01	0.000E+00
NP-237	1.092E+00	3.360E-01	2.894E-01	0.000E+00
U-238	1.682E+00	1.800E+00	1.744E+00	0.000E+00
AM-243	3.851E-01	7.246E-02	8.053E-02	0.000E+00
ANH-511	1.851E-01	6.631E-02	4.219E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	1.935E-01	2.947E-01	5.303E-01	0.000E+00 NOT IDENT.
NA-22	-1.670E-02	4.425E-02	7.072E-02	0.000E+00 NOT IDENT.

NA-24	0.000E+00	5.927E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-1.350E-02	3.237E-02	5.044E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.137E-02	6.743E-02	0.000E+00	FAIL ABUN
SC-46	-2.330E-02	3.686E-02	5.986E-02	0.000E+00	FAIL ABUN
V-48	-1.897E-02	6.482E-02	1.072E-01	0.000E+00	NOT IDENT.
CR-51	2.544E-01	3.417E-01	5.937E-01	0.000E+00	NOT IDENT.
MN-52	1.755E-01	2.436E-01	4.444E-01	0.000E+00	NOT IDENT.
MN-54	-4.738E-02	3.360E-02	5.085E-02	0.000E+00	NOT IDENT.
CO-56	-9.453E-03	3.550E-02	6.002E-02	0.000E+00	FAIL ABUN
CO-57	-1.142E-02	2.096E-02	3.657E-02	0.000E+00	NOT IDENT.
CO-58	-2.948E-02	3.469E-02	5.362E-02	0.000E+00	NOT IDENT.
FE-59	-2.496E-02	8.895E-02	1.461E-01	0.000E+00	NOT IDENT.
CO-60	1.958E-02	3.832E-02	6.700E-02	0.000E+00	NOT IDENT.
ZN-65	-8.268E-02	9.913E-02	1.281E-01	0.000E+00	NOT IDENT.
GE-68	-4.916E-01	1.167E+00	1.893E+00	0.000E+00	NOT IDENT.
AS-73	5.713E-02	7.661E-01	1.303E+00	0.000E+00	NOT IDENT.
AS-74	2.753E-02	8.571E-02	1.488E-01	0.000E+00	NOT IDENT.
SE-75	-5.238E-03	4.435E-02	6.603E-02	0.000E+00	NOT IDENT.
BR-77	1.224E+01	1.525E+01	2.769E+01	0.000E+00	FAIL ABUN
SR-82	5.791E-02	3.708E-01	6.205E-01	0.000E+00	NOT IDENT.
RB-83	5.441E-02	5.840E-02	1.069E-01	0.000E+00	NOT IDENT.
RB-84	-3.589E-02	7.172E-02	1.185E-01	0.000E+00	NOT IDENT.
KR-85	9.785E+00	6.444E+00	1.105E+01	0.000E+00	NOT IDENT.
SR-85	5.122E-02	3.373E-02	5.785E-02	0.000E+00	NOT IDENT.
RB-86	-4.527E-01	7.816E-01	1.245E+00	0.000E+00	NOT IDENT.
Y-88	1.541E-02	2.900E-02	5.348E-02	0.000E+00	NOT IDENT.
ZR-88	-1.199E-02	2.538E-02	4.316E-02	0.000E+00	NOT IDENT.
Y-91	4.419E+00	1.814E+01	3.096E+01	0.000E+00	NOT IDENT.
NB-94	1.292E-02	3.024E-02	5.216E-02	0.000E+00	NOT IDENT.
NB-95	3.841E-02	4.549E-02	7.171E-02	0.000E+00	NOT IDENT.
NB-95M	6.727E-02	1.298E-01	2.030E-01	0.000E+00	NOT IDENT.
ZR-95	8.962E-03	7.195E-02	1.173E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.885E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.262E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	1.342E+01	1.839E+01	3.219E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.591E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.166E-02	2.966E-02	4.926E-02	0.000E+00	NOT IDENT.
RH-102	6.895E-03	2.526E-02	4.446E-02	0.000E+00	FAIL ABUN
RU-103	4.050E-02	3.673E-02	6.735E-02	0.000E+00	FAIL ABUN
RH-106	-1.501E-01	2.912E-01	4.688E-01	0.000E+00	FAIL ABUN
RU-106	-1.501E-01	2.908E-01	4.688E-01	0.000E+00	FAIL ABUN
AG-108M	-1.337E-02	2.844E-02	4.793E-02	0.000E+00	NOT IDENT.
AG-110M	-9.952E-03	3.058E-02	4.979E-02	0.000E+00	NOT IDENT.
IN-111	6.074E-01	1.643E+00	2.552E+00	0.000E+00	NOT IDENT.
IN-113M	-1.458E-03	3.722E-02	6.522E-02	0.000E+00	NOT IDENT.
SN-113	-1.458E-03	3.722E-02	6.522E-02	0.000E+00	NOT IDENT.
IN-114M	-5.440E-02	1.814E-01	2.756E-01	0.000E+00	NOT IDENT.
CD-115	5.843E-01	1.622E+01	2.784E+01	0.000E+00	NOT IDENT.
SN-117M	-1.775E-03	5.179E-02	9.077E-02	0.000E+00	NOT IDENT.
SB-122	1.688E+00	3.072E+00	5.432E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.956E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.527E-02	2.460E-02	4.196E-02	0.000E+00	NOT IDENT.
I-124	5.532E-02	9.410E-01	1.401E+00	0.000E+00	FAIL ABUN
SB-124	1.071E-01	6.551E-02	1.391E-01	0.000E+00	FAIL ABUN
SB-125	4.667E-02	7.673E-02	1.390E-01	0.000E+00	FAIL ABUN
TE-125M	9.856E-01	7.672E+00	1.387E+01	0.000E+00	NOT IDENT.
I-126	4.492E-02	1.819E-01	3.109E-01	0.000E+00	NOT IDENT.
SB-126	-7.445E-02	1.528E-01	2.430E-01	0.000E+00	FAIL ABUN
SB-127	9.710E-02	1.704E+00	2.861E+00	0.000E+00	NOT IDENT.
XE-127	2.800E-02	4.197E-02	7.443E-02	0.000E+00	NOT IDENT.
I-131	7.656E-03	1.178E-01	2.089E-01	0.000E+00	NOT IDENT.
TE-132	8.082E-01	9.201E-01	1.624E+00	0.000E+00	NOT IDENT.
BA-133	-4.966E-02	3.994E-02	5.450E-02	0.000E+00	FAIL ABUN
I-133	0.000E+00	2.471E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	7.916E-02	8.570E-02	0.000E+00	FAIL ABUN
CS-135	1.676E-01	1.610E-01	2.574E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	8.191E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.535E-02	1.083E-01	1.811E-01	0.000E+00	FAIL ABUN
BA-137M	3.673E-03	3.098E-02	5.246E-02	0.000E+00	NOT IDENT.
CS-137	3.883E-03	3.275E-02	5.545E-02	0.000E+00	NOT IDENT.
CE-139	2.644E-03	2.575E-02	4.526E-02	0.000E+00	NOT IDENT.
BA-140	-4.534E-03	2.459E-01	4.197E-01	0.000E+00	NOT IDENT.
LA-140	-5.991E-02	8.163E-02	1.223E-01	0.000E+00	FAIL ABUN
CE-141	-2.880E-02	5.898E-02	1.001E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.901E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-8.678E-02	1.880E-01	3.114E-01	0.000E+00	NOT IDENT.
PM-144	-1.582E-02	3.087E-02	4.911E-02	0.000E+00	NOT IDENT.
PR-144	-1.073E+00	2.094E+00	3.331E+00	0.000E+00	NOT IDENT.

PM-146	2.117E-02	3.614E-02	6.512E-02	0.000E+00	NOT IDENT.
ND-147	6.664E-02	5.431E-01	9.379E-01	0.000E+00	FAIL ABUN
PM-149	-2.627E+01	1.528E+02	2.536E+02	0.000E+00	NOT IDENT.
EU-152	4.661E-02	8.998E-02	1.466E-01	0.000E+00	FAIL ABUN
GD-153	-1.924E-02	7.162E-02	1.142E-01	0.000E+00	FAIL ABUN
EU-154	-4.061E-02	1.240E-01	1.993E-01	0.000E+00	NOT IDENT.
EU-155	1.251E-01	8.823E-02	1.665E-01	0.000E+00	FAIL ABUN
TB-160	4.914E-02	1.312E-01	2.332E-01	0.000E+00	FAIL ABUN
HO-166M	2.425E-05	5.471E-02	9.105E-02	0.000E+00	FAIL ABUN
TM-171	-2.434E+01	2.600E+01	3.763E+01	0.000E+00	NOT IDENT.
LU-176	-7.169E-03	2.178E-02	3.550E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.631E+00	2.326E+00	0.000E+00	FAIL ABUN
LU-177M	1.921E-02	1.655E-01	2.576E-01	0.000E+00	FAIL ABUN
HF-181	-1.160E-02	3.808E-02	6.424E-02	0.000E+00	NOT IDENT.
W-181	1.661E-01	3.230E-01	5.100E-01	0.000E+00	NOT IDENT.
TA-182	5.737E-02	2.108E-01	3.591E-01	0.000E+00	FAIL ABUN
RE-183	-4.297E-02	9.793E-02	1.648E-01	0.000E+00	FAIL ABUN
RE-184	7.475E-02	2.051E-01	3.544E-01	0.000E+00	NOT IDENT.
OS-185	3.765E-02	3.867E-02	6.996E-02	0.000E+00	NOT IDENT.
RE-188	-2.579E-02	1.529E-01	2.669E-01	0.000E+00	NOT IDENT.
W-188	-6.409E+00	7.962E+00	1.106E+01	0.000E+00	FAIL ABUN
IR-192	-7.560E-03	2.844E-02	4.634E-02	0.000E+00	FAIL ABUN
AU-195	-8.680E-02	1.983E-01	3.327E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.404E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.940E+00	9.343E+00	1.619E+01	0.000E+00	NOT IDENT.
TL-202	-2.485E-02	6.973E-02	1.184E-01	0.000E+00	NOT IDENT.
HG-203	-1.418E-02	4.277E-02	6.226E-02	0.000E+00	NOT IDENT.
BI-207	4.248E-02	5.010E-02	9.086E-02	0.000E+00	FAIL ABUN
TL-207	-2.538E-01	7.040E-01	1.003E+00	0.000E+00	FAIL ABUN
PO-209	-2.640E+00	5.871E+00	9.632E+00	0.000E+00	NOT IDENT.
BI-210	5.162E-01	3.198E+00	5.508E+00	0.000E+00	NOT IDENT.
PB-210	5.162E-01	3.198E+00	5.508E+00	0.000E+00	NOT IDENT.
PO-210	5.162E-01	3.198E+00	5.508E+00	0.000E+00	NOT IDENT.
PB-211	5.900E-01	9.244E-01	1.393E+00	0.000E+00	NOT IDENT.
BI-212	6.432E-01	3.697E-01	6.527E-01	0.000E+00	FAIL ABUN
PO-215	-2.538E-01	7.040E-01	1.003E+00	0.000E+00	FAIL ABUN
RN-219	-1.408E-01	3.559E-01	6.076E-01	0.000E+00	FAIL ABUN
RN-220	4.176E+00	2.297E+01	3.972E+01	0.000E+00	NOT IDENT.
RA-223	-2.538E-01	7.040E-01	1.003E+00	0.000E+00	FAIL ABUN
AC-227	-9.705E-02	3.530E-01	5.880E-01	0.000E+00	FAIL ABUN
TH-227	-9.705E-02	3.531E-01	5.880E-01	0.000E+00	FAIL ABUN
TH-229	1.607E-02	4.324E-01	7.493E-01	0.000E+00	FAIL ABUN
PA-231	-4.410E-01	1.327E+00	2.178E+00	0.000E+00	FAIL ABUN
TH-231	-2.538E-01	7.040E-01	1.003E+00	0.000E+00	FAIL ABUN
U-231	4.210E-01	1.302E+00	2.139E+00	0.000E+00	FAIL ABUN
PA-233	2.558E-02	5.773E-02	9.873E-02	0.000E+00	FAIL ABUN
PA-234	-2.689E-01	2.609E-01	3.919E-01	0.000E+00	FAIL ABUN
PA-234M	3.538E+00	4.533E+00	8.173E+00	0.000E+00	FAIL ABUN
U-235	7.775E-02	1.934E-01	3.400E-01	0.000E+00	FAIL ABUN
NP-236	3.399E-03	6.765E-02	1.189E-01	0.000E+00	NOT IDENT.
NP-239	-7.481E-02	1.497E-01	2.623E-01	0.000E+00	FAIL ABUN
AM-241	9.361E-02	1.441E-01	2.310E-01	0.000E+00	NOT IDENT.
CM-243	-5.658E-02	7.988E-02	1.400E-01	0.000E+00	FAIL ABUN
AM-246	1.094E-01	1.291E-01	2.348E-01	0.000E+00	NOT IDENT.
CM-247	-6.310E-03	3.126E-02	5.409E-02	0.000E+00	FAIL ABUN
CF-249	1.789E-02	3.563E-02	6.436E-02	0.000E+00	NOT IDENT.
CF-251	2.559E-02	1.102E-01	1.939E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:59:39.94

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492005.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:01:43.
Sample ID : G243492005 Sample quantity : 1.32800E+02 GRAM
Detector name : GAM16 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:02.05 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1423	10.67*	1.208E+00	3.120E+01	3.120E+01	10.50
CD-109	88.03	305	3.72*	6.260E+00	3.698E+00	3.793E+00	23.67
SN-126	64.28	80	9.60	3.520E+00	6.657E-01	6.657E-01	108.76
	86.94	305	8.90	6.260E+00	1.545E+00	1.545E+00	46.87
	87.57	305	37.00*	6.260E+00	3.718E-01	3.718E-01	23.67
TL-208	277.35	81	6.80	4.697E+00	7.152E-01	7.152E-01	67.20
	510.84	194	21.60	2.966E+00	8.569E-01	8.569E-01	37.50
	583.14	432	84.20*	2.669E+00	5.428E-01	5.428E-01	17.98
	860.37	73	12.46	1.918E+00	8.622E-01	8.622E-01	51.25
BI-211	72.87	------	1.27	4.872E+00	------ Line Not Found		------
	351.07	773	12.94*	3.941E+00	4.284E+00	4.284E+00	14.68
PB-212	74.81	458	10.70	5.095E+00	2.376E+00	2.376E+00	21.35
	77.11	680	18.00	5.362E+00	1.990E+00	1.990E+00	14.27
	87.30	305	8.00	6.260E+00	1.719E+00	1.719E+00	25.70
	238.63	1391	44.60*	5.227E+00	1.686E+00	1.686E+00	13.47
	300.09	125	3.41	4.434E+00	2.341E+00	2.341E+00	38.68
PO-212	74.81	458	10.70	5.095E+00	2.376E+00	2.376E+00	21.35
	77.11	680	18.00	5.362E+00	1.990E+00	1.990E+00	14.27
	87.30	305	8.00	6.260E+00	1.719E+00	1.719E+00	25.70
	115.19	------	0.60	7.166E+00	------ Line Not Found		------
	238.63	1391	44.60*	5.227E+00	1.686E+00	1.686E+00	13.47
	300.09	125	3.41	4.434E+00	2.341E+00	2.341E+00	38.68
BI-214	609.31	549	46.30*	2.576E+00	1.301E+00	1.302E+00	15.35
	1120.29	123	15.10	1.517E+00	1.513E+00	1.513E+00	36.41
	1764.49	92	15.80	1.056E+00	1.559E+00	1.559E+00	27.45
PB-214	74.81	458	6.21	5.095E+00	4.093E+00	4.093E+00	20.58
	77.11	680	10.50	5.362E+00	3.412E+00	3.412E+00	16.18
	87.30	305	4.67	6.260E+00	2.945E+00	2.945E+00	24.90
	241.98	359	7.49	5.183E+00	2.615E+00	2.615E+00	27.16
	295.21	473	19.20	4.489E+00	1.551E+00	1.551E+00	20.63
	351.92	773	37.20*	3.941E+00	1.490E+00	1.490E+00	15.58
PO-214	74.81	458	6.21	5.095E+00	4.093E+00	4.093E+00	20.58

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	680	10.50	5.362E+00	3.412E+00	3.412E+00	16.18
	87.30	305	4.67	6.260E+00	2.945E+00	2.945E+00	24.90
	241.98	359	7.49	5.183E+00	2.615E+00	2.615E+00	27.16
	295.21	473	19.20	4.489E+00	1.551E+00	1.551E+00	20.63
	351.92	773	37.20*	3.941E+00	1.490E+00	1.490E+00	15.58
PO-216	74.81	458	10.70	5.095E+00	2.376E+00	2.376E+00	21.35
	77.11	680	18.00	5.362E+00	1.990E+00	1.990E+00	14.27
	87.30	305	8.00	6.260E+00	1.719E+00	1.719E+00	25.70
	238.63	1391	44.60*	5.227E+00	1.686E+00	1.686E+00	13.47
	300.09	125	3.41	4.434E+00	2.341E+00	2.341E+00	38.68
PO-218	74.81	458	6.21	5.095E+00	4.093E+00	4.093E+00	20.58
	77.11	680	10.50	5.362E+00	3.412E+00	3.412E+00	16.18
	87.30	305	4.67	6.260E+00	2.945E+00	2.945E+00	24.90
	241.98	359	7.49	5.183E+00	2.615E+00	2.615E+00	27.16
	295.21	473	19.20	4.489E+00	1.551E+00	1.551E+00	20.63
	351.92	773	37.20*	3.941E+00	1.490E+00	1.490E+00	15.58
RA-224	240.98	359	3.95*	5.183E+00	4.958E+00	4.958E+00	26.57
RA-226	609.31	549	46.30*	2.576E+00	1.301E+00	1.302E+00	15.35
	1120.29	123	15.10	1.517E+00	1.513E+00	1.513E+00	36.41
	1764.49	92	15.80	1.056E+00	1.559E+00	1.559E+00	27.45
AC-228	338.32	296	11.40	4.056E+00	1.809E+00	1.809E+00	48.68
	911.07	325	27.70*	1.825E+00	1.817E+00	1.817E+00	20.38
	969.11	191	16.60	1.728E+00	1.886E+00	1.886E+00	31.16
RA-228	338.32	296	11.40	4.056E+00	1.809E+00	1.809E+00	48.68
	911.07	325	27.70*	1.825E+00	1.817E+00	1.817E+00	20.38
	969.11	191	16.60	1.728E+00	1.886E+00	1.886E+00	31.16
TH-228	74.81	458	10.70	5.095E+00	2.376E+00	2.416E+00	19.23
	77.11	680	18.00	5.362E+00	1.990E+00	2.025E+00	14.27
	87.30	305	8.00	6.260E+00	1.719E+00	1.749E+00	23.67
	238.63	1391	44.60*	5.227E+00	1.686E+00	1.715E+00	13.47
	300.09	125	3.41	4.434E+00	2.341E+00	2.381E+00	70.01
TH-230	609.31	549	46.30*	2.576E+00	1.301E+00	1.301E+00	15.35
	1120.29	123	15.10	1.517E+00	1.513E+00	1.513E+00	36.41
	1764.49	92	15.80	1.056E+00	1.559E+00	1.559E+00	27.45
TH-232	338.32	296	11.40	4.056E+00	1.809E+00	1.809E+00	27.23
	911.07	325	27.70*	1.825E+00	1.817E+00	1.817E+00	20.38
	969.11	191	16.60	1.728E+00	1.886E+00	1.886E+00	31.16
TH-234	63.29	80	3.80*	3.520E+00	1.682E+00	1.682E+00	109.19
	92.38	297	5.41	6.608E+00	2.347E+00	2.347E+00	37.04
U-234	609.31	549	46.30*	2.576E+00	1.301E+00	1.301E+00	15.35
	1120.29	123	15.10	1.517E+00	1.513E+00	1.513E+00	36.41
	1764.49	92	15.80	1.056E+00	1.559E+00	1.559E+00	27.45
NP-237	86.50	305	12.60*	6.260E+00	1.092E+00	1.092E+00	31.40
	95.87	------	2.60	6.742E+00	------ Line Not Found		------
U-238	63.29	80	3.80*	3.520E+00	1.682E+00	1.682E+00	109.19
	92.38	297	5.41	6.608E+00	2.347E+00	2.347E+00	33.45
AM-243	74.67	458	66.00*	5.095E+00	3.851E-01	3.851E-01	19.20
	86.72	305	0.34	6.260E+00	4.094E+01	4.094E+01	23.67
	117.66	------	0.55	7.175E+00	------ Line Not Found		------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	142.18	------	0.13	6.968E+00	------	Line Not Found	------
ANH-511	511.00	194	100.00*	2.966E+00	1.851E-01	1.851E-01	36.56

Flag: "*" = Keyline

Sample ID : G243492005 Acquisition date : 4-JAN-2010 14:01:43

Total number of lines in spectrum 39
Number of unidentified lines 3
Number of lines tentatively identified by NID 36 92.31%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.120E+01	3.120E+01	0.328E+01	10.50	
CD-109	464.00D	1.03	3.698E+00	3.793E+00	0.898E+00	23.67	
SN-126	1.00E+05Y	1.00	3.718E-01	3.718E-01	0.880E-01	23.67	
TL-208	1.41E+10Y	1.00	5.428E-01	5.428E-01	0.976E-01	17.98	
BI-211	7.04E+08Y	1.00	4.284E+00	4.284E+00	0.629E+00	14.68	
PB-212	1.41E+10Y	1.00	1.686E+00	1.686E+00	0.227E+00	13.47	
PO-212	1.41E+10Y	1.00	1.686E+00	1.686E+00	0.227E+00	13.47	
BI-214	1600.00Y	1.00	1.301E+00	1.302E+00	0.200E+00	15.35	
PB-214	1600.00Y	1.00	1.490E+00	1.490E+00	0.232E+00	15.58	
PO-214	1600.00Y	1.00	1.490E+00	1.490E+00	0.232E+00	15.58	
PO-216	1.41E+10Y	1.00	1.686E+00	1.686E+00	0.227E+00	13.47	
PO-218	1600.00Y	1.00	1.490E+00	1.490E+00	0.232E+00	15.58	
RA-224	1.41E+10Y	1.00	4.958E+00	4.958E+00	1.317E+00	26.57	
RA-226	1600.00Y	1.00	1.301E+00	1.302E+00	0.200E+00	15.35	
AC-228	1.41E+10Y	1.00	1.817E+00	1.817E+00	0.370E+00	20.38	
RA-228	1.41E+10Y	1.00	1.817E+00	1.817E+00	0.370E+00	20.38	
TH-228	1.91Y	1.02	1.686E+00	1.715E+00	0.231E+00	13.47	
TH-230	4.47E+09Y	1.00	1.301E+00	1.301E+00	0.200E+00	15.35	
TH-232	1.41E+10Y	1.00	1.817E+00	1.817E+00	0.370E+00	20.38	
TH-234	4.47E+09Y	1.00	1.682E+00	1.682E+00	1.836E+00	109.19	
U-234	4.47E+09Y	1.00	1.301E+00	1.301E+00	0.200E+00	15.35	
NP-237	2.14E+06Y	1.00	1.092E+00	1.092E+00	0.343E+00	31.40	
U-238	4.47E+09Y	1.00	1.682E+00	1.682E+00	1.836E+00	109.19	
AM-243	7380.00Y	1.00	3.851E-01	3.851E-01	0.739E-01	19.20	
ANH-511	1.00E+09Y	1.00	1.851E-01	1.851E-01	0.677E-01	36.56	
	Total Activity :		7.195E+01	7.208E+01			

Grand Total Activity : 7.195E+01 7.208E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	84.25	148	322	1.13	168.68	166	6	2.06E-02	41.7	6.03E+00	T
4	89.78	177	328	1.28	179.74	172	11	2.46E-02	36.2	6.42E+00	T
0	129.01	101	369	0.89	258.22	254	8	1.41E-02	68.5	7.13E+00	T
0	185.76	200	385	1.20	371.71	367	10	2.77E-02	41.0	6.15E+00	T
0	208.94	114	284	1.08	418.08	414	8	1.59E-02	54.2	5.71E+00	T
0	270.25	139	287	1.82	540.69	534	13	1.94E-02	53.0	4.78E+00	T
1	301.92	37	85	1.03	604.04	596	11	5.19E-03	93.9	4.41E+00	T
0	328.09	96	218	1.38	656.38	650	11	1.33E-02	63.3	4.15E+00	T
0	408.91	54	84	1.30	817.99	815	8	7.43E-03	64.9	3.52E+00	
0	462.34	73	133	1.14	924.85	920	10	1.01E-02	63.6	3.20E+00	T
0	727.05	60	72	1.78	1454.19	1453	6	8.28E-03	57.7	2.22E+00	T
0	767.89	55	57	1.01	1535.85	1531	9	7.69E-03	55.8	2.12E+00	T
0	795.33	51	86	0.85	1590.72	1584	15	7.02E-03	87.4	2.06E+00	T
2	963.99	56	46	1.94	1927.95	1923	25	7.72E-03	50.7	1.73E+00	T
0	1237.65	58	72	1.39	2475.09	2469	12	8.01E-03	64.5	1.39E+00	T
0	1377.48	37	4	1.21	2754.64	2750	10	5.09E-03	39.9	1.27E+00	T
0	1629.09	16	15	1.03	3257.61	3250	13	2.28E-03	****	1.11E+00	
0	1728.33	38	11	1.39	3455.99	3448	14	5.32E-03	48.3	1.07E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 11:59:44.81

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492005.CNF;1		
Acquisition date	: 4-JAN-2010 14:01:43.	Detector SN#	:
Detector ID	: GAM16	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:02.05	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492005	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.32800E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 16-NOV-2009 11:22:16.1	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.120E+01	3.275E+00	4.799E-01	4.218E-02	65.013
CD-109	3.793E+00	8.980E-01	9.907E-01	9.547E-02	3.829
SN-126	3.718E-01	8.801E-02	9.753E-02	9.351E-03	3.812
TL-208	5.428E-01	9.761E-02	5.067E-02	5.022E-03	10.713
BI-211	4.284E+00	6.290E-01	2.779E-01	3.038E-02	15.418
PB-212	1.686E+00	2.271E-01	8.557E-02	1.013E-02	19.709
PO-212	1.686E+00	2.271E-01	8.557E-02	1.013E-02	19.709
BI-214	1.302E+00	1.998E-01	9.999E-02	1.057E-02	13.017
PB-214	1.490E+00	2.322E-01	9.687E-02	1.172E-02	15.386
PO-214	1.490E+00	2.322E-01	9.687E-02	1.172E-02	15.386
PO-216	1.686E+00	2.271E-01	8.557E-02	1.013E-02	19.709
PO-218	1.490E+00	2.322E-01	9.687E-02	1.172E-02	15.386
RA-224	4.958E+00	1.317E+00	9.740E-01	1.073E-01	5.091
RA-226	1.302E+00	1.998E-01	9.999E-02	1.057E-02	13.017
AC-228	1.817E+00	3.703E-01	1.891E-01	2.246E-02	9.611
RA-228	1.817E+00	3.703E-01	1.891E-01	2.246E-02	9.611
TH-228	1.715E+00	2.310E-01	8.704E-02	1.031E-02	19.709
TH-230	1.301E+00	1.997E-01	9.999E-02	1.057E-02	13.017

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.817E+00	3.703E-01	1.891E-01	2.246E-02	9.611
TH-234	1.682E+00	1.836E+00	1.650E+00	2.878E-01	1.019
U-234	1.301E+00	1.997E-01	9.999E-02	1.057E-02	13.017
NP-237	1.092E+00	3.428E-01	2.752E-01	6.248E-02	3.966
U-238	1.682E+00	1.836E+00	1.650E+00	2.878E-01	1.019
AM-243	3.851E-01	7.394E-02	7.641E-02	6.326E-03	5.040
ANH-511	1.851E-01	6.767E-02	4.135E-02	3.933E-03	4.476

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	1.935E-01		3.007E-01	5.191E-01	5.251E-02	0.373
NA-22	-1.670E-02		4.515E-02	7.044E-02	5.861E-03	-0.237
NA-24	1.076E+00		3.024E+00	Half-Life too short		
AL-26	-1.350E-02		3.303E-02	5.055E-02	4.134E-03	-0.267
TI-44	3.673E-01	+	5.242E-02	6.404E-02	5.515E-03	5.736
SC-46	-2.330E-02		3.761E-02	5.924E-02	5.600E-03	-0.393
V-48	-1.897E-02		6.614E-02	1.063E-01	9.787E-03	-0.178
CR-51	2.544E-01		3.487E-01	5.772E-01	6.748E-02	0.441
MN-52	1.755E-01		2.486E-01	4.436E-01	3.785E-02	0.396
MN-54	-4.738E-02		3.429E-02	5.027E-02	4.722E-03	-0.942
CO-56	-9.453E-03		3.622E-02	5.934E-02	5.584E-03	-0.159
CO-57	-1.142E-02		2.139E-02	3.498E-02	2.907E-03	-0.326
CO-58	-2.948E-02		3.540E-02	5.298E-02	4.963E-03	-0.556
FE-59	-2.496E-02		9.076E-02	1.451E-01	1.349E-02	-0.172
CO-60	1.958E-02		3.910E-02	6.678E-02	5.633E-03	0.293
ZN-65	-8.268E-02		1.012E-01	1.273E-01	1.081E-02	-0.649
GE-68	-4.916E-01		1.191E+00	1.879E+00	1.641E-01	-0.262
AS-73	5.713E-02		7.817E-01	1.230E+00	9.381E-02	0.046
AS-74	2.753E-02		8.746E-02	1.462E-01	1.357E-02	0.188
SE-75	-5.238E-03		4.526E-02	6.399E-02	7.467E-03	-0.082
BR-77	1.224E+01		1.556E+01	2.715E+01	2.580E+00	0.451
SR-82	5.791E-02		3.784E-01	6.126E-01	5.680E-02	0.095
RB-83	5.441E-02		5.959E-02	1.048E-01	9.954E-03	0.519
RB-84	-3.589E-02		7.318E-02	1.172E-01	1.108E-02	-0.306
KR-85	9.785E+00		6.575E+00	1.083E+01	1.030E+00	0.903
SR-85	5.122E-02		3.442E-02	5.671E-02	5.392E-03	0.903
RB-86	-4.527E-01		7.975E-01	1.236E+00	1.080E-01	-0.366
Y-88	1.541E-02		2.959E-02	5.362E-02	4.353E-03	0.287
ZR-88	-1.199E-02		2.590E-02	4.210E-02	3.895E-03	-0.285
Y-91	4.419E+00		1.851E+01	3.081E+01	2.505E+00	0.143
NB-94	1.292E-02		3.086E-02	5.141E-02	4.647E-03	0.251
NB-95	3.841E-02		4.642E-02	7.078E-02	6.543E-03	0.543
NB-95M	6.727E-02		1.325E-01	1.963E-01	2.335E-02	0.343
ZR-95	8.962E-03		7.342E-02	1.157E-01	1.162E-02	0.077
NB-97	-1.872E-01		3.003E-01	Half-Life too short		
ZR-97	1.059E+01		6.437E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	1.342E+01		1.876E+01	3.175E+01	4.922E+00	0.423
TC-99M	-2.136E+12		3.873E+12	Half-Life too short		
RH-101	-1.166E-02		3.027E-02	4.750E-02	4.690E-03	-0.245
RH-102	6.895E-03		2.577E-02	4.352E-02	4.137E-03	0.158
RU-103	4.050E-02		3.748E-02	6.597E-02	9.714E-03	0.614
RH-106	-1.501E-01		2.972E-01	4.610E-01	6.317E-02	-0.326
RU-106	-1.501E-01		2.968E-01	4.610E-01	4.216E-02	-0.326
AG-108M	-1.337E-02		2.902E-02	4.684E-02	4.560E-03	-0.285
AG-110M	-9.952E-03		3.120E-02	4.901E-02	4.486E-03	-0.203
IN-111	6.074E-01		1.677E+00	2.470E+00	2.751E-01	0.246
IN-113M	-1.458E-03		3.798E-02	6.363E-02	6.040E-03	-0.023
SN-113	-1.458E-03		3.798E-02	6.363E-02	6.040E-03	-0.023
IN-114M	-5.440E-02		1.851E-01	2.656E-01	2.568E-02	-0.205
CD-115	5.843E-01		1.655E+01	2.730E+01	2.592E+00	0.021
SN-117M	-1.775E-03		5.284E-02	8.721E-02	7.746E-03	-0.020
SB-122	1.688E+00		3.134E+00	5.333E+00	5.017E-01	0.316
I-123	-3.696E+01		3.039E+01	Half-Life too short		
TE-123M	-1.527E-02		2.511E-02	4.032E-02	3.605E-03	-0.379
I-124	5.532E-02		9.602E-01	1.377E+00	1.274E-01	0.040
SB-124	1.071E-01		6.685E-02	1.393E-01	1.220E-02	0.769
SB-125	4.667E-02		7.829E-02	1.358E-01	1.297E-02	0.344
TE-125M	9.856E-01		7.828E+00	1.325E+01	1.349E+00	0.074
I-126	4.492E-02		1.856E-01	3.061E-01	2.722E-02	0.147
SB-126	-7.445E-02		1.559E-01	2.396E-01	2.182E-02	-0.311
SB-127	9.710E-02		1.739E+00	2.819E+00	3.448E-01	0.034
XE-127	2.800E-02		4.282E-02	7.180E-02	7.181E-03	0.390
I-131	7.656E-03		1.202E-01	2.035E-01	2.155E-02	0.038
TE-132	8.082E-01		9.389E-01	1.569E+00	2.713E-01	0.515
BA-133	-4.966E-02		4.076E-02	5.308E-02	7.670E-03	-0.936
I-133	5.927E-03		1.261E-02	Half-Life too short		
CS-134	9.186E-02	+	8.078E-02	8.465E-02	7.936E-03	1.085
CS-135	1.676E-01		1.643E-01	2.495E-01	3.181E-02	0.672
I-135	5.133E+10		4.179E+11	Half-Life too short		
CS-136	-1.535E-02		1.106E-01	1.798E-01	1.665E-02	-0.085
BA-137M	3.673E-03		3.162E-02	5.165E-02	4.583E-03	0.071
CS-137	3.883E-03		3.342E-02	5.460E-02	4.854E-03	0.071
CE-139	2.644E-03		2.628E-02	4.351E-02	3.946E-03	0.061
BA-140	-4.534E-03		2.510E-01	4.117E-01	1.374E-01	-0.011
LA-140	-5.991E-02		8.329E-02	1.223E-01	1.041E-02	-0.490
CE-141	-2.880E-02		6.019E-02	9.601E-02	8.398E-03	-0.300
CE-143	1.715E-03		3.011E-04	Half-Life too short		
CE-144	-8.678E-02		1.919E-01	2.984E-01	4.608E-02	-0.291
PM-144	-1.582E-02		3.150E-02	4.839E-02	4.365E-03	-0.327
PR-144	-1.073E+00		2.137E+00	3.283E+00	2.960E-01	-0.327
PM-146	2.117E-02		3.688E-02	6.369E-02	7.274E-03	0.332
ND-147	6.664E-02		5.542E-01	9.198E-01	1.423E-01	0.072
PM-149	-2.627E+01		1.560E+02	2.461E+02	4.331E+01	-0.107
EU-152	4.661E-02		9.181E-02	1.427E-01	1.595E-02	0.327

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-1.924E-02		7.308E-02	1.088E-01	9.667E-03	-0.177
EU-154	-4.061E-02		1.266E-01	1.985E-01	2.199E-02	-0.205
EU-155	1.251E-01		9.003E-02	1.588E-01	1.374E-02	0.788
TB-160	4.914E-02		1.339E-01	2.308E-01	2.180E-02	0.213
HO-166M	2.425E-05		5.582E-02	8.975E-02	8.143E-03	0.000
TM-171	-2.434E+01		2.654E+01	3.565E+01	2.731E+00	-0.683
LU-176	-7.169E-03		2.223E-02	3.449E-02	4.001E-03	-0.208
LU-177	3.020E+00	+	1.665E+00	2.245E+00	2.278E-01	1.345
LU-177M	1.921E-02		1.689E-01	2.515E-01	2.351E-02	0.076
HF-181	-1.160E-02		3.885E-02	6.290E-02	5.982E-03	-0.184
W-181	1.661E-01		3.296E-01	4.829E-01	3.647E-02	0.344
TA-182	5.737E-02		2.151E-01	3.574E-01	2.923E-02	0.160
RE-183	-4.297E-02		9.993E-02	1.584E-01	1.422E-02	-0.271
RE-184	7.475E-02		2.093E-01	3.432E-01	3.889E-02	0.218
OS-185	3.765E-02		3.946E-02	6.885E-02	6.188E-03	0.547
RE-188	-2.579E-02		1.560E-01	2.563E-01	2.255E-02	-0.101
W-188	-6.409E+00		8.125E+00	1.073E+01	1.273E+00	-0.597
IR-192	-7.560E-03		2.902E-02	4.504E-02	5.147E-03	-0.168
AU-195	-8.680E-02		2.024E-01	3.172E-01	2.793E-02	-0.274
TL-200	-1.302E-03		7.162E-04	Half-Life too short		
TL-201	-1.940E+00		9.534E+00	1.556E+01	1.417E+00	-0.125
TL-202	-2.485E-02		7.115E-02	1.158E-01	1.093E-02	-0.215
HG-203	-1.418E-02		4.364E-02	6.039E-02	7.359E-03	-0.235
BI-207	4.248E-02		5.112E-02	9.021E-02	7.952E-03	0.471
TL-207	-2.538E-01		7.184E-01	9.758E-01	1.866E-01	-0.260
PO-209	-2.640E+00		5.991E+00	9.533E+00	9.017E-01	-0.277
BI-210	5.162E-01		3.264E+00	5.187E+00	4.837E-01	0.100
PB-210	5.162E-01		3.264E+00	5.187E+00	4.837E-01	0.100
PO-210	5.162E-01		3.264E+00	5.187E+00	4.381E-01	0.100
PB-211	5.900E-01		9.433E-01	1.360E+00	8.536E-01	0.434
BI-212	6.432E-01	+	3.772E-01	6.437E-01	6.725E-02	0.999
PO-215	-2.538E-01		7.184E-01	9.758E-01	1.866E-01	-0.260
RN-219	-1.408E-01		3.632E-01	5.930E-01	9.146E-02	-0.237
RN-220	4.176E+00		2.344E+01	3.898E+01	3.683E+00	0.107
RA-223	-2.538E-01		7.184E-01	9.758E-01	1.866E-01	-0.260
AC-227	-9.705E-02		3.602E-01	5.695E-01	9.726E-02	-0.170
TH-227	-9.705E-02		3.603E-01	5.695E-01	1.114E-01	-0.170
TH-229	1.607E-02		4.412E-01	7.224E-01	7.049E-02	0.022
PA-231	-4.410E-01		1.355E+00	2.113E+00	3.655E-01	-0.209
TH-231	-2.538E-01		7.184E-01	9.758E-01	1.866E-01	-0.260
U-231	4.210E-01		1.329E+00	2.038E+00	1.830E-01	0.207
PA-233	2.558E-02		5.891E-02	9.594E-02	1.121E-02	0.267
PA-234	-2.689E-01		2.663E-01	3.883E-01	7.417E-02	-0.693
PA-234M	3.538E+00		4.625E+00	8.105E+00	8.439E-01	0.437
U-235	7.775E-02		1.974E-01	3.261E-01	5.699E-02	0.238
NP-236	3.399E-03		6.903E-02	1.143E-01	1.020E-02	0.030
NP-239	-7.481E-02		1.527E-01	2.507E-01	2.087E-02	-0.298
AM-241	9.361E-02		1.470E-01	2.184E-01	1.714E-02	0.429

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-5.658E-02		8.151E-02	1.336E-01	1.148E-02	-0.424
AM-246	1.094E-01		1.317E-01	2.331E-01	2.034E-02	0.469
CM-247	-6.310E-03		3.190E-02	5.280E-02	4.909E-03	-0.120
CF-249	1.789E-02		3.636E-02	6.278E-02	5.889E-03	0.285
CF-251	2.559E-02		1.124E-01	1.866E-01	1.740E-02	0.137

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492005		
Acquisition date	: 4-JAN-2010 14:01:43	Detector SN#	:
Detector ID	: GAM16	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:02.05	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492005	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3280E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 16-NOV-2009 11:22:16	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.120E+01	3.210E+00	2.404E-01	1.638E+00
CD-109	3.793E+00	8.800E-01	5.209E-01	4.490E-01
SN-126	3.718E-01	8.625E-02	5.129E-02	4.400E-02
TL-208	5.428E-01	9.565E-02	2.580E-02	4.880E-02
BI-211	4.284E+00	6.164E-01	1.428E-01	3.145E-01
PB-212	1.686E+00	2.226E-01	4.425E-02	1.136E-01
PO-212	1.686E+00	2.226E-01	4.425E-02	1.136E-01
BI-214	1.302E+00	1.958E-01	5.088E-02	9.988E-02
PB-214	1.490E+00	2.276E-01	4.977E-02	1.161E-01
PO-214	1.490E+00	2.276E-01	4.977E-02	1.161E-01
PO-216	1.686E+00	2.226E-01	4.425E-02	1.136E-01
PO-218	1.490E+00	2.276E-01	4.977E-02	1.161E-01
RA-224	4.958E+00	1.291E+00	5.036E-01	6.587E-01
RA-226	1.302E+00	1.958E-01	5.088E-02	9.988E-02
AC-228	1.817E+00	3.629E-01	9.555E-02	1.852E-01
RA-228	1.817E+00	3.629E-01	9.555E-02	1.852E-01
TH-228	1.715E+00	2.264E-01	4.501E-02	1.155E-01
TH-230	1.301E+00	1.958E-01	5.088E-02	9.987E-02
TH-232	1.817E+00	3.629E-01	9.555E-02	1.852E-01
TH-234	1.682E+00	1.800E+00	8.723E-01	9.182E-01
U-234	1.301E+00	1.958E-01	5.088E-02	9.987E-02
NP-237	1.092E+00	3.360E-01	1.448E-01	1.714E-01
U-238	1.682E+00	1.800E+00	8.723E-01	9.182E-01
AM-243	3.851E-01	7.246E-02	4.029E-02	3.697E-02
ANH-511	1.851E-01	6.631E-02	2.111E-02	3.383E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	1.935E-01	2.947E-01	2.653E-01	1.503E-01	NOT IDENT.
NA-22	-1.670E-02	4.425E-02	3.538E-02	2.257E-02	NOT IDENT.

NA-24	1.076E+06	5.927E+06	0.000E+00	3.024E+06	SHORT HLIF
AL-26	-1.350E-02	3.237E-02	2.523E-02	1.651E-02	NOT IDENT.
TI-44	3.673E-01	5.137E-02	3.374E-02	2.621E-02	FAIL ABUN
SC-46	-2.330E-02	3.686E-02	2.995E-02	1.881E-02	FAIL ABUN
V-48	-1.897E-02	6.482E-02	5.365E-02	3.307E-02	NOT IDENT.
CR-51	2.544E-01	3.417E-01	2.970E-01	1.743E-01	NOT IDENT.
MN-52	1.755E-01	2.436E-01	2.224E-01	1.243E-01	NOT IDENT.
MN-54	-4.738E-02	3.360E-02	2.544E-02	1.714E-02	NOT IDENT.
CO-56	-9.453E-03	3.550E-02	3.003E-02	1.811E-02	FAIL ABUN
CO-57	-1.142E-02	2.096E-02	1.830E-02	1.069E-02	NOT IDENT.
CO-58	-2.948E-02	3.469E-02	2.683E-02	1.770E-02	NOT IDENT.
FE-59	-2.496E-02	8.895E-02	7.308E-02	4.538E-02	NOT IDENT.
CO-60	1.958E-02	3.832E-02	3.352E-02	1.955E-02	NOT IDENT.
ZN-65	-8.268E-02	9.913E-02	6.411E-02	5.058E-02	NOT IDENT.
GE-68	-4.916E-01	1.167E+00	9.468E-01	5.956E-01	NOT IDENT.
AS-73	5.713E-02	7.661E-01	6.518E-01	3.909E-01	NOT IDENT.
AS-74	2.753E-02	8.571E-02	7.443E-02	4.373E-02	NOT IDENT.
SE-75	-5.238E-03	4.435E-02	3.303E-02	2.263E-02	NOT IDENT.
BR-77	1.224E+01	1.525E+01	1.385E+01	7.780E+00	FAIL ABUN
SR-82	5.791E-02	3.708E-01	3.104E-01	1.892E-01	NOT IDENT.
RB-83	5.441E-02	5.840E-02	5.346E-02	2.980E-02	NOT IDENT.
RB-84	-3.589E-02	7.172E-02	5.927E-02	3.659E-02	NOT IDENT.
KR-85	9.785E+00	6.444E+00	5.530E+00	3.288E+00	NOT IDENT.
SR-85	5.122E-02	3.373E-02	2.894E-02	1.721E-02	NOT IDENT.
RB-86	-4.527E-01	7.816E-01	6.228E-01	3.988E-01	NOT IDENT.
Y-88	1.541E-02	2.900E-02	2.676E-02	1.480E-02	NOT IDENT.
ZR-88	-1.199E-02	2.538E-02	2.159E-02	1.295E-02	NOT IDENT.
Y-91	4.419E+00	1.814E+01	1.549E+01	9.256E+00	NOT IDENT.
NB-94	1.292E-02	3.024E-02	2.610E-02	1.543E-02	NOT IDENT.
NB-95	3.841E-02	4.549E-02	3.588E-02	2.321E-02	NOT IDENT.
NB-95M	6.727E-02	1.298E-01	1.016E-01	6.623E-02	NOT IDENT.
ZR-95	8.962E-03	7.195E-02	5.868E-02	3.671E-02	NOT IDENT.
NB-97	-1.872E+05	5.885E+05	0.000E+00	3.003E+05	SHORT HLIF
ZR-97	1.059E+07	1.262E+07	0.000E+00	6.437E+06	SHORT HLIF
MO-99	1.342E+01	1.839E+01	1.610E+01	9.381E+00	NOT IDENT.
TC-99M	-2.136E+18	7.591E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-1.166E-02	2.966E-02	2.464E-02	1.513E-02	NOT IDENT.
RH-102	6.895E-03	2.526E-02	2.224E-02	1.289E-02	FAIL ABUN
RU-103	4.050E-02	3.673E-02	3.369E-02	1.874E-02	FAIL ABUN
RH-106	-1.501E-01	2.912E-01	2.345E-01	1.486E-01	FAIL ABUN
RU-106	-1.501E-01	2.908E-01	2.345E-01	1.484E-01	FAIL ABUN
AG-108M	-1.337E-02	2.844E-02	2.398E-02	1.451E-02	NOT IDENT.
AG-110M	-9.952E-03	3.058E-02	2.491E-02	1.560E-02	NOT IDENT.
IN-111	6.074E-01	1.643E+00	1.277E+00	8.384E-01	NOT IDENT.
IN-113M	-1.458E-03	3.722E-02	3.263E-02	1.899E-02	NOT IDENT.
SN-113	-1.458E-03	3.722E-02	3.263E-02	1.899E-02	NOT IDENT.
IN-114M	-5.440E-02	1.814E-01	1.379E-01	9.256E-02	NOT IDENT.
CD-115	5.843E-01	1.622E+01	1.393E+01	8.274E+00	NOT IDENT.
SN-117M	-1.775E-03	5.179E-02	4.541E-02	2.642E-02	NOT IDENT.
SB-122	1.688E+00	3.072E+00	2.718E+00	1.567E+00	NOT IDENT.
I-123	-3.696E+07	5.956E+07	0.000E+00	3.039E+07	SHORT HLIF
TE-123M	-1.527E-02	2.460E-02	2.099E-02	1.255E-02	NOT IDENT.
I-124	5.532E-02	9.410E-01	7.011E-01	4.801E-01	FAIL ABUN
SB-124	1.071E-01	6.551E-02	6.961E-02	3.342E-02	FAIL ABUN
SB-125	4.667E-02	7.673E-02	6.952E-02	3.915E-02	FAIL ABUN
TE-125M	9.856E-01	7.672E+00	6.941E+00	3.914E+00	NOT IDENT.
I-126	4.492E-02	1.819E-01	1.555E-01	9.282E-02	NOT IDENT.
SB-126	-7.445E-02	1.528E-01	1.216E-01	7.794E-02	FAIL ABUN
SB-127	9.710E-02	1.704E+00	1.431E+00	8.695E-01	NOT IDENT.
XE-127	2.800E-02	4.197E-02	3.724E-02	2.141E-02	NOT IDENT.
I-131	7.656E-03	1.178E-01	1.045E-01	6.008E-02	NOT IDENT.
TE-132	8.082E-01	9.201E-01	8.123E-01	4.694E-01	NOT IDENT.
BA-133	-4.966E-02	3.994E-02	2.726E-02	2.038E-02	FAIL ABUN
I-133	5.927E+03	2.471E+04	0.000E+00	1.261E+04	SHORT HLIF
CS-134	9.186E-02	7.916E-02	4.287E-02	4.039E-02	FAIL ABUN
CS-135	1.676E-01	1.610E-01	1.288E-01	8.215E-02	NOT IDENT.
I-135	5.133E+16	8.191E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-1.535E-02	1.083E-01	9.063E-02	5.528E-02	FAIL ABUN
BA-137M	3.673E-03	3.098E-02	2.625E-02	1.581E-02	NOT IDENT.
CS-137	3.883E-03	3.275E-02	2.774E-02	1.671E-02	NOT IDENT.
CE-139	2.644E-03	2.575E-02	2.264E-02	1.314E-02	NOT IDENT.
BA-140	-4.534E-03	2.459E-01	2.100E-01	1.255E-01	NOT IDENT.
LA-140	-5.991E-02	8.163E-02	6.117E-02	4.165E-02	FAIL ABUN
CE-141	-2.880E-02	5.898E-02	5.007E-02	3.009E-02	NOT IDENT.
CE-143	1.715E+03	5.901E+02	0.000E+00	3.011E+02	SHORT HLIF
CE-144	-8.678E-02	1.880E-01	1.558E-01	9.594E-02	NOT IDENT.
PM-144	-1.582E-02	3.087E-02	2.457E-02	1.575E-02	NOT IDENT.
PR-144	-1.073E+00	2.094E+00	1.667E+00	1.068E+00	NOT IDENT.

PM-146	2.117E-02	3.614E-02	3.258E-02	1.844E-02 NOT IDENT.
ND-147	6.664E-02	5.431E-01	4.692E-01	2.771E-01 FAIL ABUN
PM-149	-2.627E+01	1.528E+02	1.269E+02	7.798E+01 NOT IDENT.
EU-152	4.661E-02	8.998E-02	7.336E-02	4.591E-02 FAIL ABUN
GD-153	-1.924E-02	7.162E-02	5.712E-02	3.654E-02 FAIL ABUN
EU-154	-4.061E-02	1.240E-01	9.970E-02	6.328E-02 NOT IDENT.
EU-155	1.251E-01	8.823E-02	8.328E-02	4.502E-02 FAIL ABUN
TB-160	4.914E-02	1.312E-01	1.167E-01	6.695E-02 FAIL ABUN
HO-166M	2.425E-05	5.471E-02	4.555E-02	2.791E-02 FAIL ABUN
TM-171	-2.434E+01	2.600E+01	1.883E+01	1.327E+01 NOT IDENT.
LU-176	-7.169E-03	2.178E-02	1.776E-02	1.111E-02 FAIL ABUN
LU-177	3.020E+00	1.631E+00	1.164E+00	8.324E-01 FAIL ABUN
LU-177M	1.921E-02	1.655E-01	1.289E-01	8.445E-02 FAIL ABUN
HF-181	-1.160E-02	3.808E-02	3.214E-02	1.943E-02 NOT IDENT.
W-181	1.661E-01	3.230E-01	2.552E-01	1.648E-01 NOT IDENT.
TA-182	5.737E-02	2.108E-01	1.797E-01	1.076E-01 FAIL ABUN
RE-183	-4.297E-02	9.793E-02	8.247E-02	4.997E-02 FAIL ABUN
RE-184	7.475E-02	2.051E-01	1.773E-01	1.047E-01 NOT IDENT.
OS-185	3.765E-02	3.867E-02	3.500E-02	1.973E-02 NOT IDENT.
RE-188	-2.579E-02	1.529E-01	1.335E-01	7.800E-02 NOT IDENT.
W-188	-6.409E+00	7.962E+00	5.531E+00	4.062E+00 FAIL ABUN
IR-192	-7.560E-03	2.844E-02	2.318E-02	1.451E-02 FAIL ABUN
AU-195	-8.680E-02	1.983E-01	1.665E-01	1.012E-01 FAIL ABUN
TL-200	-1.302E+03	1.404E+03	0.000E+00	7.162E+02 SHORT HLIF
TL-201	-1.940E+00	9.343E+00	8.098E+00	4.767E+00 NOT IDENT.
TL-202	-2.485E-02	6.973E-02	5.926E-02	3.558E-02 NOT IDENT.
HG-203	-1.418E-02	4.277E-02	3.115E-02	2.182E-02 NOT IDENT.
BI-207	4.248E-02	5.010E-02	4.546E-02	2.556E-02 FAIL ABUN
TL-207	-2.538E-01	7.040E-01	5.020E-01	3.592E-01 FAIL ABUN
PO-209	-2.640E+00	5.871E+00	4.819E+00	2.995E+00 NOT IDENT.
BI-210	5.162E-01	3.198E+00	2.756E+00	1.632E+00 NOT IDENT.
PB-210	5.162E-01	3.198E+00	2.756E+00	1.632E+00 NOT IDENT.
PO-210	5.162E-01	3.198E+00	2.756E+00	1.632E+00 NOT IDENT.
PB-211	5.900E-01	9.244E-01	6.971E-01	4.716E-01 NOT IDENT.
BI-212	6.432E-01	3.697E-01	3.265E-01	1.886E-01 FAIL ABUN
PO-215	-2.538E-01	7.040E-01	5.020E-01	3.592E-01 FAIL ABUN
RN-219	-1.408E-01	3.559E-01	3.040E-01	1.816E-01 FAIL ABUN
RN-220	4.176E+00	2.297E+01	1.987E+01	1.172E+01 NOT IDENT.
RA-223	-2.538E-01	7.040E-01	5.020E-01	3.592E-01 FAIL ABUN
AC-227	-9.705E-02	3.530E-01	2.942E-01	1.801E-01 FAIL ABUN
TH-227	-9.705E-02	3.531E-01	2.942E-01	1.802E-01 FAIL ABUN
TH-229	1.607E-02	4.324E-01	3.749E-01	2.206E-01 FAIL ABUN
PA-231	-4.410E-01	1.327E+00	1.090E+00	6.773E-01 FAIL ABUN
TH-231	-2.538E-01	7.040E-01	5.020E-01	3.592E-01 FAIL ABUN
U-231	4.210E-01	1.302E+00	1.070E+00	6.643E-01 FAIL ABUN
PA-233	2.558E-02	5.773E-02	4.939E-02	2.946E-02 FAIL ABUN
PA-234	-2.689E-01	2.609E-01	1.961E-01	1.331E-01 FAIL ABUN
PA-234M	3.538E+00	4.533E+00	4.089E+00	2.313E+00 FAIL ABUN
U-235	7.775E-02	1.934E-01	1.701E-01	9.869E-02 FAIL ABUN
NP-236	3.399E-03	6.765E-02	5.950E-02	3.452E-02 NOT IDENT.
NP-239	-7.481E-02	1.497E-01	1.312E-01	7.637E-02 FAIL ABUN
AM-241	9.361E-02	1.441E-01	1.156E-01	7.352E-02 NOT IDENT.
CM-243	-5.658E-02	7.988E-02	7.005E-02	4.075E-02 FAIL ABUN
AM-246	1.094E-01	1.291E-01	1.174E-01	6.585E-02 NOT IDENT.
CM-247	-6.310E-03	3.126E-02	2.706E-02	1.595E-02 FAIL ABUN
CF-249	1.789E-02	3.563E-02	3.220E-02	1.818E-02 NOT IDENT.
CF-251	2.559E-02	1.102E-01	9.699E-02	5.622E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	235.0952
46.50	235.0952
46.50	235.0952
48.70	266.3009
49.72	238.6369
51.35	269.6320
52.39	257.2948
52.97	260.1282
53.15	260.2644
53.44	268.8856
54.07	274.1838
56.28	283.1621
56.28	283.1639
57.37	0.0000
57.53	313.2904
57.53	313.2919
57.60	313.3510
57.98	289.3616
57.98	289.3616
59.32	235.9134
59.32	235.9134
59.40	250.6103
59.54	273.4965
59.72	273.6285
60.01	273.8417
61.10	318.7753
61.14	318.8086
61.30	318.9430
63.00	283.3996
63.29	283.6128
63.29	283.6128
63.58	283.8251
64.28	284.3348
65.12	269.2520
65.20	269.3055
65.20	269.3055
66.05	326.1790
66.72	333.3602
66.83	333.4522
66.91	333.5197
67.20	313.8330
67.20	313.8330
67.75	309.2715
67.85	309.3491
68.90	329.3234
68.90	329.3234
69.30	318.4619
69.67	309.4774
70.82	358.0786
70.82	358.0786
70.83	358.0873
72.80	374.9163
72.87	374.9774
72.87	374.9774
74.67	381.2057
74.81	381.3272
74.81	381.3272
74.81	381.3272
74.81	381.3272
74.81	381.3272
74.81	381.3272
74.81	381.3272
74.97	381.4695
75.28	381.7424
75.70	382.1094
77.11	383.3390
77.11	383.3390

77.11	383.3390
77.11	383.3390
77.11	383.3390
77.11	383.3390
77.11	383.3390
78.38	384.4377
79.62	364.1328
79.80	364.2780
79.80	364.2780
80.11	347.4132
80.18	347.4669
80.30	347.5578
80.30	347.5578
80.57	357.1865
81.00	339.5189
81.07	339.5713
81.07	339.5713
81.07	339.5713
81.07	339.5713
82.60	358.7708
83.37	379.1858
83.78	367.4458
83.78	367.4458
83.78	367.4458
83.78	367.4458
84.21	317.2783
84.90	267.1641
85.43	267.4643
86.29	267.9500
86.50	268.0678
86.54	268.0898
86.59	268.1181
86.72	268.1904
86.79	268.2281
86.94	268.3146
87.30	297.1922
87.30	297.1922
87.30	297.1922
87.30	297.1922
87.30	297.1922
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87.30	297.1922
87.57	297.3592
87.88	297.5505
88.03	297.6427
88.36	297.8462
88.47	297.9141
89.95	290.9550
91.11	291.6409
92.29	292.3354
92.38	292.3878
92.38	292.3878
93.35	291.6339
94.00	292.0116
94.67	292.3944
94.67	292.3977
94.90	275.3217
94.90	275.3217
94.90	275.3217
94.90	275.3217
95.87	273.1930
95.87	273.1930
96.73	301.5502
97.43	285.9947
98.44	262.5590
98.44	262.5605
98.88	297.7300
99.55	281.3708
99.55	281.3708
99.86	275.3006
100.00	271.8082
100.10	271.8625
103.18	300.3291
103.76	299.7554
105.00	253.6649
105.31	242.1093
108.00	310.2209
109.28	267.4218

111.00	270.0566
111.00	270.0566
111.76	279.5226
112.95	260.0323
115.19	250.9674
116.30	254.1985
117.00	251.7464
117.00	251.7464
117.66	255.7072
121.11	241.4630
121.62	250.9267
121.78	249.1405
122.06	267.7889
122.32	269.7576
122.32	269.7576
122.32	269.7576
122.32	269.7576
123.07	274.7313
127.23	274.7233
129.76	289.9044
131.20	256.7123
133.02	271.5879
133.54	300.1177
135.34	264.9894
136.00	248.2076
136.25	263.4643
136.48	263.5576
140.51	282.3358
140.51	0.0000
142.18	305.9863
142.65	286.1067
143.76	285.6167
144.24	293.4897
144.24	293.4897
144.24	293.4897
144.24	293.4897
145.22	290.0710
145.44	290.1632
147.16	268.7345
152.43	269.7961
152.70	271.8396
153.22	276.8968
154.21	293.8190
154.21	293.8190
154.21	293.8190
154.21	293.8190
155.03	284.4166
156.02	262.3752
158.56	257.4245
159.00	0.0000
159.00	270.3090
160.31	252.1530
161.27	257.3945
162.32	260.7111
162.64	255.9005
163.35	265.0130
163.89	252.3880
165.85	250.0841
167.43	252.5876
171.28	244.9014
171.86	233.1312
172.10	233.2026
176.55	242.5539
176.60	242.5711
181.06	250.9909
184.41	267.2173
185.71	260.5450
186.00	260.6392
190.27	249.2480
192.34	249.3564
193.63	227.2212
197.04	233.2740
198.01	246.9141
198.60	225.4628
200.40	256.8851
201.83	238.7099
202.84	216.2265
205.31	256.7802

208.36	223.8315
208.81	223.9452
209.75	245.5569
209.75	245.5569
210.97	225.5317
215.65	220.4034
216.55	204.8627
218.09	236.7783
222.10	200.8139
223.80	221.2971
226.40	212.3535
227.00	203.9883
227.08	195.5056
227.20	195.5299
228.16	184.0272
228.18	184.0307
228.18	184.0307
231.56	0.0000
235.69	241.2209
236.00	252.5593
236.00	252.5593
238.63	230.1201
238.63	230.1201
238.63	230.1201
238.63	230.1201
239.00	230.2050
240.98	230.6687
241.98	230.9016
241.98	230.9016
241.98	230.9016
244.69	173.6464
245.39	170.5209
247.94	182.3486
248.90	167.3111
249.79	178.3323
252.40	168.9778
252.85	163.5986
252.85	163.5986
254.15	0.0000
256.20	194.7681
256.20	194.7681
260.50	184.5874
260.90	205.5394
262.80	161.8669
264.65	168.7663
268.24	167.6758
268.79	153.9203
269.46	154.0165
269.46	154.0165
269.46	154.0165
269.46	154.0165
271.23	154.2682
273.65	126.8051
276.40	140.5067
277.35	151.7881
277.60	151.8241
277.60	151.8241
278.00	152.4378
278.60	169.2816
279.20	179.4327
279.53	174.4558
280.46	152.7766
281.68	119.3293
283.67	152.6569
284.30	175.2048
285.00	187.6745
285.90	160.8343
286.10	156.3609
286.10	156.3609
287.40	140.7751
288.45	0.0000
290.67	189.7485
290.80	189.7690
291.72	176.3569
293.26	0.0000
293.70	169.8669
295.21	170.0897
295.21	170.0897

295.21	170.0897
295.96	119.1418
296.50	119.1974
297.23	119.2722
298.57	119.4089
299.80	119.5349
299.80	119.5349
300.09	119.5648
300.09	119.5648
300.09	119.5648
300.09	119.5648
300.12	119.5691
301.29	119.6887
302.84	145.5283
303.76	121.6542
303.91	121.6694
304.40	106.2900
304.40	106.2900
304.84	101.1848
306.84	142.0127
308.46	151.3816
311.98	132.2739
316.51	114.2975
318.01	123.6861
319.02	133.0436
319.41	138.8721
320.08	116.9477
323.87	160.2841
323.87	160.2841
323.87	160.2841
323.87	160.2841
325.23	149.9961
328.77	131.1813
333.44	143.9604
334.20	136.3163
334.20	136.3163
334.30	136.3281
338.28	141.8650
338.28	141.8650
338.28	141.8650
338.28	141.8650
338.32	141.8699
338.32	141.8699
338.32	141.8699
340.50	122.8684
340.57	122.8748
344.27	114.7289
345.85	127.6326
350.59	0.0000
351.07	116.5739
351.92	116.6499
351.92	116.6499
351.92	116.6499
355.39	0.0000
356.01	130.0516
364.48	119.5490
366.43	113.4204
367.43	132.4202
367.94	0.0000
369.80	120.0178
374.96	125.9030
383.85	133.0878
387.95	117.9337
388.63	128.9646
391.69	107.2435
391.69	107.2435
392.90	109.1693
398.62	106.8401
400.65	128.2021
401.10	134.7007
401.81	120.9195
402.60	113.5971
404.84	91.7558
410.95	109.9702
411.60	110.0172
413.65	99.7476
414.70	107.4798
415.30	108.0544

415.76	109.0198
417.63	0.0000
418.52	110.1533
423.70	104.9111
427.08	101.3884
427.89	87.3535
432.53	103.6336
433.93	108.4407
439.47	103.1505
439.56	113.5657
439.89	107.9100
443.98	95.8541
444.90	86.4136
445.03	86.4220
445.03	86.4220
445.03	86.4220
445.03	86.4220
453.90	81.1739
463.38	92.2178
468.07	95.0504
473.00	100.4882
475.06	88.0368
475.35	84.1817
476.78	86.1902
477.59	88.1701
477.96	90.1278
482.03	94.2322
484.57	92.4284
487.03	86.7171
490.36	0.0000
492.35	92.8532
497.08	71.5475
507.63	0.0000
510.53	0.0000
510.84	86.9325
511.00	86.9406
511.85	86.9815
511.85	86.9815
513.99	66.5027
513.99	66.5027
520.41	64.5576
520.65	64.5676
527.90	70.8115
528.96	0.0000
529.64	65.8892
529.87	0.0000
531.02	76.9295
537.32	78.1976
543.00	83.4661
546.56	0.0000
549.76	78.7260
552.65	86.9343
555.20	79.9668
563.23	83.3563
563.90	79.3163
568.70	76.4580
569.32	77.5029
569.50	77.5099
569.67	74.4570
573.80	70.5287
574.00	70.5351
574.64	74.6486
578.91	63.9501
579.30	0.0000
583.14	74.9760
585.48	74.0369
591.81	76.3396
592.07	76.3486
593.00	73.2881
595.88	72.3605
600.56	90.1462
602.52	0.0000
602.71	86.3002
602.71	86.3002
603.60	89.6590
604.41	89.6959
604.70	89.7091
609.31	82.2113

609.31	82.2113
609.31	82.2113
609.31	82.2113
610.33	63.3030
612.46	73.3756
614.37	75.1135
618.01	74.2025
621.84	83.7646
621.84	83.7646
631.29	57.8517
633.02	72.6387
633.10	74.7463
634.78	69.5389
635.90	70.6293
636.97	69.6114
645.85	55.0754
646.12	59.3206
656.30	78.7605
657.75	73.4894
657.90	0.0000
661.65	69.3541
661.65	69.3541
664.57	0.0000
666.33	73.7800
666.33	73.7800
675.00	84.8078
677.61	68.7871
685.20	65.7880
692.80	69.2578
695.00	51.9946
696.49	79.1264
696.49	79.1264
697.00	86.7334
697.49	90.0062
698.33	84.6151
698.50	79.1977
699.00	79.2155
702.63	69.5605
706.10	77.2857
706.58	0.0000
706.67	66.4172
709.31	76.3040
711.68	69.8359
713.82	74.2692
717.42	67.8220
720.50	83.2479
721.93	0.0000
722.20	88.9456
722.78	95.0244
722.78	95.0244
722.89	95.0297
722.95	90.6462
723.30	92.9984
724.18	82.5024
727.18	65.9106
733.00	56.6361
735.90	84.9002
739.58	64.0499
742.81	71.8793
744.21	76.3468
747.13	77.5473
751.79	72.1490
752.31	61.0626
753.82	72.2105
755.35	80.0376
756.15	70.0560
756.87	71.1895
763.93	66.0417
765.79	66.0923
766.42	66.1104
766.84	51.8248
776.49	63.9145
778.00	56.1005
778.57	51.6237
778.89	51.6307
783.80	58.4810
785.46	63.0222
792.07	66.1969

795.84	54.2432
796.30	54.2534
798.80	52.7976
801.93	70.9877
805.60	45.3772
810.29	63.6460
810.76	64.5674
815.85	51.9387
817.79	69.3036
818.51	71.1464
819.60	60.2266
826.30	82.3403
828.27	0.0000
831.60	58.6734
831.96	56.8475
834.83	84.4464
836.80	0.0000
846.75	62.7008
848.13	74.7272
856.28	0.0000
856.80	67.8745
860.37	64.8765
867.32	54.2033
867.82	53.1069
871.10	48.3856
873.19	58.6657
874.81	59.6328
875.33	0.0000
876.40	52.2088
879.36	55.9995
880.27	61.6204
880.51	64.4264
881.50	73.7906
883.24	69.1636
884.67	60.7836
889.25	66.5053
896.60	47.8984
898.02	50.7423
899.00	49.8208
903.28	48.4177
911.07	52.8678
911.07	52.8678
911.07	52.8678
919.63	52.6082
920.93	50.2115
925.00	40.7954
925.24	41.7474
926.50	50.3099
935.52	54.2766
937.48	58.1257
944.10	49.6641
946.00	59.2527
949.00	40.1810
962.29	73.6794
964.01	51.9262
966.15	51.9645
968.20	52.0000
969.11	52.0172
969.11	52.0172
969.11	52.0172
977.42	44.1585
980.50	41.5796
983.50	48.3972
989.30	50.4309
996.32	69.0170
1001.03	51.6000
1001.68	51.6116
1004.76	68.2346
1021.30	0.0000
1024.50	0.0000
1034.80	59.0596
1036.00	60.0677
1037.82	57.1447
1038.57	56.1734
1038.76	0.0000
1045.16	57.2807
1046.59	58.2942
1048.07	53.3777

1050.47	54.4092
1050.47	54.4092
1062.04	55.6008
1063.62	48.6746
1076.63	58.8444
1077.35	58.8588
1078.86	42.9160
1085.78	54.0105
1099.22	60.2578
1112.02	57.1315
1112.84	65.5522
1115.52	72.3315
1120.29	47.1680
1120.29	47.1680
1120.29	47.1680
1120.29	47.1680
1120.51	47.1702
1121.28	45.4966
1124.00	0.0000
1129.67	58.7873
1131.51	0.0000
1147.95	0.0000
1167.94	75.8500
1173.22	56.4609
1175.09	57.5203
1177.93	83.2663
1189.05	60.8438
1204.90	61.1174
1205.75	0.0000
1213.00	73.7180
1221.42	80.1356
1230.97	74.7811
1235.34	83.5781
1236.41	0.0000
1238.25	55.7630
1246.25	58.6824
1260.41	0.0000
1271.85	42.2070
1274.45	59.1336
1274.54	59.1336
1291.56	42.4316
1298.22	0.0000
1312.09	42.6621
1325.50	27.8281
1325.50	27.8281
1332.49	34.3109
1333.61	27.8865
1360.21	21.5977
1362.66	0.0000
1365.15	29.1938
1368.21	27.0520
1368.53	0.0000
1376.25	28.9141
1384.27	36.6685
1394.10	20.6940
1395.20	19.6102
1407.95	18.5796
1434.06	15.3993
1436.60	22.0127
1457.56	0.0000
1460.81	22.1416
1489.15	13.0031
1509.49	15.8649
1596.49	24.7495
1620.62	16.5878
1678.03	0.0000
1691.02	4.8580
1691.02	4.8580
1706.46	0.0000
1750.46	0.0000
1764.49	6.7648
1764.49	6.7648
1764.49	6.7648
1764.49	6.7648
1770.23	32.5931
1771.40	11.8550
1791.20	0.0000
1808.65	20.9026

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492005

Total Uranium Activity	5.0394E+00	ug/g
Total Uranium Counting Unc.	5.3547E+00	ug/g
Total Uranium Tpu	2.7320E-06	ug/g
Total Uranium Mda	2.5962E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492005
ANALYST	: MXR1	DETECTOR	: GAM16
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 14:01:43.14	SAMPLE ALQT:	132.800 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 1.032E+01
GROSS GAMMA ERROR (pCi/GRAM)	: 1.490E+00
GROSS GAMMA MDA (pCi/GRAM)	: 3.433E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.660E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:00:28.88

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492006.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:02:07.
Sample ID : G243492006 Sample quantity : 1.36110E+02 GRAM
Detector name : GAM17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.61 0.1%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	45.62*	43	455	0.84	92.70	89	8	5.92E-03	91.9	
2	0	62.28*	176	653	0.83	126.00	122	9	2.45E-02	27.7	
3	3	74.02*	637	455	0.99	149.47	143	17	8.85E-02	6.7	1.76E+00
4	3	76.28*	982	413	0.93	153.98	143	17	1.36E-01	4.7	
5	6	83.36*	161	461	1.27	168.13	163	29	2.24E-02	23.8	2.82E+00
6	6	86.43	422	368	1.23	174.28	163	29	5.86E-02	8.8	
7	6	88.97	279	390	1.31	179.34	163	29	3.87E-02	14.4	
8	6	92.13*	334	394	1.56	185.67	163	29	4.64E-02	13.2	
9	0	128.51	85	325	0.80	258.39	255	8	1.18E-02	38.3	
10	0	185.35*	229	234	1.25	372.00	367	10	3.18E-02	14.9	
11	0	208.53	106	224	1.05	418.34	415	8	1.48E-02	26.2	
12	6	237.96*	1204	135	1.04	477.16	470	19	1.67E-01	3.4	2.43E+00
13	6	240.93	311	202	1.92	483.11	470	19	4.31E-02	15.3	
14	0	270.19	98	220	1.22	541.61	535	12	1.36E-02	32.1	
15	0	294.75*	335	162	1.04	590.70	586	11	4.65E-02	9.4	
16	0	299.90*	117	137	0.94	600.98	597	10	1.63E-02	21.0	
17	0	327.88	94	201	1.86	656.92	649	15	1.30E-02	34.7	
18	5	337.69*	252	107	1.47	676.55	669	25	3.50E-02	9.8	2.27E+00
19	5	340.97	45	102	1.74	683.10	669	25	6.30E-03	49.0	
20	0	351.29*	539	149	1.28	703.73	699	10	7.48E-02	6.1	
21	3	408.11	28	33	1.15	817.32	815	13	3.96E-03	38.2	2.43E+00
22	3	409.58	58	52	1.37	820.25	815	13	8.10E-03	26.8	
23	0	462.59	81	92	1.49	926.24	921	12	1.13E-02	26.1	
24	0	510.70*	155	105	1.95	1022.41	1014	19	2.16E-02	20.0	
25	0	582.70*	335	112	1.29	1166.36	1159	13	4.65E-02	8.6	
26	0	608.99*	384	126	1.36	1218.92	1213	14	5.33E-02	8.1	
27	0	727.02	72	66	1.85	1454.92	1449	11	1.00E-02	24.7	
28	0	794.96	32	58	1.28	1590.77	1585	10	4.43E-03	48.0	
29	0	860.14	37	40	1.01	1721.10	1718	8	5.18E-03	33.2	
30	0	911.11*	217	61	1.80	1823.01	1815	18	3.01E-02	11.0	
31	0	964.79	30	31	1.32	1930.36	1926	9	4.19E-03	37.3	
32	0	969.16*	183	21	1.70	1939.09	1934	13	2.54E-02	9.2	
33	0	1120.35*	71	51	1.12	2241.43	2237	11	9.90E-03	22.9	
34	0	1377.84	35	13	3.00	2756.40	2751	13	4.86E-03	27.1	
35	0	1460.91*	1060	22	2.10	2922.54	2915	17	1.47E-01	3.2	
36	0	1764.57*	63	0	2.06	3529.94	3522	14	8.79E-03	13.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 12:00:31

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492006.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:02:07
Sample ID : G243492006 Sample quantity : 136.11 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.61 0.1%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	3.432E+01	3.067E+00	6.511E-01	4.003E-02	52.705
CD-109	+	88.03	*	3.231E+00	9.653E-01	9.211E-01	7.419E-02	3.508
SN-126		64.28		-2.308E-01	2.994E-01	4.081E-01	6.261E-02	-0.566
	+	86.94		1.986E+00	8.910E-01	3.743E-01	1.544E-01	5.306
	+	87.57	*	4.777E-01	9.273E-02	9.017E-02	7.272E-03	5.297
TL-208		277.35		6.588E-01	3.997E-01	6.895E-01	7.959E-02	0.955
	+	510.84		9.563E-01	3.954E-01	2.428E-01	2.605E-02	3.939
	+	583.14	*	6.008E-01	1.139E-01	6.909E-02	5.478E-03	8.695
	+	860.37		6.515E-01	4.352E-01	5.725E-01	4.671E-02	1.138
BI-210	+	46.50	*	4.433E-01	8.153E-01	7.687E-01	6.152E-02	0.577
PB-210	+	46.50	*	4.433E-01	8.153E-01	7.687E-01	6.152E-02	0.577
PO-210	+	46.50	*	4.433E-01	8.151E-01	7.687E-01	5.350E-02	0.577
BI-211	+	72.87		2.079E+01	3.286E+00	3.022E+00	2.584E-01	6.880
	+	351.07	*	3.877E+00	5.519E-01	3.471E-01	2.494E-02	11.168
PB-212	+	74.81		2.468E+00	4.531E-01	3.598E-01	4.540E-02	6.859
	+	77.11		2.265E+00	2.863E-01	2.147E-01	1.803E-02	10.549
	+	87.30		2.209E+00	4.825E-01	4.168E-01	5.356E-02	5.301
	+	238.63	*	1.797E+00	1.985E-01	9.186E-02	8.062E-03	19.560
	+	300.09		2.779E+00	1.197E+00	1.101E+00	1.029E-01	2.525
PO-212	+	74.81		2.468E+00	4.531E-01	3.598E-01	4.540E-02	6.859
	+	77.11		2.265E+00	2.863E-01	2.147E-01	1.803E-02	10.549
	+	87.30		2.209E+00	4.825E-01	4.168E-01	5.356E-02	5.301
		115.19		-9.201E-01	3.268E+00	5.416E+00	5.635E-01	-0.170
	+	238.63	*	1.797E+00	1.985E-01	9.186E-02	8.062E-03	19.560
	+	300.09		2.779E+00	1.197E+00	1.101E+00	1.029E-01	2.525
BI-214	+	609.31	*	1.306E+00	2.422E-01	1.309E-01	1.175E-02	9.972
	+	1120.29		1.298E+00	6.058E-01	5.187E-01	4.631E-02	2.503
	+	1764.49		1.633E+00	4.431E-01	2.223E-01	1.278E-02	7.346
PB-214	+	74.81		4.253E+00	7.422E-01	6.200E-01	6.980E-02	6.859
	+	77.11		3.883E+00	5.731E-01	3.681E-01	4.174E-02	10.549
	+	87.30		3.785E+00	7.905E-01	7.140E-01	7.969E-02	5.301
	+	241.98		2.788E+00	8.948E-01	5.540E-01	5.207E-02	5.032
	+	295.21		1.387E+00	2.929E-01	1.889E-01	1.819E-02	7.340
	+	351.92	*	1.348E+00	2.045E-01	1.136E-01	1.007E-02	11.874

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PO-214	+	74.81		4.253E+00	7.422E-01	6.200E-01	6.980E-02	6.859
	+	77.11		3.883E+00	5.731E-01	3.681E-01	4.174E-02	10.549
	+	87.30		3.785E+00	7.905E-01	7.140E-01	7.969E-02	5.301
	+	241.98		2.788E+00	8.948E-01	5.540E-01	5.207E-02	5.032
	+	295.21		1.387E+00	2.929E-01	1.889E-01	1.819E-02	7.340
	+	351.92	*	1.348E+00	2.045E-01	1.136E-01	1.007E-02	11.874
PO-216	+	74.81		2.468E+00	4.531E-01	3.598E-01	4.540E-02	6.859
	+	77.11		2.265E+00	2.863E-01	2.147E-01	1.803E-02	10.549
	+	87.30		2.209E+00	4.825E-01	4.168E-01	5.356E-02	5.301
	+	238.63	*	1.797E+00	1.985E-01	9.186E-02	8.062E-03	19.560
	+	300.09		2.779E+00	1.197E+00	1.101E+00	1.029E-01	2.525
PO-218	+	74.81		4.253E+00	7.422E-01	6.200E-01	6.980E-02	6.859
	+	77.11		3.883E+00	5.731E-01	3.681E-01	4.174E-02	10.549
	+	87.30		3.785E+00	7.905E-01	7.140E-01	7.969E-02	5.301
	+	241.98		2.788E+00	8.948E-01	5.540E-01	5.207E-02	5.032
	+	295.21		1.387E+00	2.929E-01	1.889E-01	1.819E-02	7.340
	+	351.92	*	1.348E+00	2.045E-01	1.136E-01	1.007E-02	11.874
RA-224	+	240.98	*	5.286E+00	1.671E+00	1.046E+00	7.894E-02	5.051
RA-226	+	609.31	*	1.306E+00	2.422E-01	1.309E-01	1.175E-02	9.972
	+	1120.29		1.298E+00	6.058E-01	5.187E-01	4.631E-02	2.503
	+	1764.49		1.633E+00	4.431E-01	2.223E-01	1.278E-02	7.346
AC-228	+	338.32		1.985E+00	9.017E-01	3.693E-01	1.511E-01	5.376
	+	911.07	*	1.793E+00	4.342E-01	2.407E-01	2.463E-02	7.448
	+	969.11		2.669E+00	7.817E-01	4.890E-01	1.114E-01	5.458
RA-228	+	338.32		1.985E+00	9.017E-01	3.693E-01	1.511E-01	5.376
	+	911.07	*	1.793E+00	4.342E-01	2.407E-01	2.463E-02	7.448
	+	969.11		2.669E+00	7.817E-01	4.890E-01	1.114E-01	5.458
TH-228	+	74.81		2.510E+00	3.977E-01	3.660E-01	3.130E-02	6.859
	+	77.11		2.304E+00	2.912E-01	2.184E-01	1.834E-02	10.549
	+	87.30		2.247E+00	4.363E-01	4.239E-01	3.422E-02	5.301
	+	238.63	*	1.828E+00	2.019E-01	9.344E-02	8.200E-03	19.560
	+	300.09		2.827E+00	2.050E+00	1.120E+00	6.617E-01	2.525
TH-230	+	609.31	*	1.305E+00	2.422E-01	1.309E-01	1.175E-02	9.972
	+	1120.29		1.298E+00	6.058E-01	5.186E-01	4.631E-02	2.503
	+	1764.49		1.633E+00	4.431E-01	2.223E-01	1.278E-02	7.346
TH-232	+	338.32		1.985E+00	4.137E-01	3.693E-01	2.522E-02	5.376
	+	911.07	*	1.793E+00	4.342E-01	2.407E-01	2.463E-02	7.448
	+	969.11		2.669E+00	7.817E-01	4.890E-01	1.114E-01	5.458
TH-234	+	63.29	*	1.925E+00	1.124E+00	1.008E+00	1.828E-01	1.910
	+	92.38		2.609E+00	8.352E-01	6.243E-01	1.122E-01	4.180
U-234	+	609.31	*	1.305E+00	2.422E-01	1.309E-01	1.175E-02	9.972
	+	1120.29		1.298E+00	6.058E-01	5.186E-01	4.631E-02	2.503
	+	1764.49		1.633E+00	4.431E-01	2.223E-01	1.278E-02	7.346
NP-237	+	86.50	*	1.403E+00	3.974E-01	2.641E-01	5.854E-02	5.311
		95.87		-7.439E-01	8.161E-01	1.147E+00	2.828E-01	-0.648
U-238	+	63.29	*	1.925E+00	1.124E+00	1.008E+00	1.828E-01	1.910
	+	92.38		2.609E+00	7.249E-01	6.243E-01	5.241E-02	4.180
AM-243	+	74.67	*	4.001E-01	6.324E-02	5.832E-02	4.948E-03	6.861
	+	86.72		5.260E+01	1.021E+01	9.909E+00	8.016E-01	5.308

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		117.66		-1.310E+00	3.421E+00	5.633E+00	5.997E-01	-0.233
		142.18		1.034E+01	1.687E+01	2.824E+01	2.678E+00	0.366
ANH-511	+	511.00	*	2.066E-01	8.365E-02	5.246E-02	3.546E-03	3.937

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-8.127E-03	3.872E-01	6.390E-01	4.712E-02	-0.013
NA-22		1274.54	*	2.544E-02	5.838E-02	9.891E-02	5.606E-03	0.257
NA-24		1368.53	*	1.181E+00	5.838E-02	Half-Life too short		
AL-26		1129.67		2.204E-01	1.916E+00	3.172E+00	1.874E-01	0.070
		1808.65	*	-6.851E-03	3.408E-02	5.304E-02	3.033E-03	-0.129
TI-44		67.85		-1.872E-02	2.693E-02	4.258E-02	3.724E-03	-0.440
		78.38	*	-5.033E-03	3.025E-02	3.679E-02	3.073E-03	-0.137
SC-46		889.25	*	6.170E-03	5.076E-02	8.556E-02	6.271E-03	0.072
	+	1120.51		2.259E-01	1.043E-01	1.616E-01	9.674E-03	1.398
V-48		944.10		4.370E-02	1.150E+00	1.915E+00	1.363E-01	0.023
		983.50	*	-7.321E-02	9.934E-02	1.511E-01	1.046E-02	-0.484
		1312.09		-1.166E-01	1.196E-01	1.678E-01	9.554E-03	-0.695
CR-51		320.08	*	1.292E-01	3.872E-01	6.507E-01	4.963E-02	0.199
MN-52		744.21		1.633E-02	3.709E-01	5.953E-01	4.535E-02	0.027
		848.13		-1.018E+01	1.066E+01	1.608E+01	1.201E+00	-0.633
		935.52		3.242E-01	4.364E-01	7.708E-01	5.513E-02	0.421
		1246.25		9.076E+00	1.277E+01	2.208E+01	1.241E+00	0.411
		1333.61		4.864E+00	8.308E+00	1.461E+01	8.346E-01	0.333
		1434.06	*	1.765E-02	3.597E-01	6.065E-01	3.505E-02	0.029
MN-54		834.83	*	1.832E-02	4.915E-02	8.477E-02	6.360E-03	0.216
CO-56		846.75	*	1.057E-02	4.893E-02	8.349E-02	6.238E-03	0.127
		977.42		-1.084E+00	4.150E+00	6.494E+00	4.517E-01	-0.167
		1037.82		-1.487E-01	4.483E-01	7.138E-01	5.133E-02	-0.208
		1175.09		5.182E-01	3.090E+00	5.112E+00	2.823E-01	0.101
		1238.25		2.052E-01	1.346E-01	2.430E-01	1.455E-02	0.845
		1360.21		5.720E-04	1.222E+00	1.963E+00	1.126E-01	0.000
		1771.40		-3.933E-01	3.213E-01	3.831E-01	2.201E-02	-1.027
CO-57		122.06	*	-2.319E-04	2.387E-02	3.993E-02	4.430E-03	-0.006
		136.48		4.009E-02	2.010E-01	3.373E-01	3.548E-02	0.119
CO-58		810.76	*	5.781E-03	4.760E-02	8.078E-02	6.122E-03	0.072
FE-59		142.65		1.766E+00	2.624E+00	4.403E+00	4.157E-01	0.401
		192.34		1.427E-01	9.380E-01	1.543E+00	1.959E-01	0.092
		1099.22	*	2.657E-02	1.266E-01	2.115E-01	1.503E-02	0.126
		1291.56		2.092E-02	1.658E-01	2.718E-01	1.990E-02	0.077
CO-60		1173.22		9.980E-03	6.025E-02	9.969E-02	5.502E-03	0.100
		1332.49	*	-1.054E-02	5.107E-02	8.125E-02	4.640E-03	-0.130
ZN-65		1115.52	*	-2.187E-02	1.220E-01	1.675E-01	1.012E-02	-0.131
GE-68		1077.35	*	2.443E-01	1.686E+00	2.806E+00	1.775E-01	0.087
AS-73		53.44	*	-4.570E-04	2.377E-01	3.723E-01	3.021E-02	-0.001
AS-74		595.88	*	-6.078E-02	1.224E-01	1.902E-01	1.381E-02	-0.320
		634.78		1.409E-02	4.861E-01	7.886E-01	5.862E-02	0.018

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SE-75		66.05		2.752E+00	2.950E+00	4.377E+00	4.640E-01	0.629
		96.73		3.256E-01	6.699E-01	1.044E+00	1.432E-01	0.312
		121.11		-3.342E-02	1.280E-01	2.117E-01	2.780E-02	-0.158
		136.00		-6.500E-03	3.791E-02	6.260E-02	6.288E-03	-0.104
		198.60		1.298E+00	1.779E+00	2.926E+00	2.497E-01	0.444
		264.65	*	-1.802E-02	4.892E-02	6.724E-02	5.073E-03	-0.268
		279.53		-1.400E-01	1.187E-01	1.736E-01	1.355E-02	-0.806
		303.91		-6.509E-01	2.428E+00	3.327E+00	3.488E-01	-0.196
		400.65		1.432E-01	2.750E-01	4.759E-01	4.351E-02	0.301
BR-77	+	87.88		1.236E+03	3.692E+02	4.862E+02	3.917E+01	2.541
		200.40		-2.057E+02	2.826E+02	4.415E+02	3.298E+01	-0.466
	+	239.00		5.122E+02	5.173E+01	7.304E+01	5.510E+00	7.013
		249.79		-8.603E+01	1.121E+02	1.702E+02	1.283E+01	-0.505
		281.68		-2.898E+02	1.726E+02	2.411E+02	1.788E+01	-1.202
		297.23		1.640E+02	1.176E+02	1.565E+02	1.143E+01	1.048
		303.76		-6.849E+01	3.646E+02	5.038E+02	3.652E+01	-0.136
		439.47		-6.050E+01	2.664E+02	4.350E+02	2.699E+01	-0.139
		484.57		1.319E+02	4.879E+02	8.218E+02	5.397E+01	0.161
		520.65	*	-6.587E+00	2.110E+01	3.372E+01	2.301E+00	-0.195
		574.64		-3.841E+02	4.836E+02	7.360E+02	5.264E+01	-0.522
		578.91		9.832E+01	2.222E+02	3.322E+02	2.383E+01	0.296
		585.48		5.834E+02	4.234E+02	6.877E+02	4.958E+01	0.848
		755.35		1.875E+02	3.793E+02	6.342E+02	4.830E+01	0.296
		817.79		1.658E+02	2.898E+02	5.110E+02	3.853E+01	0.325
SR-82		698.33		5.756E+00	4.678E+01	7.593E+01	5.765E+00	0.076
		776.49	*	2.318E-02	4.909E-01	8.299E-01	6.309E-02	0.028
		1395.20		-6.253E+00	1.201E+01	1.839E+01	1.059E+00	-0.340
RB-83		520.41	*	-3.627E-02	7.885E-02	1.242E-01	8.477E-03	-0.292
		529.64		4.852E-02	1.266E-01	2.142E-01	1.474E-02	0.227
		552.65		1.592E-01	2.377E-01	4.102E-01	2.883E-02	0.388
RB-84		881.50	*	-1.879E-02	9.377E-02	1.533E-01	1.128E-02	-0.123
KR-85		513.99	*	6.114E+00	8.258E+00	1.291E+01	8.752E-01	0.474
SR-85		513.99	*	3.200E-02	4.323E-02	6.758E-02	4.581E-03	0.474
RB-86		1076.63	*	1.981E-01	1.148E+00	1.915E+00	1.212E-01	0.103
Y-88		898.02		6.469E-03	5.432E-02	9.145E-02	6.716E-03	0.071
		1836.01	*	5.648E-02	4.049E-02	8.543E-02	4.877E-03	0.661
ZR-88		392.90	*	-1.807E-02	3.413E-02	5.511E-02	3.190E-03	-0.328
Y-91		1204.90	*	-4.549E+00	2.582E+01	4.121E+01	2.294E+00	-0.110
NB-94		702.63	*	-2.444E-02	4.495E-02	6.853E-02	5.206E-03	-0.357
		871.10		1.911E-02	4.324E-02	7.511E-02	5.554E-03	0.254
NB-95		765.79	*	2.694E-02	5.956E-02	1.035E-01	7.879E-03	0.260
NB-95M		235.69	*	3.214E-01	1.603E-01	2.550E-01	2.280E-02	1.260
ZR-95		724.18		7.960E-02	1.348E-01	2.023E-01	1.709E-02	0.393
		756.15	*	8.163E-03	9.629E-02	1.549E-01	1.331E-02	0.053
NB-97		657.90	*	-2.931E-01	9.629E-02	Half-Life too short		
		1024.50		-8.052E+00	9.629E-02	Half-Life too short		
ZR-97		254.15		7.892E+00	9.629E-02	Half-Life too short		
		355.39		1.266E+01	9.629E-02	Half-Life too short		
		507.63	*	1.218E+01	9.629E-02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		602.52		-6.206E-01	9.629E-02	Half-Life too short		
		1021.30		3.773E+01	9.629E-02	Half-Life too short		
		1147.95		-1.459E+01	9.629E-02	Half-Life too short		
		1362.66		3.631E+01	9.629E-02	Half-Life too short		
		1750.46		5.105E+00	9.629E-02	Half-Life too short		
MO-99		140.51		-2.673E+01	4.181E+01	6.635E+01	1.859E+01	-0.403
		181.06		-1.162E+01	2.938E+01	4.173E+01	7.402E+00	-0.278
		366.43		-1.332E+01	1.390E+02	2.324E+02	1.473E+01	-0.057
		739.58	*	4.549E-01	2.482E+01	3.974E+01	5.818E+00	0.011
		778.00		-2.272E+01	6.505E+01	1.059E+02	8.048E+00	-0.215
TC-99M		140.51	*	-5.442E+12	6.505E+01	Half-Life too short		
RH-101	+	127.23		5.828E-02	4.502E-02	5.369E-02	5.741E-03	1.086
		198.01	*	9.520E-04	3.298E-02	5.247E-02	3.915E-03	0.018
		325.23		1.843E-01	2.344E-01	3.747E-01	2.627E-02	0.492
RH-102		418.52		-2.220E-01	2.980E-01	4.682E-01	2.819E-02	-0.474
		475.06	*	-9.946E-03	3.426E-02	5.539E-02	3.597E-03	-0.180
		631.29		-3.112E-02	7.206E-02	1.121E-01	8.319E-03	-0.278
		697.49		1.552E-02	9.727E-02	1.585E-01	1.203E-02	0.098
		766.84		1.171E-01	1.489E-01	2.641E-01	2.010E-02	0.443
		1046.59		-1.431E-02	1.480E-01	2.408E-01	1.576E-02	-0.059
		1112.84		1.925E-02	2.811E-01	4.510E-01	2.728E-02	0.043
RU-103		497.08	*	-1.186E-02	4.524E-02	7.282E-02	9.512E-03	-0.163
	+	610.33		1.459E+01	3.333E+00	3.610E+00	5.796E-01	4.043
RH-106	+	511.85		1.036E+00	4.194E-01	4.715E-01	3.189E-02	2.196
		621.84	*	1.419E-01	3.840E-01	6.428E-01	8.095E-02	0.221
		1050.47		2.914E-02	2.950E+00	4.854E+00	3.163E-01	0.006
RU-106	+	511.85		1.036E+00	4.194E-01	4.715E-01	3.189E-02	2.196
		621.84	*	1.419E-01	3.837E-01	6.428E-01	4.744E-02	0.221
		1050.47		2.914E-02	2.950E+00	4.854E+00	3.163E-01	0.006
AG-108M		433.93	*	4.653E-04	3.447E-02	5.742E-02	3.806E-03	0.008
		614.37		1.513E-02	5.204E-02	7.645E-02	5.919E-03	0.198
		722.95		-4.964E-02	6.152E-02	7.613E-02	6.086E-03	-0.652
AG-110M		657.75	*	-1.862E-02	4.350E-02	6.729E-02	5.256E-03	-0.277
		677.61		-3.370E-01	3.947E-01	5.804E-01	4.549E-02	-0.581
		706.67		2.075E-01	2.712E-01	4.641E-01	3.652E-02	0.447
		763.93		-2.062E-01	2.237E-01	3.493E-01	2.755E-02	-0.590
		884.67		-2.563E-02	6.168E-02	9.844E-02	7.551E-03	-0.260
		937.48		-7.083E-02	1.429E-01	2.252E-01	1.693E-02	-0.315
		1384.27		1.596E-01	1.885E-01	3.233E-01	1.975E-02	0.494
IN-111		171.28		2.199E-01	1.543E+00	2.554E+00	1.873E-01	0.086
		245.39	*	5.197E-01	1.772E+00	2.602E+00	1.962E-01	0.200
IN-113M		391.69	*	-9.021E-03	4.911E-02	8.129E-02	5.012E-03	-0.111
SN-113		391.69	*	-9.021E-03	4.911E-02	8.129E-02	5.012E-03	-0.111
IN-114M		190.27	*	1.275E-01	1.812E-01	2.937E-01	2.181E-02	0.434
CD-115		260.90		5.096E+01	2.413E+02	3.918E+02	2.943E+01	0.130
		492.35		-3.375E+00	7.222E+01	1.186E+02	7.861E+00	-0.028
		527.90	*	1.787E+01	2.338E+01	4.071E+01	2.797E+00	0.439
SN-117M		156.02		-2.270E+00	2.515E+00	3.972E+00	3.279E-01	-0.572
		158.56	*	3.007E-02	5.910E-02	9.976E-02	7.999E-03	0.301

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-122		563.90	*	-2.188E+00	4.175E+00	6.510E+00	4.617E-01	-0.336
		692.80		-2.630E+01	8.700E+01	1.355E+02	1.028E+01	-0.194
I-123		159.00	*	2.025E+01	8.700E+01	Half-Life too short		
		528.96		1.793E+03	8.700E+01	Half-Life too short		
TE-123M		159.00	*	8.359E-03	2.807E-02	4.696E-02	3.772E-03	0.178
I-124		602.71	*	-4.110E-01	1.287E+00	1.758E+00	1.282E-01	-0.234
		722.78		-6.964E+00	8.919E+00	1.109E+01	8.444E-01	-0.628
		1325.50		-6.521E+01	6.272E+01	8.823E+01	5.033E+00	-0.739
		1376.25		9.882E+01	6.039E+01	1.081E+02	6.213E+00	0.914
		1509.49		2.800E+01	2.622E+01	5.017E+01	2.913E+00	0.558
		1691.02		-1.321E+00	6.441E+00	1.018E+01	5.890E-01	-0.130
SB-124		602.71		-1.763E-02	5.520E-02	7.541E-02	5.502E-03	-0.234
		645.85		-2.025E-01	5.990E-01	9.343E-01	7.537E-02	-0.217
		709.31		-1.110E+00	3.620E+00	5.631E+00	4.282E-01	-0.197
		713.82		1.152E+00	2.110E+00	3.552E+00	4.026E-01	0.324
		722.78		-4.331E-01	5.547E-01	6.897E-01	5.396E-02	-0.628
	+	968.20		2.811E+01	5.532E+00	9.631E+00	6.744E-01	2.919
		1045.16		-2.917E-01	3.255E+00	5.302E+00	3.474E-01	-0.055
		1325.50		-4.331E+00	4.166E+00	5.860E+00	3.343E-01	-0.739
		1368.21		3.232E-01	2.196E+00	3.608E+00	4.272E-01	0.090
		1436.60		-1.472E+00	4.945E+00	7.932E+00	4.585E-01	-0.186
		1691.02	*	-1.937E-02	9.448E-02	1.493E-01	9.381E-03	-0.130
SB-125		427.89	*	-3.701E-02	9.916E-02	1.605E-01	1.017E-02	-0.231
	+	463.38		9.613E-01	5.075E-01	6.310E-01	4.598E-02	1.523
		600.56		8.407E-02	2.158E-01	3.620E-01	2.905E-02	0.232
		635.90		-1.487E-01	3.414E-01	5.295E-01	4.360E-02	-0.281
TE-125M		109.28	*	6.401E-01	8.644E+00	1.458E+01	1.659E+00	0.044
I-126		388.63		1.535E-01	2.484E-01	4.327E-01	2.531E-02	0.355
		666.33	*	-1.328E-02	2.615E-01	4.196E-01	3.164E-02	-0.032
		753.82		2.777E+00	2.145E+00	3.822E+00	2.911E-01	0.727
SB-126		223.80		3.444E-01	4.571E+00	7.424E+00	5.592E-01	0.046
		278.60		1.693E+00	2.853E+00	4.718E+00	3.508E-01	0.359
		296.50		6.427E+00	2.130E+00	3.200E+00	2.340E-01	2.008
		414.70		-1.141E-02	9.444E-02	1.370E-01	8.201E-03	-0.083
		415.30		4.219E+00	7.716E+00	1.200E+01	7.191E-01	0.352
		555.20		-1.432E+00	5.229E+00	8.341E+00	5.874E-01	-0.172
		573.80		-1.354E+00	1.520E+00	2.293E+00	1.639E-01	-0.590
		593.00		3.714E-01	1.268E+00	2.115E+00	1.533E-01	0.176
		656.30		-2.184E+00	4.590E+00	7.062E+00	5.305E-01	-0.309
		666.33		-5.576E-03	1.098E-01	1.761E-01	1.328E-02	-0.032
		675.00		2.970E+00	2.732E+00	4.828E+00	3.649E-01	0.615
		695.00		-9.639E-03	1.060E-01	1.688E-01	1.281E-02	-0.057
		697.00		-6.274E-03	3.804E-01	6.099E-01	4.630E-02	-0.010
		720.50	*	4.047E-02	2.171E-01	3.279E-01	2.496E-02	0.123
		856.80		-2.699E-01	6.530E-01	8.861E-01	6.594E-02	-0.305
		989.30		-4.314E-01	1.638E+00	2.623E+00	1.808E-01	-0.164
		1034.80		-1.129E+01	1.431E+01	2.172E+01	1.438E+00	-0.520
		1213.00		2.140E+00	7.838E+00	1.302E+01	7.260E-01	0.164
SB-127	+	61.10		1.125E+02	6.387E+01	6.394E+01	7.721E+00	1.759

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		252.40		1.099E+00	5.996E+00	9.713E+00	4.078E+00	0.113
		290.80		-9.488E+00	3.646E+01	5.030E+01	5.470E+00	-0.189
		411.60		6.291E+00	1.969E+01	2.987E+01	4.455E+00	0.211
		444.90		1.056E+01	1.516E+01	2.641E+01	3.077E+00	0.400
		473.00		8.296E-02	2.784E+00	4.616E+00	5.598E-01	0.018
		543.00		-9.904E+00	2.735E+01	4.330E+01	6.052E+00	-0.229
		603.60		-1.336E+01	2.296E+01	3.022E+01	3.693E+00	-0.442
		685.20	*	2.098E-02	2.544E+00	4.094E+00	4.605E-01	0.005
		698.50		5.110E+00	2.804E+01	4.574E+01	7.196E+00	0.112
		722.20		-2.594E+01	6.130E+01	8.051E+01	8.896E+00	-0.322
		783.80		4.490E+00	5.866E+00	1.050E+01	1.292E+00	0.428
XE-127		57.60		1.941E+00	2.510E+00	4.033E+00	3.548E-01	0.481
		145.22		-2.659E-01	6.591E-01	1.072E+00	9.880E-02	-0.248
		172.10		2.753E-02	1.168E-01	1.943E-01	1.426E-02	0.142
		202.84	*	-3.875E-02	4.703E-02	7.295E-02	5.456E-03	-0.531
		374.96		8.706E-02	2.036E-01	3.522E-01	2.170E-02	0.247
I-131		80.18		-2.914E+00	4.900E+00	5.749E+00	4.810E-01	-0.507
		284.30		1.625E+00	1.957E+00	3.273E+00	2.597E-01	0.497
		364.48	*	-8.837E-02	1.355E-01	2.173E-01	1.525E-02	-0.407
		636.97		-1.732E+00	2.323E+00	3.487E+00	2.794E-01	-0.497
		722.89		-9.799E+00	1.228E+01	1.523E+01	1.171E+00	-0.644
TE-132		49.72		4.208E+00	5.916E+00	9.591E+00	1.014E+00	0.439
		111.76		-5.444E+00	4.113E+01	6.874E+01	8.616E+00	-0.079
		116.30		-3.519E+01	3.807E+01	6.082E+01	7.837E+00	-0.579
		228.16	*	-1.035E+00	1.038E+00	1.556E+00	2.419E-01	-0.665
BA-133		53.15		5.044E-01	9.711E-01	1.558E+00	1.257E-01	0.324
		79.62		-4.286E-01	1.159E+00	1.385E+00	2.085E-01	-0.309
		81.00		-5.958E-02	8.955E-02	1.039E-01	1.630E-02	-0.573
		276.40		1.239E-01	4.069E-01	6.604E-01	9.101E-02	0.188
		302.84		1.712E-01	1.581E-01	2.438E-01	3.034E-02	0.702
		356.01	*	2.810E-02	4.519E-02	7.116E-02	8.500E-03	0.395
		383.85		-9.264E-04	3.395E-01	5.697E-01	6.243E-02	-0.002
I-133	+	510.53		1.014E+01	3.395E-01	Half-Life too short		
		529.87	*	1.075E-03	3.395E-01	Half-Life too short		
		706.58		1.927E+00	3.395E-01	Half-Life too short		
		856.28		-1.886E+00	3.395E-01	Half-Life too short		
		875.33		-5.511E-01	3.395E-01	Half-Life too short		
		1236.41		8.239E+00	3.395E-01	Half-Life too short		
		1298.22		-1.700E+00	3.395E-01	Half-Life too short		
CS-134		475.35		-9.792E-01	2.242E+00	3.582E+00	2.327E-01	-0.273
		563.23		5.543E-02	4.202E-01	6.940E-01	4.989E-02	0.080
		569.32		2.498E-01	2.496E-01	4.378E-01	3.180E-02	0.571
		604.70		-3.568E-02	4.800E-02	6.204E-02	4.547E-03	-0.575
	+	795.84	*	8.530E-02	8.209E-02	1.181E-01	9.034E-03	0.722
		801.93		-1.523E-01	4.241E-01	6.852E-01	5.224E-02	-0.222
		1038.57		5.242E-01	5.524E+00	9.169E+00	6.048E-01	0.057
		1167.94		3.354E+00	3.439E+00	6.101E+00	3.398E-01	0.550
		1365.15		-7.236E-01	1.621E+00	2.426E+00	1.531E-01	-0.298
CS-135		268.24	*	3.141E-01	1.803E-01	2.891E-01	2.602E-02	1.086

---- Non-Identified Nuclides ----

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I-135		288.45		2.561E+12	1.803E-01	Half-Life too short		
		417.63		2.638E+11	1.803E-01	Half-Life too short		
		546.56		-1.403E+12	1.803E-01	Half-Life too short		
		836.80		4.515E+12	1.803E-01	Half-Life too short		
		1038.76		6.654E+11	1.803E-01	Half-Life too short		
		1124.00		5.951E+12	1.803E-01	Half-Life too short		
		1131.51		-8.823E+11	1.803E-01	Half-Life too short		
		1260.41	*	-1.238E+12	1.803E-01	Half-Life too short		
		1457.56		6.187E+13	1.803E-01	Half-Life too short		
		1678.03		1.093E+12	1.803E-01	Half-Life too short		
		1706.46		-2.068E+12	1.803E-01	Half-Life too short		
		1791.20		1.294E+12	1.803E-01	Half-Life too short		
CS-136		66.91		-4.494E-02	5.133E-01	7.907E-01	1.228E-01	-0.057
	+	86.29		6.914E+00	1.495E+00	1.948E+00	2.437E-01	3.550
		153.22		4.478E-01	7.293E-01	1.236E+00	1.180E-01	0.362
		163.89		1.039E-01	1.212E+00	1.971E+00	1.711E-01	0.053
		176.55		-2.814E-01	4.057E-01	6.416E-01	5.096E-02	-0.439
		273.65		-5.755E-01	6.035E-01	7.853E-01	6.370E-02	-0.733
	+	340.57		2.089E-01	2.051E-01	2.494E-01	1.774E-02	0.838
		818.51		1.246E-02	1.028E-01	1.743E-01	1.316E-02	0.071
		1048.07	*	3.832E-02	1.531E-01	2.582E-01	1.811E-02	0.148
		1235.34		6.698E-01	9.603E-01	1.640E+00	1.620E-01	0.408
BA-137M		661.65	*	-2.286E-02	4.842E-02	7.383E-02	5.560E-03	-0.310
CS-137		661.65	*	-2.416E-02	5.119E-02	7.805E-02	5.892E-03	-0.310
CE-139		165.85	*	2.739E-03	2.939E-02	4.861E-02	3.555E-03	0.056
BA-140		162.64		2.451E-01	8.456E-01	1.388E+00	1.137E-01	0.177
		304.84		4.754E-01	1.557E+00	2.252E+00	6.222E-01	0.211
		423.70		1.444E+00	2.331E+00	3.980E+00	1.267E+00	0.363
		537.32	*	-2.562E-02	3.569E-01	5.814E-01	1.904E-01	-0.044
LA-140	+	328.77		1.009E+00	7.046E-01	6.573E-01	4.966E-02	1.535
		432.53		1.451E-01	2.432E+00	4.067E+00	2.734E-01	0.036
		487.03		6.270E-02	1.783E-01	3.023E-01	2.197E-02	0.207
		751.79		1.076E+00	2.488E+00	4.135E+00	3.575E-01	0.260
		815.85		2.742E-02	4.271E-01	7.207E-01	6.243E-02	0.038
		867.82		-1.485E+00	1.973E+00	3.045E+00	2.416E-01	-0.488
		919.63		-5.392E-01	3.949E+00	5.849E+00	5.584E-01	-0.092
		925.24		2.339E-01	1.600E+00	2.696E+00	2.112E-01	0.087
		1596.49	*	1.637E-02	1.183E-01	2.005E-01	1.166E-02	0.082
CE-141		145.44	*	-1.533E-02	6.051E-02	9.913E-02	9.268E-03	-0.155
CE-143		57.37		7.007E-04	6.051E-02	Half-Life too short		
		231.56		2.479E-03	6.051E-02	Half-Life too short		
	+	293.26	*	3.561E-03	6.051E-02	Half-Life too short		
	+	350.59		8.287E-02	6.051E-02	Half-Life too short		
		490.36		-4.851E-03	6.051E-02	Half-Life too short		
		664.57		8.613E-04	6.051E-02	Half-Life too short		
		721.93		-9.805E-04	6.051E-02	Half-Life too short		
CE-144		80.11		-1.121E+00	1.911E+00	2.244E+00	1.862E-01	-0.500
		133.54	*	2.832E-02	1.916E-01	3.211E-01	5.296E-02	0.088
PM-144		476.78		-7.806E-03	8.067E-02	1.324E-01	9.990E-03	-0.059

---- Non-Identified Nuclides ----

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		618.01		1.959E-02	4.084E-02	6.888E-02	5.264E-03	0.284
		696.49	*	-7.599E-03	4.373E-02	6.907E-02	5.246E-03	-0.110
		778.57		-9.846E-01	2.551E+00	4.129E+00	3.139E-01	-0.238
PR-144		696.49	*	-5.155E-01	2.966E+00	4.686E+00	3.557E-01	-0.110
		1489.15		1.351E+01	1.365E+01	2.628E+01	1.524E+00	0.514
PM-146		453.90	*	-5.235E-03	5.124E-02	8.438E-02	7.581E-03	-0.062
		633.02		2.402E+00	1.929E+00	3.110E+00	1.154E+00	0.772
		735.90		-8.937E-02	1.862E-01	2.797E-01	7.920E-02	-0.320
		747.13		-1.556E-02	1.086E-01	1.707E-01	2.295E-02	-0.091
ND-147	+	91.11		1.486E+00	4.163E-01	4.930E-01	4.453E-02	3.015
		319.41		2.779E+00	3.848E+00	6.404E+00	4.538E-01	0.434
		439.89		-3.725E+00	6.965E+00	1.108E+01	6.885E-01	-0.336
		531.02	*	-1.622E-01	7.589E-01	1.222E+00	1.714E-01	-0.133
PM-149		285.90	*	2.216E+02	1.921E+02	3.230E+02	4.814E+01	0.686
EU-152		121.78		3.192E-03	6.827E-02	1.145E-01	1.386E-02	0.028
		244.69		-7.101E-02	3.427E-01	4.820E-01	3.635E-02	-0.147
		344.27	*	7.786E-03	9.654E-02	1.640E-01	1.211E-02	0.047
		443.98		4.481E-01	1.040E+00	1.783E+00	1.113E-01	0.251
		778.89		-1.351E-01	2.941E-01	4.722E-01	3.589E-02	-0.286
		867.32		-1.110E+00	1.075E+00	1.609E+00	1.192E-01	-0.690
	+	964.01		5.066E-01	3.798E-01	6.514E-01	4.575E-02	0.778
		1085.78		3.889E-02	5.004E-01	8.271E-01	5.179E-02	0.047
		1112.02		6.814E-02	4.037E-01	6.718E-01	4.069E-02	0.101
		1407.95		1.211E-01	2.082E-01	3.769E-01	2.173E-02	0.321
GD-153		69.67		-2.863E-01	1.065E+00	1.614E+00	1.400E-01	-0.177
	+	83.37		3.211E+01	1.553E+01	2.021E+01	1.656E+00	1.589
		97.43	*	7.313E-02	6.599E-02	1.115E-01	9.823E-03	0.656
		103.18		7.295E-02	9.184E-02	1.593E-01	1.482E-02	0.458
EU-154		123.07		-2.565E-02	4.908E-02	8.003E-02	1.062E-02	-0.321
		247.94		9.123E-03	3.414E-01	5.496E-01	5.873E-02	0.017
		591.81		1.013E-01	7.525E-01	1.239E+00	1.324E-01	0.082
		723.30		-2.171E-01	2.602E-01	3.208E-01	2.768E-02	-0.677
		756.87		-5.458E-01	1.020E+00	1.535E+00	1.731E-01	-0.356
		873.19		6.815E-03	4.006E-01	6.694E-01	7.638E-02	0.010
		996.32		-1.447E-01	5.192E-01	8.339E-01	1.416E-01	-0.173
		1004.76		-2.583E-01	2.832E-01	4.212E-01	4.366E-02	-0.613
		1274.45	*	6.785E-02	1.627E-01	2.749E-01	2.544E-02	0.247
EU-155		48.70		-7.968E-02	4.893E-01	7.012E-01	5.139E-02	-0.114
		60.01		-1.253E+00	2.389E+00	3.330E+00	3.026E-01	-0.376
	+	86.54		5.757E-01	1.120E-01	1.631E-01	1.335E-02	3.530
		105.31	*	5.225E-02	9.715E-02	1.669E-01	1.599E-02	0.313
TB-160	+	86.79		1.566E+00	3.040E-01	4.458E-01	3.605E-02	3.513
		197.04		-5.707E-02	5.689E-01	8.987E-01	6.702E-02	-0.064
		215.65		1.861E-01	7.399E-01	1.216E+00	9.142E-02	0.153
	+	298.57		4.121E-01	1.759E-01	2.183E-01	1.593E-02	1.887
		879.36	*	9.920E-02	1.877E-01	3.277E-01	2.414E-02	0.303
		962.29		1.566E-01	7.702E-01	1.136E+00	7.984E-02	0.138
	+	966.15		3.544E-01	2.657E-01	6.162E-01	4.321E-02	0.575
		1177.93		-1.888E-01	5.091E-01	7.984E-01	4.412E-02	-0.236

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1271.85		3.122E-01	8.653E-01	1.461E+00	8.258E-02	0.214
HO-166M		80.57		-1.678E-01	2.447E-01	2.848E-01	2.359E-02	-0.589
	+	184.41		1.775E-01	5.446E-02	7.117E-02	5.268E-03	2.494
		280.46		-7.972E-02	8.759E-02	1.305E-01	9.690E-03	-0.611
	+	410.95		5.603E-01	3.026E-01	4.781E-01	2.847E-02	1.172
		711.68	*	-5.349E-02	7.788E-02	1.162E-01	8.837E-03	-0.460
		752.31		3.596E-01	3.567E-01	6.225E-01	4.741E-02	0.578
		810.29		5.403E-03	7.125E-02	1.204E-01	9.098E-03	0.045
TM-171		51.35		5.623E-01	7.300E+00	1.150E+01	8.933E-01	0.049
		52.39		-3.013E-01	4.130E+00	6.453E+00	5.124E-01	-0.047
		59.40		1.011E+00	1.225E+01	1.766E+01	1.606E+00	0.057
		66.72	*	4.061E+00	1.803E+01	2.595E+01	2.282E+00	0.156
LU-176	+	88.36		7.510E-01	2.244E-01	2.826E-01	2.283E-02	2.658
		201.83		-1.682E-02	2.791E-02	4.392E-02	3.283E-03	-0.383
		306.84	*	-1.566E-03	2.564E-02	3.998E-02	2.886E-03	-0.039
		401.10		2.727E+00	7.134E+00	1.224E+01	7.180E-01	0.223
LU-177		112.95		1.025E+00	1.839E+00	3.152E+00	3.212E-01	0.325
	+	208.36	*	3.420E+00	1.809E+00	2.517E+00	1.887E-01	1.359
LU-177M		52.97		1.953E-01	4.360E-01	6.976E-01	5.606E-02	0.280
		54.07		-2.359E-01	2.610E-01	3.900E-01	3.205E-02	-0.605
	+	61.30		2.073E+00	1.165E+00	1.244E+00	1.123E-01	1.666
		121.62		2.551E-02	3.519E-01	5.907E-01	6.522E-02	0.043
		147.16		3.713E-02	5.988E-01	9.953E-01	9.010E-02	0.037
		171.86		8.201E-02	4.596E-01	7.619E-01	5.591E-02	0.108
		218.09		-3.665E-02	8.623E-01	1.394E+00	1.049E-01	-0.026
	+	268.79		2.288E+00	1.477E+00	1.550E+00	1.159E-01	1.476
		319.02		1.512E-01	2.642E-01	4.355E-01	3.086E-02	0.347
		367.43		5.942E-01	9.408E-01	1.648E+00	1.041E-01	0.361
		413.65	*	-3.698E-02	1.948E-01	2.803E-01	1.676E-02	-0.132
HF-181		56.28		-1.157E-01	3.580E-01	5.515E-01	4.732E-02	-0.210
		57.53		1.524E-01	2.089E-01	3.353E-01	2.946E-02	0.455
		65.20		-3.376E-01	5.972E-01	8.268E-01	7.322E-02	-0.408
		133.02		1.186E-02	6.586E-02	1.057E-01	1.082E-02	0.112
		136.25		4.676E-02	4.502E-01	7.525E-01	7.505E-02	0.062
		345.85		-1.591E-01	2.699E-01	3.148E-01	2.112E-02	-0.505
		482.03	*	-2.554E-03	5.386E-02	8.867E-02	5.806E-03	-0.029
W-181		56.28		-4.416E-02	1.373E-01	2.115E-01	1.815E-02	-0.209
		57.53		5.837E-02	8.014E-02	1.286E-01	1.130E-02	0.454
		65.20	*	-1.285E-01	2.273E-01	3.147E-01	2.787E-02	-0.408
TA-182		67.75		-4.792E-02	6.120E-02	1.024E-01	8.957E-03	-0.468
		100.10		-2.727E-01	1.525E-01	2.349E-01	2.122E-02	-1.161
		152.43		4.042E-01	3.449E-01	5.961E-01	5.117E-02	0.678
		222.10		3.459E-01	3.499E-01	5.953E-01	4.482E-02	0.581
		1001.68		1.402E+00	2.849E+00	4.872E+00	3.324E-01	0.288
	+	1121.28		6.212E-01	2.869E-01	4.473E-01	2.675E-02	1.389
		1189.05		-2.006E-01	4.121E-01	6.365E-01	3.528E-02	-0.315
		1221.42	*	-1.798E-02	2.677E-01	4.315E-01	2.412E-02	-0.042
		1230.97		1.207E-01	6.620E-01	1.091E+00	6.111E-02	0.111
RE-183		57.98		5.468E-02	8.900E-02	1.318E-01	1.168E-02	0.415

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		59.32		5.266E-03	5.113E-02	7.379E-02	6.701E-03	0.071
		67.20		-3.959E-03	1.201E-01	1.860E-01	1.631E-02	-0.021
		162.32	*	6.853E-02	1.126E-01	1.874E-01	1.435E-02	0.366
	+	208.81		2.558E+00	1.353E+00	1.899E+00	1.424E-01	1.347
		291.72		-3.717E-01	1.078E+00	1.472E+00	1.082E-01	-0.252
RE-184		57.98		1.992E-01	3.242E-01	4.801E-01	4.253E-02	0.415
		59.32		1.917E-02	1.861E-01	2.686E-01	2.439E-02	0.071
		67.20		-1.442E-02	4.374E-01	6.772E-01	5.941E-02	-0.021
		161.27		8.211E-03	3.533E-01	5.833E-01	4.526E-02	0.014
		216.55		1.674E-01	2.621E-01	4.393E-01	3.303E-02	0.381
		252.85	*	7.745E-02	2.287E-01	3.751E-01	2.824E-02	0.206
		318.01		1.032E-01	4.652E-01	7.475E-01	5.307E-02	0.138
		792.07		6.072E-01	1.313E+00	2.024E+00	1.535E-01	0.300
		903.28		1.299E-01	1.308E+00	2.005E+00	1.459E-01	0.065
		920.93		-3.369E-01	5.263E-01	8.156E-01	5.882E-02	-0.413
OS-185		59.72		4.483E-05	1.384E-01	1.986E-01	1.808E-02	0.000
	+	61.14		2.281E-01	1.283E-01	1.312E-01	1.185E-02	1.739
		69.30		-3.769E-02	1.912E-01	2.906E-01	2.525E-02	-0.130
		592.07		8.412E-01	3.104E+00	5.169E+00	3.744E-01	0.163
		646.12	*	-1.040E-02	5.020E-02	7.940E-02	5.936E-03	-0.131
		717.42		4.598E-01	1.158E+00	1.925E+00	1.465E-01	0.239
		874.81		-5.333E-01	8.142E-01	1.275E+00	9.413E-02	-0.418
		880.27		5.389E-01	1.032E+00	1.801E+00	1.326E-01	0.299
RE-188		155.03	*	-7.498E-02	1.717E-01	2.778E-01	2.319E-02	-0.270
		477.96		-1.206E+00	3.731E+00	6.015E+00	3.920E-01	-0.200
		633.10		5.046E+00	3.553E+00	6.431E+00	4.776E-01	0.785
W-188	+	63.58		7.890E+01	4.436E+01	4.683E+01	4.180E+00	1.685
		227.08		-7.058E+00	1.246E+01	1.943E+01	1.464E+00	-0.363
		290.67	*	-2.595E+00	9.020E+00	1.241E+01	9.135E-01	-0.209
IR-192	+	295.96		1.077E+00	2.176E-01	2.885E-01	2.132E-02	3.734
		308.46		-5.347E-02	1.022E-01	1.534E-01	1.113E-02	-0.348
		316.51	*	-1.336E-02	3.666E-02	5.629E-02	4.020E-03	-0.237
		468.07		-5.311E-02	7.954E-02	1.061E-01	7.692E-03	-0.501
		604.41		-5.642E-01	6.575E-01	8.317E-01	1.014E-01	-0.678
		612.46		8.866E-02	9.554E-01	1.371E+00	1.208E-01	0.065
AU-195		65.12		-5.938E-02	1.046E-01	1.448E-01	1.283E-02	-0.410
		66.83		-2.766E-03	5.594E-02	8.632E-02	7.585E-03	-0.032
	+	75.70		2.014E+00	2.546E-01	3.607E-01	3.047E-02	5.585
		98.88	*	1.791E-01	1.827E-01	3.197E-01	2.854E-02	0.560
	+	129.76		5.169E+00	3.994E+00	4.735E+00	4.969E-01	1.092
TL-200		367.94	*	1.473E-03	3.994E+00	Half-Life too short		
		579.30		1.253E-02	3.994E+00	Half-Life too short		
		828.27		1.317E-02	3.994E+00	Half-Life too short		
		1205.75		-2.161E-04	3.994E+00	Half-Life too short		
TL-201		68.90		-9.936E-01	4.673E+00	7.098E+00	6.178E-01	-0.140
		70.82		7.230E-01	2.737E+00	4.277E+00	3.690E-01	0.169
		80.30		-4.347E+00	7.064E+00	8.272E+00	6.858E-01	-0.525
		135.34		-1.942E+01	3.744E+01	6.077E+01	6.106E+00	-0.320
		167.43	*	1.996E+00	1.047E+01	1.739E+01	1.272E+00	0.115

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-202		68.90		-6.383E-02	3.002E-01	4.560E-01	3.968E-02	-0.140
		70.82		4.631E-02	1.753E-01	2.740E-01	2.364E-02	0.169
		80.30		-2.785E-01	4.526E-01	5.301E-01	4.394E-02	-0.525
		439.56	*	-2.084E-02	8.102E-02	1.320E-01	8.189E-03	-0.158
HG-203		70.83		1.867E-01	7.004E-01	1.094E+00	1.489E-01	0.171
	+	72.87		4.259E+00	7.965E-01	8.812E-01	1.159E-01	4.833
	+	82.60		2.444E+00	1.211E+00	1.483E+00	2.001E-01	1.649
		279.20	*	-3.284E-02	4.446E-02	6.732E-02	5.193E-03	-0.488
BI-207	+	72.80		1.213E+00	1.916E-01	2.453E-01	2.098E-02	4.944
	+	74.97		7.183E-01	1.135E-01	1.918E-01	1.625E-02	3.745
		84.90		4.516E-01	1.473E-01	2.624E-01	2.137E-02	1.721
		569.67		3.783E-02	3.827E-02	6.714E-02	4.783E-03	0.563
		1063.62	*	-3.025E-02	6.966E-02	1.092E-01	7.014E-03	-0.277
		1770.23		-1.546E-01	5.452E-01	6.819E-01	3.918E-02	-0.227
TL-207		81.07		-1.280E-01	1.971E-01	2.300E-01	1.901E-02	-0.557
	+	83.78		2.723E-01	1.317E-01	1.692E-01	1.384E-02	1.609
		94.90		-2.262E-02	1.868E-01	2.827E-01	2.430E-02	-0.080
		122.32		2.024E-01	1.638E+00	2.755E+00	3.188E-01	0.073
		144.24		-1.607E-01	6.493E-01	1.046E+00	1.073E-01	-0.154
		154.21		1.340E-01	3.981E-01	6.675E-01	6.208E-02	0.201
	+	269.46		5.311E-01	3.429E-01	3.661E-01	2.813E-02	1.451
		323.87	*	-2.725E-01	7.176E-01	1.037E+00	1.762E-01	-0.263
	+	338.28		8.291E+00	1.875E+00	2.769E+00	3.083E-01	2.994
		445.03		1.649E+00	2.469E+00	4.298E+00	4.526E-01	0.384
PO-209		260.50		-6.056E+00	9.790E+00	1.502E+01	1.128E+00	-0.403
		262.80		2.243E+00	2.621E+01	4.219E+01	3.166E+00	0.053
		896.60	*	4.405E+00	9.528E+00	1.654E+01	1.208E+00	0.266
PB-211		404.84	*	-2.716E-01	1.110E+00	1.575E+00	9.819E-01	-0.172
		427.08		3.219E-01	2.192E+00	3.677E+00	2.274E+00	0.088
		831.96		-1.545E+00	1.864E+00	2.441E+00	1.526E+00	-0.633
BI-212	+	727.18	*	1.141E+00	5.742E-01	8.184E-01	7.494E-02	1.394
		785.46		2.008E-01	2.062E+00	3.498E+00	2.656E-01	0.057
		1620.62		7.326E-01	1.412E+00	2.558E+00	1.485E-01	0.286
PO-215		81.07		-1.280E-01	1.971E-01	2.300E-01	1.901E-02	-0.557
	+	83.78		2.723E-01	1.317E-01	1.692E-01	1.384E-02	1.609
		94.90		-2.262E-02	1.868E-01	2.827E-01	2.430E-02	-0.080
		122.32		2.024E-01	1.638E+00	2.755E+00	3.188E-01	0.073
		144.24		-1.607E-01	6.493E-01	1.046E+00	1.073E-01	-0.154
		154.21		1.340E-01	3.981E-01	6.675E-01	6.208E-02	0.201
	+	269.46		5.311E-01	3.429E-01	3.661E-01	2.813E-02	1.451
		323.87	*	-2.725E-01	7.176E-01	1.037E+00	1.762E-01	-0.263
	+	338.28		8.291E+00	1.875E+00	2.769E+00	3.083E-01	2.994
		445.03		1.649E+00	2.469E+00	4.298E+00	4.526E-01	0.384
RN-219	+	271.23		6.814E-01	4.415E-01	4.378E-01	4.104E-02	1.556
		401.81	*	-1.624E-01	4.375E-01	7.120E-01	9.709E-02	-0.228
RN-220		549.76	*	1.508E+00	3.108E+01	5.106E+01	3.579E+00	0.030
RA-223		81.07		-1.280E-01	1.971E-01	2.300E-01	1.901E-02	-0.557
	+	83.78		2.723E-01	1.317E-01	1.692E-01	1.384E-02	1.609
		94.90		-2.262E-02	1.868E-01	2.827E-01	2.430E-02	-0.080

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		122.32		2.024E-01	1.638E+00	2.755E+00	3.188E-01	0.073
		144.24		-1.607E-01	6.493E-01	1.046E+00	1.073E-01	-0.154
		154.21		1.340E-01	3.981E-01	6.675E-01	6.208E-02	0.201
	+	269.46		5.311E-01	3.429E-01	3.661E-01	2.813E-02	1.451
		323.87	*	-2.725E-01	7.176E-01	1.037E+00	1.762E-01	-0.263
	+	338.28		8.291E+00	1.875E+00	2.769E+00	3.083E-01	2.994
		445.03		1.649E+00	2.469E+00	4.298E+00	4.526E-01	0.384
AC-227		79.80		-7.875E-01	1.475E+00	1.730E+00	3.699E-01	-0.455
		236.00		1.578E+00	3.423E-01	5.662E-01	6.519E-02	2.786
		256.20	*	2.527E-01	3.784E-01	6.299E-01	9.296E-02	0.401
		286.10		1.793E+00	1.714E+00	2.884E+00	3.586E-01	0.622
	+	299.80		5.151E+00	2.333E+00	2.898E+00	4.889E-01	1.777
		304.40		-9.110E-01	2.157E+00	2.900E+00	5.171E-01	-0.314
		334.20		-7.266E-01	2.954E+00	3.626E+00	6.783E-01	-0.200
TH-227		79.80		-7.875E-01	1.475E+00	1.730E+00	3.747E-01	-0.455
		94.00		3.452E+00	1.688E+00	2.569E+00	5.585E-01	1.344
		236.00		1.578E+00	3.322E-01	5.662E-01	5.811E-02	2.786
		256.20	*	2.527E-01	3.792E-01	6.299E-01	1.106E-01	0.401
		286.10		1.793E+00	2.474E+00	2.884E+00	2.892E+00	0.622
	+	299.80		5.151E+00	2.333E+00	2.898E+00	4.889E-01	1.777
		304.40		-9.110E-01	2.157E+00	2.900E+00	5.171E-01	-0.314
		334.20		-7.266E-01	2.954E+00	3.626E+00	6.783E-01	-0.200
TH-229	+	85.43		1.071E+00	2.080E-01	2.855E-01	2.321E-02	3.752
	+	88.47		4.323E-01	1.292E-01	1.631E-01	1.319E-02	2.651
		100.00		-2.745E-01	1.564E-01	2.416E-01	2.180E-02	-1.136
		193.63	*	-1.189E-03	4.859E-01	7.928E-01	5.901E-02	-0.001
		210.97		-5.125E-02	8.068E-01	1.163E+00	8.730E-02	-0.044
PA-231		283.67	*	5.000E-01	1.659E+00	2.692E+00	3.911E-01	0.186
	+	301.29		2.060E+00	8.972E-01	1.042E+00	1.181E-01	1.977
TH-231		81.07		-1.280E-01	1.971E-01	2.300E-01	1.901E-02	-0.557
	+	83.78		2.723E-01	1.317E-01	1.692E-01	1.384E-02	1.609
		94.90		-2.262E-02	1.868E-01	2.827E-01	2.430E-02	-0.080
		122.32		2.024E-01	1.638E+00	2.755E+00	3.188E-01	0.073
		144.24		-1.607E-01	6.493E-01	1.046E+00	1.073E-01	-0.154
		154.21		1.340E-01	3.981E-01	6.675E-01	6.208E-02	0.201
	+	269.46		5.311E-01	3.429E-01	3.661E-01	2.813E-02	1.451
		323.87	*	-2.725E-01	7.176E-01	1.037E+00	1.762E-01	-0.263
	+	338.28		8.291E+00	1.875E+00	2.769E+00	3.083E-01	2.994
		445.03		1.649E+00	2.469E+00	4.298E+00	4.526E-01	0.384
U-231	+	84.21		1.622E+01	7.849E+00	9.793E+00	7.997E-01	1.657
	+	92.29		1.378E+01	3.828E+00	4.877E+00	4.091E-01	2.825
		95.87	*	-1.166E+00	1.251E+00	1.799E+00	1.561E-01	-0.648
		108.00		1.183E+00	2.517E+00	4.313E+00	4.196E-01	0.274
PA-233	+	75.28		3.236E+01	5.798E+00	5.869E+00	8.956E-01	5.514
	+	86.59		9.351E+00	2.989E+00	2.652E+00	7.068E-01	3.526
	+	300.12		1.436E+00	6.370E-01	8.184E-01	1.157E-01	1.755
		311.98	*	3.856E-02	6.718E-02	1.087E-01	8.111E-03	0.355
	+	340.50		9.136E-01	9.193E-01	1.097E+00	2.550E-01	0.833
		398.62		-1.598E+00	2.358E+00	3.704E+00	9.582E-01	-0.431

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		415.76		2.073E-01	1.901E+00	2.825E+00	5.832E-01	0.073
PA-234	+	63.00		2.244E+00	1.294E+00	1.443E+00	2.263E-01	1.555
		94.67		2.948E-02	1.320E-01	2.034E-01	2.517E-02	0.145
		98.44		1.384E-01	1.071E-01	1.345E-01	7.510E-02	1.029
		99.86		-4.697E-01	3.857E-01	6.143E-01	5.536E-02	-0.765
		111.00		-3.019E-02	1.679E-01	2.801E-01	3.673E-02	-0.108
		131.20		9.966E-03	1.079E-01	1.623E-01	1.684E-02	0.061
		152.70		3.269E-01	3.312E-01	5.633E-01	9.585E-02	0.580
	+	186.00		6.389E+00	2.742E+00	2.623E+00	8.106E-01	2.436
		226.40		-1.042E-01	3.913E-01	6.223E-01	7.793E-02	-0.167
		227.20		-2.311E-01	4.129E-01	6.440E-01	4.854E-02	-0.359
		248.90		1.926E-02	7.635E-01	1.229E+00	2.706E-01	0.016
	+	293.70		6.657E+00	1.673E+00	1.885E+00	3.147E-01	3.532
		369.80		-8.731E-02	8.998E-01	1.484E+00	3.111E-01	-0.059
		568.70		-7.588E-01	1.377E+00	1.983E+00	1.412E-01	-0.383
		569.50		3.539E-01	3.410E-01	6.001E-01	4.275E-02	0.590
		574.00		-1.519E+00	1.936E+00	2.948E+00	2.108E-01	-0.515
		699.00		1.568E-01	9.335E-01	1.520E+00	2.834E-01	0.103
		706.10		6.361E-01	1.405E+00	2.299E+00	1.021E+00	0.277
		733.00		5.205E-02	4.964E-01	7.418E-01	1.619E-01	0.070
		742.81		-9.617E-02	1.716E+00	2.724E+00	1.828E+00	-0.035
	+	796.30		1.655E+00	1.648E+00	2.179E+00	5.826E-01	0.759
		805.60		-3.340E-01	1.299E+00	1.961E+00	5.956E-01	-0.170
		819.60		2.414E-01	1.523E+00	2.587E+00	9.777E-01	0.093
		826.30		-2.815E-01	1.090E+00	1.773E+00	7.899E-01	-0.159
		831.60		-6.944E-01	8.477E-01	1.275E+00	3.767E-01	-0.545
		876.40		-5.485E-02	1.137E+00	1.887E+00	1.938E+00	-0.029
		880.51		1.584E-01	3.576E-01	6.207E-01	4.570E-02	0.255
		883.24		-9.621E-02	3.661E-01	5.849E-01	3.923E-01	-0.164
		899.00		-1.707E-01	1.095E+00	1.791E+00	7.786E-01	-0.095
		925.00		1.071E-01	1.483E+00	2.480E+00	1.785E-01	0.043
		926.50		1.116E-01	2.165E-01	3.751E-01	9.312E-02	0.297
		946.00	*	1.483E-01	3.410E-01	5.905E-01	1.070E-01	0.251
		949.00		-3.605E-01	5.489E-01	8.450E-01	5.994E-02	-0.427
		980.50		6.561E-01	9.339E-01	1.649E+00	1.145E-01	0.398
		1394.10		-3.801E-01	1.164E+00	1.795E+00	1.163E+00	-0.212
PA-234M		766.42		1.373E+01	1.703E+01	2.781E+01	1.407E+01	0.494
		1001.03	*	3.847E+00	6.350E+00	1.096E+01	9.273E-01	0.351
U-235	+	89.95		4.339E+00	1.826E+00	1.631E+00	5.016E-01	2.660
	+	93.35		3.137E+00	1.208E+00	9.643E-01	2.698E-01	3.253
		105.00		7.125E-01	9.754E-01	1.650E+00	4.966E-01	0.432
		143.76	*	-1.148E-02	2.036E-01	3.314E-01	5.924E-02	-0.035
		163.35		3.991E-01	4.796E-01	7.972E-01	1.485E-01	0.501
	+	185.71		2.366E-01	7.261E-02	9.903E-02	7.336E-03	2.390
		205.31		-5.960E-02	5.574E-01	8.027E-01	1.493E-01	-0.074
NP-236		94.67		2.258E-02	1.001E-01	1.543E-01	1.324E-02	0.146
		98.44		1.047E-01	5.684E-02	1.017E-01	9.041E-03	1.030
		111.00		-2.284E-02	1.270E-01	2.119E-01	2.120E-02	-0.108
		160.31	*	-4.585E-02	7.968E-02	1.278E-01	1.003E-02	-0.359

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		-1.112E-01	1.294E-01	2.103E-01	1.889E-02	-0.529
		117.00	*	-1.203E-01	1.717E-01	2.783E-01	2.944E-02	-0.432
	+	209.75		1.979E+00	1.047E+00	1.427E+00	1.070E-01	1.387
		228.18		-2.226E-01	2.214E-01	3.350E-01	2.525E-02	-0.664
		277.60		3.915E-01	1.871E-01	3.330E-01	2.478E-02	1.176
		334.30		-3.767E-01	1.674E+00	2.063E+00	1.421E-01	-0.183
AM-241		59.54	*	3.327E-03	7.142E-02	1.028E-01	9.970E-03	0.032
CM-243		99.55		-1.144E-01	1.332E-01	2.164E-01	1.944E-02	-0.529
		103.76	*	1.062E-01	8.602E-02	1.510E-01	1.412E-02	0.703
		117.00		-1.238E-01	1.767E-01	2.863E-01	3.029E-02	-0.432
	+	209.75		1.951E+00	1.032E+00	1.407E+00	1.055E-01	1.387
		228.18		-2.249E-01	2.237E-01	3.385E-01	2.552E-02	-0.664
		277.60		3.948E-01	1.887E-01	3.358E-01	2.498E-02	1.176
AM-246		798.80		-2.017E-01	1.816E-01	2.202E-01	1.668E-02	-0.916
		1036.00		-3.636E-02	4.157E-01	6.782E-01	4.485E-02	-0.054
		1062.04		-1.783E-01	2.997E-01	4.606E-01	2.965E-02	-0.387
		1078.86	*	7.435E-02	1.907E-01	3.247E-01	2.050E-02	0.229
CM-247		278.00		1.250E+00	7.942E-01	1.379E+00	1.025E-01	0.907
		287.40		-1.275E+00	1.443E+00	2.164E+00	1.597E-01	-0.589
		402.60	*	1.066E-02	3.895E-02	6.637E-02	3.901E-03	0.161
CF-249		252.85		2.883E-01	8.514E-01	1.396E+00	1.051E-01	0.206
		333.44		-2.341E-02	2.505E-01	2.692E-01	1.857E-02	-0.087
		387.95	*	-7.722E-04	4.378E-02	7.334E-02	4.303E-03	-0.011
CF-251		176.60	*	-3.338E-02	1.235E-01	1.998E-01	1.471E-02	-0.167
		227.00		-2.063E-01	3.666E-01	5.718E-01	4.310E-02	-0.361
		285.00		1.650E+00	1.947E+00	3.258E+00	2.410E-01	0.507

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492006		
Acquisition date	: 4-JAN-2010 14:02:07	Detector SN#	:
Detector ID	: GAM17	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:09.61	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492006	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3611E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 27-JAN-2009 16:21:14	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	3.432E+01	3.006E+00	6.528E-01	0.000E+00
CD-109	3.231E+00	9.460E-01	9.729E-01	0.000E+00
SN-126	4.777E-01	9.088E-02	9.524E-02	0.000E+00
TL-208	6.008E-01	1.116E-01	7.050E-02	0.000E+00
BI-210	4.433E-01	7.990E-01	8.209E-01	0.000E+00
PB-210	4.433E-01	7.990E-01	8.209E-01	0.000E+00
PO-210	4.433E-01	7.988E-01	8.209E-01	0.000E+00
BI-211	3.877E+00	5.408E-01	3.576E-01	0.000E+00
PB-212	1.797E+00	1.946E-01	9.530E-02	0.000E+00
PO-212	1.797E+00	1.946E-01	9.530E-02	0.000E+00
BI-214	1.306E+00	2.374E-01	1.335E-01	0.000E+00
PB-214	1.348E+00	2.004E-01	1.170E-01	0.000E+00
PO-214	1.348E+00	2.004E-01	1.170E-01	0.000E+00
PO-216	1.797E+00	1.946E-01	9.530E-02	0.000E+00
PO-218	1.348E+00	2.004E-01	1.170E-01	0.000E+00
RA-224	5.286E+00	1.637E+00	1.085E+00	0.000E+00
RA-226	1.306E+00	2.374E-01	1.335E-01	0.000E+00
AC-228	1.793E+00	4.255E-01	2.436E-01	0.000E+00
RA-228	1.793E+00	4.255E-01	2.436E-01	0.000E+00
TH-228	1.828E+00	1.979E-01	9.694E-02	0.000E+00
TH-230	1.305E+00	2.374E-01	1.335E-01	0.000E+00
TH-232	1.793E+00	4.255E-01	2.436E-01	0.000E+00
TH-234	1.925E+00	1.102E+00	1.071E+00	0.000E+00
U-234	1.305E+00	2.374E-01	1.335E-01	0.000E+00
NP-237	1.403E+00	3.895E-01	2.790E-01	0.000E+00
U-238	1.925E+00	1.102E+00	1.071E+00	0.000E+00
AM-243	4.001E-01	6.197E-02	6.177E-02	0.000E+00
ANH-511	2.066E-01	8.197E-02	5.367E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)

BE-7	-8.127E-03	3.794E-01	6.545E-01	0.000E+00	NOT IDENT.
NA-22	2.544E-02	5.722E-02	9.943E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	7.868E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	-6.851E-03	3.340E-02	5.296E-02	0.000E+00	NOT IDENT.
TI-44	-5.033E-03	2.964E-02	3.893E-02	0.000E+00	NOT IDENT.
SC-46	6.170E-03	4.975E-02	8.660E-02	0.000E+00	FAIL ABUN
V-48	-7.321E-02	9.735E-02	1.527E-01	0.000E+00	NOT IDENT.
CR-51	1.292E-01	3.794E-01	6.715E-01	0.000E+00	NOT IDENT.
MN-52	1.765E-02	3.525E-01	6.082E-01	0.000E+00	NOT IDENT.
MN-54	1.832E-02	4.817E-02	8.591E-02	0.000E+00	NOT IDENT.
CO-56	1.057E-02	4.796E-02	8.460E-02	0.000E+00	NOT IDENT.
CO-57	-2.319E-04	2.340E-02	4.193E-02	0.000E+00	NOT IDENT.
CO-58	5.781E-03	4.665E-02	8.192E-02	0.000E+00	NOT IDENT.
FE-59	2.657E-02	1.241E-01	2.133E-01	0.000E+00	NOT IDENT.
CO-60	-1.054E-02	5.005E-02	8.161E-02	0.000E+00	NOT IDENT.
ZN-65	-2.187E-02	1.195E-01	1.688E-01	0.000E+00	NOT IDENT.
GE-68	2.443E-01	1.653E+00	2.829E+00	0.000E+00	NOT IDENT.
AS-73	-4.570E-04	2.329E-01	3.966E-01	0.000E+00	NOT IDENT.
AS-74	-6.078E-02	1.199E-01	1.940E-01	0.000E+00	NOT IDENT.
SE-75	-1.802E-02	4.794E-02	6.963E-02	0.000E+00	NOT IDENT.
BR-77	-6.587E+00	2.067E+01	3.448E+01	0.000E+00	FAIL ABUN
SR-82	2.318E-02	4.811E-01	8.422E-01	0.000E+00	NOT IDENT.
RB-83	-3.627E-02	7.728E-02	1.271E-01	0.000E+00	NOT IDENT.
RB-84	-1.879E-02	9.189E-02	1.552E-01	0.000E+00	NOT IDENT.
KR-85	6.114E+00	8.093E+00	1.320E+01	0.000E+00	NOT IDENT.
SR-85	3.200E-02	4.236E-02	6.912E-02	0.000E+00	NOT IDENT.
RB-86	1.981E-01	1.125E+00	1.931E+00	0.000E+00	NOT IDENT.
Y-88	5.648E-02	3.969E-02	8.526E-02	0.000E+00	NOT IDENT.
ZR-88	-1.807E-02	3.345E-02	5.665E-02	0.000E+00	NOT IDENT.
Y-91	-4.549E+00	2.530E+01	4.147E+01	0.000E+00	NOT IDENT.
NB-94	-2.444E-02	4.405E-02	6.968E-02	0.000E+00	NOT IDENT.
NB-95	2.694E-02	5.837E-02	1.051E-01	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	1.571E-01	2.646E-01	0.000E+00	NOT IDENT.
ZR-95	8.163E-03	9.436E-02	1.573E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	8.257E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.638E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	4.549E-01	2.433E+01	4.037E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	8.392E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.520E-04	3.232E-02	5.462E-02	0.000E+00	FAIL ABUN
RH-102	-9.946E-03	3.357E-02	5.674E-02	0.000E+00	NOT IDENT.
RU-103	-1.186E-02	4.434E-02	7.453E-02	0.000E+00	FAIL ABUN
RH-106	1.419E-01	3.763E-01	6.551E-01	0.000E+00	FAIL ABUN
RU-106	1.419E-01	3.760E-01	6.551E-01	0.000E+00	FAIL ABUN
AG-108M	4.653E-04	3.378E-02	5.892E-02	0.000E+00	NOT IDENT.
AG-110M	-1.862E-02	4.263E-02	6.851E-02	0.000E+00	NOT IDENT.
IN-111	5.197E-01	1.736E+00	2.698E+00	0.000E+00	NOT IDENT.
IN-113M	-9.021E-03	4.813E-02	8.356E-02	0.000E+00	NOT IDENT.
SN-113	-9.021E-03	4.813E-02	8.356E-02	0.000E+00	NOT IDENT.
IN-114M	1.275E-01	1.776E-01	3.059E-01	0.000E+00	NOT IDENT.
CD-115	1.787E+01	2.291E+01	4.161E+01	0.000E+00	NOT IDENT.
SN-117M	3.007E-02	5.791E-02	1.043E-01	0.000E+00	NOT IDENT.
SB-122	-2.188E+00	4.092E+00	6.647E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	6.663E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	8.359E-03	2.751E-02	4.908E-02	0.000E+00	NOT IDENT.
I-124	-4.110E-01	1.261E+00	1.792E+00	0.000E+00	NOT IDENT.
SB-124	-1.937E-02	9.260E-02	1.492E-01	0.000E+00	FAIL ABUN
SB-125	-3.701E-02	9.717E-02	1.647E-01	0.000E+00	FAIL ABUN
TE-125M	6.401E-01	8.471E+00	1.534E+01	0.000E+00	NOT IDENT.
I-126	-1.328E-02	2.563E-01	4.271E-01	0.000E+00	NOT IDENT.
SB-126	4.047E-02	2.127E-01	3.332E-01	0.000E+00	NOT IDENT.
SB-127	2.098E-02	2.493E+00	4.165E+00	0.000E+00	FAIL ABUN
XE-127	-3.875E-02	4.609E-02	7.591E-02	0.000E+00	NOT IDENT.
I-131	-8.837E-02	1.328E-01	2.237E-01	0.000E+00	NOT IDENT.
TE-132	-1.035E+00	1.018E+00	1.616E+00	0.000E+00	NOT IDENT.
BA-133	2.810E-02	4.429E-02	7.328E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.437E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.530E-02	8.044E-02	1.198E-01	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.767E-01	2.993E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.134E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.832E-02	1.501E-01	2.606E-01	0.000E+00	FAIL ABUN
BA-137M	-2.286E-02	4.746E-02	7.516E-02	0.000E+00	NOT IDENT.
CS-137	-2.416E-02	5.017E-02	7.945E-02	0.000E+00	NOT IDENT.
CE-139	2.739E-03	2.880E-02	5.076E-02	0.000E+00	NOT IDENT.
BA-140	-2.562E-02	3.497E-01	5.941E-01	0.000E+00	NOT IDENT.
LA-140	1.637E-02	1.159E-01	2.007E-01	0.000E+00	FAIL ABUN
CE-141	-1.533E-02	5.930E-02	1.038E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.035E+03	0.000E+00	0.000E+00	SHORT HLIF

CE-144	2.832E-02	1.878E-01	3.367E-01	0.000E+00	NOT IDENT.
PM-144	-7.599E-03	4.285E-02	7.025E-02	0.000E+00	NOT IDENT.
PR-144	-5.155E-01	2.907E+00	4.765E+00	0.000E+00	NOT IDENT.
PM-146	-5.235E-03	5.022E-02	8.651E-02	0.000E+00	NOT IDENT.
ND-147	-1.622E-01	7.437E-01	1.249E+00	0.000E+00	FAIL ABUN
PM-149	2.216E+02	1.882E+02	3.340E+02	0.000E+00	NOT IDENT.
EU-152	7.786E-03	9.461E-02	1.690E-01	0.000E+00	FAIL ABUN
GD-153	7.313E-02	6.467E-02	1.176E-01	0.000E+00	FAIL ABUN
EU-154	6.785E-02	1.594E-01	2.764E-01	0.000E+00	NOT IDENT.
EU-155	5.225E-02	9.520E-02	1.757E-01	0.000E+00	FAIL ABUN
TB-160	9.920E-02	1.840E-01	3.318E-01	0.000E+00	FAIL ABUN
HO-166M	-5.349E-02	7.632E-02	1.181E-01	0.000E+00	FAIL ABUN
TM-171	4.061E+00	1.767E+01	2.754E+01	0.000E+00	NOT IDENT.
LU-176	-1.566E-03	2.513E-02	4.129E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.772E+00	2.618E+00	0.000E+00	FAIL ABUN
LU-177M	-3.698E-02	1.909E-01	2.879E-01	0.000E+00	FAIL ABUN
HF-181	-2.554E-03	5.279E-02	9.081E-02	0.000E+00	NOT IDENT.
W-181	-1.285E-01	2.227E-01	3.341E-01	0.000E+00	NOT IDENT.
TA-182	-1.798E-02	2.624E-01	4.342E-01	0.000E+00	FAIL ABUN
RE-183	6.853E-02	1.104E-01	1.957E-01	0.000E+00	FAIL ABUN
RE-184	7.745E-02	2.242E-01	3.888E-01	0.000E+00	NOT IDENT.
OS-185	-1.040E-02	4.920E-02	8.086E-02	0.000E+00	FAIL ABUN
RE-188	-7.498E-02	1.682E-01	2.905E-01	0.000E+00	NOT IDENT.
W-188	-2.595E+00	8.840E+00	1.283E+01	0.000E+00	FAIL ABUN
IR-192	-1.336E-02	3.593E-02	5.810E-02	0.000E+00	FAIL ABUN
AU-195	1.791E-01	1.790E-01	3.370E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.584E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.996E+00	1.026E+01	1.816E+01	0.000E+00	NOT IDENT.
TL-202	-2.084E-02	7.940E-02	1.354E-01	0.000E+00	NOT IDENT.
HG-203	-3.284E-02	4.357E-02	6.964E-02	0.000E+00	FAIL ABUN
BI-207	-3.025E-02	6.826E-02	1.101E-01	0.000E+00	FAIL ABUN
TL-207	-2.725E-01	7.032E-01	1.070E+00	0.000E+00	FAIL ABUN
PO-209	4.405E+00	9.338E+00	1.674E+01	0.000E+00	NOT IDENT.
PB-211	-2.716E-01	1.088E+00	1.618E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.627E-01	8.316E-01	0.000E+00	FAIL ABUN
PO-215	-2.725E-01	7.032E-01	1.070E+00	0.000E+00	FAIL ABUN
RN-219	-1.624E-01	4.288E-01	7.316E-01	0.000E+00	FAIL ABUN
RN-220	1.508E+00	3.046E+01	5.216E+01	0.000E+00	NOT IDENT.
RA-223	-2.725E-01	7.032E-01	1.070E+00	0.000E+00	FAIL ABUN
AC-227	2.527E-01	3.708E-01	6.526E-01	0.000E+00	FAIL ABUN
TH-227	2.527E-01	3.716E-01	6.526E-01	0.000E+00	FAIL ABUN
TH-229	-1.189E-03	4.762E-01	8.257E-01	0.000E+00	FAIL ABUN
PA-231	5.000E-01	1.626E+00	2.784E+00	0.000E+00	FAIL ABUN
TH-231	-2.725E-01	7.032E-01	1.070E+00	0.000E+00	FAIL ABUN
U-231	-1.166E+00	1.226E+00	1.897E+00	0.000E+00	FAIL ABUN
PA-233	3.856E-02	6.584E-02	1.122E-01	0.000E+00	FAIL ABUN
PA-234	1.483E-01	3.342E-01	5.971E-01	0.000E+00	FAIL ABUN
PA-234M	3.847E+00	6.223E+00	1.107E+01	0.000E+00	NOT IDENT.
U-235	-1.148E-02	1.996E-01	3.470E-01	0.000E+00	FAIL ABUN
NP-236	-4.585E-02	7.809E-02	1.335E-01	0.000E+00	NOT IDENT.
NP-239	-1.203E-01	1.683E-01	2.924E-01	0.000E+00	FAIL ABUN
AM-241	3.327E-03	6.999E-02	1.093E-01	0.000E+00	NOT IDENT.
CM-243	1.062E-01	8.430E-02	1.590E-01	0.000E+00	FAIL ABUN
AM-246	7.435E-02	1.869E-01	3.275E-01	0.000E+00	NOT IDENT.
CM-247	1.066E-02	3.817E-02	6.820E-02	0.000E+00	NOT IDENT.
CF-249	-7.722E-04	4.291E-02	7.541E-02	0.000E+00	NOT IDENT.
CF-251	-3.338E-02	1.210E-01	2.084E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:00:29.91

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492006.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:02:07.
Sample ID : G243492006 Sample quantity : 1.36110E+02 GRAM
Detector name : GAM17 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:09.61 0.1%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1060	10.67*	7.980E-01	3.432E+01	3.432E+01	8.94
CD-109	88.03	279	3.72*	6.559E+00	3.149E+00	3.231E+00	29.88
SN-126	64.28	------	9.60	6.653E+00	------ Line Not Found		------
	86.94	422	8.90	6.582E+00	1.986E+00	1.986E+00	44.87
	87.57	422	37.00*	6.582E+00	4.777E-01	4.777E-01	19.41
TL-208	277.35	------	6.80	3.655E+00	------ Line Not Found		------
	510.84	155	21.60	2.073E+00	9.563E-01	9.563E-01	41.34
	583.14	335	84.20*	1.825E+00	6.008E-01	6.008E-01	18.96
	860.37	37	12.46	1.268E+00	6.515E-01	6.515E-01	66.80
BI-210	46.50	43	4.05*	6.555E+00	4.426E-01	4.433E-01	183.91
PB-210	46.50	43	4.05*	6.555E+00	4.426E-01	4.433E-01	183.91
PO-210	46.50	43	4.05*	6.555E+00	4.426E-01	4.433E-01	183.87
BI-211	72.87	637	1.27	6.652E+00	2.079E+01	2.079E+01	15.80
	351.07	539	12.94*	2.961E+00	3.877E+00	3.877E+00	14.24
PB-212	74.81	637	10.70	6.652E+00	2.468E+00	2.468E+00	18.36
	77.11	982	18.00	6.645E+00	2.265E+00	2.265E+00	12.64
	87.30	422	8.00	6.582E+00	2.209E+00	2.209E+00	21.84
	238.63	1204	44.60*	4.142E+00	1.797E+00	1.797E+00	11.05
	300.09	117	3.41	3.416E+00	2.779E+00	2.779E+00	43.07
PO-212	74.81	637	10.70	6.652E+00	2.468E+00	2.468E+00	18.36
	77.11	982	18.00	6.645E+00	2.265E+00	2.265E+00	12.64
	87.30	422	8.00	6.582E+00	2.209E+00	2.209E+00	21.84
	115.19	------	0.60	6.204E+00	------ Line Not Found		------
	238.63	1204	44.60*	4.142E+00	1.797E+00	1.797E+00	11.05
	300.09	117	3.41	3.416E+00	2.779E+00	2.779E+00	43.07
BI-214	609.31	384	46.30*	1.750E+00	1.305E+00	1.306E+00	18.55
	1120.29	71	15.10	1.003E+00	1.298E+00	1.298E+00	46.66
	1764.49	63	15.80	6.761E-01	1.633E+00	1.633E+00	27.14
PB-214	74.81	637	6.21	6.652E+00	4.253E+00	4.253E+00	17.45
	77.11	982	10.50	6.645E+00	3.883E+00	3.883E+00	14.76
	87.30	422	4.67	6.582E+00	3.785E+00	3.785E+00	20.89
	241.98	311	7.49	4.102E+00	2.788E+00	2.788E+00	32.10

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	295.21	335	19.20	3.468E+00	1.387E+00	1.387E+00	21.12
	351.92	539	37.20*	2.961E+00	1.348E+00	1.348E+00	15.16
PO-214	74.81	637	6.21	6.652E+00	4.253E+00	4.253E+00	17.45
	77.11	982	10.50	6.645E+00	3.883E+00	3.883E+00	14.76
	87.30	422	4.67	6.582E+00	3.785E+00	3.785E+00	20.89
	241.98	311	7.49	4.102E+00	2.788E+00	2.788E+00	32.10
	295.21	335	19.20	3.468E+00	1.387E+00	1.387E+00	21.12
	351.92	539	37.20*	2.961E+00	1.348E+00	1.348E+00	15.16
PO-216	74.81	637	10.70	6.652E+00	2.468E+00	2.468E+00	18.36
	77.11	982	18.00	6.645E+00	2.265E+00	2.265E+00	12.64
	87.30	422	8.00	6.582E+00	2.209E+00	2.209E+00	21.84
	238.63	1204	44.60*	4.142E+00	1.797E+00	1.797E+00	11.05
	300.09	117	3.41	3.416E+00	2.779E+00	2.779E+00	43.07
PO-218	74.81	637	6.21	6.652E+00	4.253E+00	4.253E+00	17.45
	77.11	982	10.50	6.645E+00	3.883E+00	3.883E+00	14.76
	87.30	422	4.67	6.582E+00	3.785E+00	3.785E+00	20.89
	241.98	311	7.49	4.102E+00	2.788E+00	2.788E+00	32.10
	295.21	335	19.20	3.468E+00	1.387E+00	1.387E+00	21.12
	351.92	539	37.20*	2.961E+00	1.348E+00	1.348E+00	15.16
RA-224	240.98	311	3.95*	4.102E+00	5.286E+00	5.286E+00	31.60
RA-226	609.31	384	46.30*	1.750E+00	1.305E+00	1.306E+00	18.55
	1120.29	71	15.10	1.003E+00	1.298E+00	1.298E+00	46.66
	1764.49	63	15.80	6.761E-01	1.633E+00	1.633E+00	27.14
AC-228	338.32	252	11.40	3.070E+00	1.985E+00	1.985E+00	45.41
	911.07	217	27.70*	1.203E+00	1.793E+00	1.793E+00	24.22
	969.11	183	16.60	1.139E+00	2.669E+00	2.669E+00	29.28
RA-228	338.32	252	11.40	3.070E+00	1.985E+00	1.985E+00	45.41
	911.07	217	27.70*	1.203E+00	1.793E+00	1.793E+00	24.22
	969.11	183	16.60	1.139E+00	2.669E+00	2.669E+00	29.28
TH-228	74.81	637	10.70	6.652E+00	2.468E+00	2.510E+00	15.84
	77.11	982	18.00	6.645E+00	2.265E+00	2.304E+00	12.64
	87.30	422	8.00	6.582E+00	2.209E+00	2.247E+00	19.41
	238.63	1204	44.60*	4.142E+00	1.797E+00	1.828E+00	11.05
	300.09	117	3.41	3.416E+00	2.779E+00	2.827E+00	72.53
TH-230	609.31	384	46.30*	1.750E+00	1.305E+00	1.305E+00	18.55
	1120.29	71	15.10	1.003E+00	1.298E+00	1.298E+00	46.66
	1764.49	63	15.80	6.761E-01	1.633E+00	1.633E+00	27.14
TH-232	338.32	252	11.40	3.070E+00	1.985E+00	1.985E+00	20.84
	911.07	217	27.70*	1.203E+00	1.793E+00	1.793E+00	24.22
	969.11	183	16.60	1.139E+00	2.669E+00	2.669E+00	29.28
TH-234	63.29	176	3.80*	6.646E+00	1.925E+00	1.925E+00	58.40
	92.38	334	5.41	6.526E+00	2.609E+00	2.609E+00	32.01
U-234	609.31	384	46.30*	1.750E+00	1.305E+00	1.305E+00	18.55
	1120.29	71	15.10	1.003E+00	1.298E+00	1.298E+00	46.66
	1764.49	63	15.80	6.761E-01	1.633E+00	1.633E+00	27.14
NP-237	86.50	422	12.60*	6.582E+00	1.403E+00	1.403E+00	28.33
	95.87	------	2.60	6.484E+00	------ Line Not Found		------
U-238	63.29	176	3.80*	6.646E+00	1.925E+00	1.925E+00	58.40
	92.38	334	5.41	6.526E+00	2.609E+00	2.609E+00	27.78

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
AM-243	74.67	637	66.00*	6.652E+00	4.001E-01	4.001E-01	15.80
	86.72	422	0.34	6.582E+00	5.260E+01	5.260E+01	19.41
	117.66	------	0.55	6.163E+00	------	Line Not Found	------
	142.18	------	0.13	5.726E+00	------	Line Not Found	------
ANH-511	511.00	155	100.00*	2.073E+00	2.066E-01	2.066E-01	40.50

Flag: "*" = Keyline

Sample ID : G243492006 Acquisition date : 4-JAN-2010 14:02:07

Total number of lines in spectrum 36
Number of unidentified lines 2
Number of lines tentatively identified by NID 34 94.44%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	3.432E+01	3.432E+01	0.307E+01	8.94	
CD-109	464.00D	1.03	3.149E+00	3.231E+00	0.965E+00	29.88	
SN-126	1.00E+05Y	1.00	4.777E-01	4.777E-01	0.927E-01	19.41	
TL-208	1.41E+10Y	1.00	6.008E-01	6.008E-01	1.139E-01	18.96	
BI-210	22.26Y	1.00	4.426E-01	4.433E-01	8.153E-01	183.91	
PB-210	22.26Y	1.00	4.426E-01	4.433E-01	8.153E-01	183.91	
PO-210	22.26Y	1.00	4.426E-01	4.433E-01	8.151E-01	183.87	
BI-211	7.04E+08Y	1.00	3.877E+00	3.877E+00	0.552E+00	14.24	
PB-212	1.41E+10Y	1.00	1.797E+00	1.797E+00	0.199E+00	11.05	
PO-212	1.41E+10Y	1.00	1.797E+00	1.797E+00	0.199E+00	11.05	
BI-214	1600.00Y	1.00	1.305E+00	1.306E+00	0.242E+00	18.55	
PB-214	1600.00Y	1.00	1.348E+00	1.348E+00	0.204E+00	15.16	
PO-214	1600.00Y	1.00	1.348E+00	1.348E+00	0.204E+00	15.16	
PO-216	1.41E+10Y	1.00	1.797E+00	1.797E+00	0.199E+00	11.05	
PO-218	1600.00Y	1.00	1.348E+00	1.348E+00	0.204E+00	15.16	
RA-224	1.41E+10Y	1.00	5.286E+00	5.286E+00	1.671E+00	31.60	
RA-226	1600.00Y	1.00	1.305E+00	1.306E+00	0.242E+00	18.55	
AC-228	1.41E+10Y	1.00	1.793E+00	1.793E+00	0.434E+00	24.22	
RA-228	1.41E+10Y	1.00	1.793E+00	1.793E+00	0.434E+00	24.22	
TH-228	1.91Y	1.02	1.797E+00	1.828E+00	0.202E+00	11.05	
TH-230	4.47E+09Y	1.00	1.305E+00	1.305E+00	0.242E+00	18.55	
TH-232	1.41E+10Y	1.00	1.793E+00	1.793E+00	0.434E+00	24.22	
TH-234	4.47E+09Y	1.00	1.925E+00	1.925E+00	1.124E+00	58.40	
U-234	4.47E+09Y	1.00	1.305E+00	1.305E+00	0.242E+00	18.55	
NP-237	2.14E+06Y	1.00	1.403E+00	1.403E+00	0.397E+00	28.33	
U-238	4.47E+09Y	1.00	1.925E+00	1.925E+00	1.124E+00	58.40	
AM-243	7380.00Y	1.00	4.001E-01	4.001E-01	0.632E-01	15.80	
ANH-511	1.00E+09Y	1.00	2.066E-01	2.066E-01	0.836E-01	40.50	
	Total Activity :		7.673E+01	7.684E+01			

Grand Total Activity : 7.673E+01 7.684E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
6	83.36	161	461	1.27	168.13	163	29	2.24E-02	47.7	6.61E+00	T
0	128.51	85	325	0.80	258.39	255	8	1.18E-02	76.5	5.97E+00	T
0	185.35	229	234	1.25	372.00	367	10	3.18E-02	29.8	4.95E+00	T
0	208.53	106	224	1.05	418.34	415	8	1.48E-02	52.3	4.57E+00	T
0	270.19	98	220	1.22	541.61	535	12	1.36E-02	64.1	3.74E+00	T
0	327.88	94	201	1.86	656.92	649	15	1.30E-02	69.4	3.15E+00	T
5	340.97	45	102	1.74	683.10	669	25	6.30E-03	97.9	3.04E+00	T
3	408.11	28	33	1.15	817.32	815	13	3.96E-03	76.4	2.57E+00	
3	409.58	58	52	1.37	820.25	815	13	8.10E-03	53.7	2.56E+00	T
0	462.59	81	92	1.49	926.24	921	12	1.13E-02	52.3	2.28E+00	T
0	727.02	72	66	1.85	1454.92	1449	11	1.00E-02	49.5	1.48E+00	T
0	794.96	32	58	1.28	1590.77	1585	10	4.43E-03	95.9	1.36E+00	T
0	964.79	30	31	1.32	1930.36	1926	9	4.19E-03	74.6	1.14E+00	T
0	1377.84	35	13	3.00	2756.40	2751	13	4.86E-03	54.3	8.39E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:00:34.84

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492006.CNF;1		
Acquisition date	: 4-JAN-2010 14:02:07.	Detector SN#	:
Detector ID	: GAM17	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:09.61	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492006	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.36110E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 27-JAN-2009 16:21:14.8	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	3.432E+01	3.067E+00	6.511E-01	4.003E-02	52.705
CD-109	3.231E+00	9.653E-01	9.211E-01	7.419E-02	3.508
SN-126	4.777E-01	9.273E-02	9.017E-02	7.272E-03	5.297
TL-208	6.008E-01	1.139E-01	6.909E-02	5.478E-03	8.695
BI-210	4.433E-01	8.153E-01	7.687E-01	6.152E-02	0.577
PB-210	4.433E-01	8.153E-01	7.687E-01	6.152E-02	0.577
PO-210	4.433E-01	8.151E-01	7.687E-01	5.350E-02	0.577
BI-211	3.877E+00	5.519E-01	3.471E-01	2.494E-02	11.168
PB-212	1.797E+00	1.985E-01	9.186E-02	8.062E-03	19.560
PO-212	1.797E+00	1.985E-01	9.186E-02	8.062E-03	19.560
BI-214	1.306E+00	2.422E-01	1.309E-01	1.175E-02	9.972
PB-214	1.348E+00	2.045E-01	1.136E-01	1.007E-02	11.874
PO-214	1.348E+00	2.045E-01	1.136E-01	1.007E-02	11.874
PO-216	1.797E+00	1.985E-01	9.186E-02	8.062E-03	19.560
PO-218	1.348E+00	2.045E-01	1.136E-01	1.007E-02	11.874
RA-224	5.286E+00	1.671E+00	1.046E+00	7.894E-02	5.051
RA-226	1.306E+00	2.422E-01	1.309E-01	1.175E-02	9.972
AC-228	1.793E+00	4.342E-01	2.407E-01	2.463E-02	7.448

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RA-228	1.793E+00	4.342E-01	2.407E-01	2.463E-02	7.448
TH-228	1.828E+00	2.019E-01	9.344E-02	8.200E-03	19.560
TH-230	1.305E+00	2.422E-01	1.309E-01	1.175E-02	9.972
TH-232	1.793E+00	4.342E-01	2.407E-01	2.463E-02	7.448
TH-234	1.925E+00	1.124E+00	1.008E+00	1.828E-01	1.910
U-234	1.305E+00	2.422E-01	1.309E-01	1.175E-02	9.972
NP-237	1.403E+00	3.974E-01	2.641E-01	5.854E-02	5.311
U-238	1.925E+00	1.124E+00	1.008E+00	1.828E-01	1.910
AM-243	4.001E-01	6.324E-02	5.832E-02	4.948E-03	6.861
ANH-511	2.066E-01	8.365E-02	5.246E-02	3.546E-03	3.937

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.127E-03		3.872E-01	6.390E-01	4.712E-02	-0.013
NA-22	2.544E-02		5.838E-02	9.891E-02	5.606E-03	0.257
NA-24	1.181E+00		4.014E+00	Half-Life too short		
AL-26	-6.851E-03		3.408E-02	5.304E-02	3.033E-03	-0.129
TI-44	-5.033E-03		3.025E-02	3.679E-02	3.073E-03	-0.137
SC-46	6.170E-03		5.076E-02	8.556E-02	6.271E-03	0.072
V-48	-7.321E-02		9.934E-02	1.511E-01	1.046E-02	-0.484
CR-51	1.292E-01		3.872E-01	6.507E-01	4.963E-02	0.199
MN-52	1.765E-02		3.597E-01	6.065E-01	3.505E-02	0.029
MN-54	1.832E-02		4.915E-02	8.477E-02	6.360E-03	0.216
CO-56	1.057E-02		4.893E-02	8.349E-02	6.238E-03	0.127
CO-57	-2.319E-04		2.387E-02	3.993E-02	4.430E-03	-0.006
CO-58	5.781E-03		4.760E-02	8.078E-02	6.122E-03	0.072
FE-59	2.657E-02		1.266E-01	2.115E-01	1.503E-02	0.126
CO-60	-1.054E-02		5.107E-02	8.125E-02	4.640E-03	-0.130
ZN-65	-2.187E-02		1.220E-01	1.675E-01	1.012E-02	-0.131
GE-68	2.443E-01		1.686E+00	2.806E+00	1.775E-01	0.087
AS-73	-4.570E-04		2.377E-01	3.723E-01	3.021E-02	-0.001
AS-74	-6.078E-02		1.224E-01	1.902E-01	1.381E-02	-0.320
SE-75	-1.802E-02		4.892E-02	6.724E-02	5.073E-03	-0.268
BR-77	-6.587E+00		2.110E+01	3.372E+01	2.301E+00	-0.195
SR-82	2.318E-02		4.909E-01	8.299E-01	6.309E-02	0.028
RB-83	-3.627E-02		7.885E-02	1.242E-01	8.477E-03	-0.292
RB-84	-1.879E-02		9.377E-02	1.533E-01	1.128E-02	-0.123
KR-85	6.114E+00		8.258E+00	1.291E+01	8.752E-01	0.474
SR-85	3.200E-02		4.323E-02	6.758E-02	4.581E-03	0.474
RB-86	1.981E-01		1.148E+00	1.915E+00	1.212E-01	0.103
Y-88	5.648E-02		4.049E-02	8.543E-02	4.877E-03	0.661
ZR-88	-1.807E-02		3.413E-02	5.511E-02	3.190E-03	-0.328
Y-91	-4.549E+00		2.582E+01	4.121E+01	2.294E+00	-0.110
NB-94	-2.444E-02		4.495E-02	6.853E-02	5.206E-03	-0.357
NB-95	2.694E-02		5.956E-02	1.035E-01	7.879E-03	0.260
NB-95M	3.214E-01		1.603E-01	2.550E-01	2.280E-02	1.260

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ZR-95	8.163E-03		9.629E-02	1.549E-01	1.331E-02	0.053
NB-97	-2.931E-01		4.213E-01	Half-Life too short		
ZR-97	1.218E+01		8.358E+00	Half-Life too short		
MO-99	4.549E-01		2.482E+01	3.974E+01	5.818E+00	0.011
TC-99M	-5.442E+12		4.282E+12	Half-Life too short		
RH-101	9.520E-04		3.298E-02	5.247E-02	3.915E-03	0.018
RH-102	-9.946E-03		3.426E-02	5.539E-02	3.597E-03	-0.180
RU-103	-1.186E-02		4.524E-02	7.282E-02	9.512E-03	-0.163
RH-106	1.419E-01		3.840E-01	6.428E-01	8.095E-02	0.221
RU-106	1.419E-01		3.837E-01	6.428E-01	4.744E-02	0.221
AG-108M	4.653E-04		3.447E-02	5.742E-02	3.806E-03	0.008
AG-110M	-1.862E-02		4.350E-02	6.729E-02	5.256E-03	-0.277
IN-111	5.197E-01		1.772E+00	2.602E+00	1.962E-01	0.200
IN-113M	-9.021E-03		4.911E-02	8.129E-02	5.012E-03	-0.111
SN-113	-9.021E-03		4.911E-02	8.129E-02	5.012E-03	-0.111
IN-114M	1.275E-01		1.812E-01	2.937E-01	2.181E-02	0.434
CD-115	1.787E+01		2.338E+01	4.071E+01	2.797E+00	0.439
SN-117M	3.007E-02		5.910E-02	9.976E-02	7.999E-03	0.301
SB-122	-2.188E+00		4.175E+00	6.510E+00	4.617E-01	-0.336
I-123	2.025E+01		3.400E+01	Half-Life too short		
TE-123M	8.359E-03		2.807E-02	4.696E-02	3.772E-03	0.178
I-124	-4.110E-01		1.287E+00	1.758E+00	1.282E-01	-0.234
SB-124	-1.937E-02		9.448E-02	1.493E-01	9.381E-03	-0.130
SB-125	-3.701E-02		9.916E-02	1.605E-01	1.017E-02	-0.231
TE-125M	6.401E-01		8.644E+00	1.458E+01	1.659E+00	0.044
I-126	-1.328E-02		2.615E-01	4.196E-01	3.164E-02	-0.032
SB-126	4.047E-02		2.171E-01	3.279E-01	2.496E-02	0.123
SB-127	2.098E-02		2.544E+00	4.094E+00	4.605E-01	0.005
XE-127	-3.875E-02		4.703E-02	7.295E-02	5.456E-03	-0.531
I-131	-8.837E-02		1.355E-01	2.173E-01	1.525E-02	-0.407
TE-132	-1.035E+00		1.038E+00	1.556E+00	2.419E-01	-0.665
BA-133	2.810E-02		4.519E-02	7.116E-02	8.500E-03	0.395
I-133	1.075E-03		1.754E-02	Half-Life too short		
CS-134	8.530E-02	+	8.209E-02	1.181E-01	9.034E-03	0.722
CS-135	3.141E-01		1.803E-01	2.891E-01	2.602E-02	1.086
I-135	-1.238E+12		5.783E+11	Half-Life too short		
CS-136	3.832E-02		1.531E-01	2.582E-01	1.811E-02	0.148
BA-137M	-2.286E-02		4.842E-02	7.383E-02	5.560E-03	-0.310
CS-137	-2.416E-02		5.119E-02	7.805E-02	5.892E-03	-0.310
CE-139	2.739E-03		2.939E-02	4.861E-02	3.555E-03	0.056
BA-140	-2.562E-02		3.569E-01	5.814E-01	1.904E-01	-0.044
LA-140	1.637E-02		1.183E-01	2.005E-01	1.166E-02	0.082
CE-141	-1.533E-02		6.051E-02	9.913E-02	9.268E-03	-0.155
CE-143	3.561E-03	+	5.280E-04	Half-Life too short		
CE-144	2.832E-02		1.916E-01	3.211E-01	5.296E-02	0.088
PM-144	-7.599E-03		4.373E-02	6.907E-02	5.246E-03	-0.110
PR-144	-5.155E-01		2.966E+00	4.686E+00	3.557E-01	-0.110
PM-146	-5.235E-03		5.124E-02	8.438E-02	7.581E-03	-0.062

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
ND-147	-1.622E-01		7.589E-01	1.222E+00	1.714E-01	-0.133
PM-149	2.216E+02		1.921E+02	3.230E+02	4.814E+01	0.686
EU-152	7.786E-03		9.654E-02	1.640E-01	1.211E-02	0.047
GD-153	7.313E-02		6.599E-02	1.115E-01	9.823E-03	0.656
EU-154	6.785E-02		1.627E-01	2.749E-01	2.544E-02	0.247
EU-155	5.225E-02		9.715E-02	1.669E-01	1.599E-02	0.313
TB-160	9.920E-02		1.877E-01	3.277E-01	2.414E-02	0.303
HO-166M	-5.349E-02		7.788E-02	1.162E-01	8.837E-03	-0.460
TM-171	4.061E+00		1.803E+01	2.595E+01	2.282E+00	0.156
LU-176	-1.566E-03		2.564E-02	3.998E-02	2.886E-03	-0.039
LU-177	3.420E+00	+	1.809E+00	2.517E+00	1.887E-01	1.359
LU-177M	-3.698E-02		1.948E-01	2.803E-01	1.676E-02	-0.132
HF-181	-2.554E-03		5.386E-02	8.867E-02	5.806E-03	-0.029
W-181	-1.285E-01		2.273E-01	3.147E-01	2.787E-02	-0.408
TA-182	-1.798E-02		2.677E-01	4.315E-01	2.412E-02	-0.042
RE-183	6.853E-02		1.126E-01	1.874E-01	1.435E-02	0.366
RE-184	7.745E-02		2.287E-01	3.751E-01	2.824E-02	0.206
OS-185	-1.040E-02		5.020E-02	7.940E-02	5.936E-03	-0.131
RE-188	-7.498E-02		1.717E-01	2.778E-01	2.319E-02	-0.270
W-188	-2.595E+00		9.020E+00	1.241E+01	9.135E-01	-0.209
IR-192	-1.336E-02		3.666E-02	5.629E-02	4.020E-03	-0.237
AU-195	1.791E-01		1.827E-01	3.197E-01	2.854E-02	0.560
TL-200	1.473E-03		8.083E-04	Half-Life too short		
TL-201	1.996E+00		1.047E+01	1.739E+01	1.272E+00	0.115
TL-202	-2.084E-02		8.102E-02	1.320E-01	8.189E-03	-0.158
HG-203	-3.284E-02		4.446E-02	6.732E-02	5.193E-03	-0.488
BI-207	-3.025E-02		6.966E-02	1.092E-01	7.014E-03	-0.277
TL-207	-2.725E-01		7.176E-01	1.037E+00	1.762E-01	-0.263
PO-209	4.405E+00		9.528E+00	1.654E+01	1.208E+00	0.266
PB-211	-2.716E-01		1.110E+00	1.575E+00	9.819E-01	-0.172
BI-212	1.141E+00	+	5.742E-01	8.184E-01	7.494E-02	1.394
PO-215	-2.725E-01		7.176E-01	1.037E+00	1.762E-01	-0.263
RN-219	-1.624E-01		4.375E-01	7.120E-01	9.709E-02	-0.228
RN-220	1.508E+00		3.108E+01	5.106E+01	3.579E+00	0.030
RA-223	-2.725E-01		7.176E-01	1.037E+00	1.762E-01	-0.263
AC-227	2.527E-01		3.784E-01	6.299E-01	9.296E-02	0.401
TH-227	2.527E-01		3.792E-01	6.299E-01	1.106E-01	0.401
TH-229	-1.189E-03		4.859E-01	7.928E-01	5.901E-02	-0.001
PA-231	5.000E-01		1.659E+00	2.692E+00	3.911E-01	0.186
TH-231	-2.725E-01		7.176E-01	1.037E+00	1.762E-01	-0.263
U-231	-1.166E+00		1.251E+00	1.799E+00	1.561E-01	-0.648
PA-233	3.856E-02		6.718E-02	1.087E-01	8.111E-03	0.355
PA-234	1.483E-01		3.410E-01	5.905E-01	1.070E-01	0.251
PA-234M	3.847E+00		6.350E+00	1.096E+01	9.273E-01	0.351
U-235	-1.148E-02		2.036E-01	3.314E-01	5.924E-02	-0.035
NP-236	-4.585E-02		7.968E-02	1.278E-01	1.003E-02	-0.359
NP-239	-1.203E-01		1.717E-01	2.783E-01	2.944E-02	-0.432
AM-241	3.327E-03		7.142E-02	1.028E-01	9.970E-03	0.032

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.062E-01		8.602E-02	1.510E-01	1.412E-02	0.703
AM-246	7.435E-02		1.907E-01	3.247E-01	2.050E-02	0.229
CM-247	1.066E-02		3.895E-02	6.637E-02	3.901E-03	0.161
CF-249	-7.722E-04		4.378E-02	7.334E-02	4.303E-03	-0.011
CF-251	-3.338E-02		1.235E-01	1.998E-01	1.471E-02	-0.167

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492006		
Acquisition date	: 4-JAN-2010 14:02:07	Detector SN#	:
Detector ID	: GAM17	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:09.61	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492006	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3611E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 27-JAN-2009 16:21:14	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	3.432E+01	3.006E+00	3.266E-01	1.534E+00
CD-109	3.231E+00	9.460E-01	4.867E-01	4.826E-01
SN-126	4.777E-01	9.088E-02	4.765E-02	4.637E-02
TL-208	6.008E-01	1.116E-01	3.527E-02	5.696E-02
BI-210	4.433E-01	7.990E-01	4.107E-01	4.076E-01
PB-210	4.433E-01	7.990E-01	4.107E-01	4.076E-01
PO-210	4.433E-01	7.988E-01	4.107E-01	4.075E-01
BI-211	3.877E+00	5.408E-01	1.789E-01	2.759E-01
PB-212	1.797E+00	1.946E-01	4.768E-02	9.927E-02
PO-212	1.797E+00	1.946E-01	4.768E-02	9.927E-02
BI-214	1.306E+00	2.374E-01	6.678E-02	1.211E-01
PB-214	1.348E+00	2.004E-01	5.852E-02	1.022E-01
PO-214	1.348E+00	2.004E-01	5.852E-02	1.022E-01
PO-216	1.797E+00	1.946E-01	4.768E-02	9.927E-02
PO-218	1.348E+00	2.004E-01	5.852E-02	1.022E-01
RA-224	5.286E+00	1.637E+00	5.431E-01	8.353E-01
RA-226	1.306E+00	2.374E-01	6.678E-02	1.211E-01
AC-228	1.793E+00	4.255E-01	1.218E-01	2.171E-01
RA-228	1.793E+00	4.255E-01	1.218E-01	2.171E-01
TH-228	1.828E+00	1.979E-01	4.850E-02	1.010E-01
TH-230	1.305E+00	2.374E-01	6.678E-02	1.211E-01
TH-232	1.793E+00	4.255E-01	1.218E-01	2.171E-01
TH-234	1.925E+00	1.102E+00	5.356E-01	5.620E-01
U-234	1.305E+00	2.374E-01	6.678E-02	1.211E-01
NP-237	1.403E+00	3.895E-01	1.396E-01	1.987E-01
U-238	1.925E+00	1.102E+00	5.356E-01	5.620E-01
AM-243	4.001E-01	6.197E-02	3.090E-02	3.162E-02
ANH-511	2.066E-01	8.197E-02	2.685E-02	4.182E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU

BE-7	-8.127E-03	3.794E-01	3.274E-01	1.936E-01	NOT IDENT.
NA-22	2.544E-02	5.722E-02	4.974E-02	2.919E-02	NOT IDENT.
NA-24	1.181E+06	7.868E+06	0.000E+00	4.014E+06	SHORT HLIF
AL-26	-6.851E-03	3.340E-02	2.649E-02	1.704E-02	NOT IDENT.
TI-44	-5.033E-03	2.964E-02	1.948E-02	1.512E-02	NOT IDENT.
SC-46	6.170E-03	4.975E-02	4.333E-02	2.538E-02	FAIL ABUN
V-48	-7.321E-02	9.735E-02	7.638E-02	4.967E-02	NOT IDENT.
CR-51	1.292E-01	3.794E-01	3.359E-01	1.936E-01	NOT IDENT.
MN-52	1.765E-02	3.525E-01	3.043E-01	1.798E-01	NOT IDENT.
MN-54	1.832E-02	4.817E-02	4.298E-02	2.457E-02	NOT IDENT.
CO-56	1.057E-02	4.796E-02	4.232E-02	2.447E-02	NOT IDENT.
CO-57	-2.319E-04	2.340E-02	2.098E-02	1.194E-02	NOT IDENT.
CO-58	5.781E-03	4.665E-02	4.098E-02	2.380E-02	NOT IDENT.
FE-59	2.657E-02	1.241E-01	1.067E-01	6.329E-02	NOT IDENT.
CO-60	-1.054E-02	5.005E-02	4.083E-02	2.554E-02	NOT IDENT.
ZN-65	-2.187E-02	1.195E-01	8.446E-02	6.099E-02	NOT IDENT.
GE-68	2.443E-01	1.653E+00	1.416E+00	8.432E-01	NOT IDENT.
AS-73	-4.570E-04	2.329E-01	1.984E-01	1.188E-01	NOT IDENT.
AS-74	-6.078E-02	1.199E-01	9.706E-02	6.119E-02	NOT IDENT.
SE-75	-1.802E-02	4.794E-02	3.484E-02	2.446E-02	NOT IDENT.
BR-77	-6.587E+00	2.067E+01	1.725E+01	1.055E+01	FAIL ABUN
SR-82	2.318E-02	4.811E-01	4.214E-01	2.455E-01	NOT IDENT.
RB-83	-3.627E-02	7.728E-02	6.357E-02	3.943E-02	NOT IDENT.
RB-84	-1.879E-02	9.189E-02	7.765E-02	4.688E-02	NOT IDENT.
KR-85	6.114E+00	8.093E+00	6.606E+00	4.129E+00	NOT IDENT.
SR-85	3.200E-02	4.236E-02	3.458E-02	2.161E-02	NOT IDENT.
RB-86	1.981E-01	1.125E+00	9.663E-01	5.740E-01	NOT IDENT.
Y-88	5.648E-02	3.969E-02	4.266E-02	2.025E-02	NOT IDENT.
ZR-88	-1.807E-02	3.345E-02	2.834E-02	1.707E-02	NOT IDENT.
Y-91	-4.549E+00	2.530E+01	2.075E+01	1.291E+01	NOT IDENT.
NB-94	-2.444E-02	4.405E-02	3.486E-02	2.247E-02	NOT IDENT.
NB-95	2.694E-02	5.837E-02	5.258E-02	2.978E-02	NOT IDENT.
NB-95M	3.214E-01	1.571E-01	1.324E-01	8.016E-02	NOT IDENT.
ZR-95	8.163E-03	9.436E-02	7.867E-02	4.814E-02	NOT IDENT.
NB-97	-2.931E+05	8.257E+05	0.000E+00	4.213E+05	SHORT HLIF
ZR-97	1.218E+07	1.638E+07	0.000E+00	8.358E+06	SHORT HLIF
MO-99	4.549E-01	2.433E+01	2.020E+01	1.241E+01	NOT IDENT.
TC-99M	-5.442E+18	8.392E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	9.520E-04	3.232E-02	2.733E-02	1.649E-02	FAIL ABUN
RH-102	-9.946E-03	3.357E-02	2.839E-02	1.713E-02	NOT IDENT.
RU-103	-1.186E-02	4.434E-02	3.729E-02	2.262E-02	FAIL ABUN
RH-106	1.419E-01	3.763E-01	3.277E-01	1.920E-01	FAIL ABUN
RU-106	1.419E-01	3.760E-01	3.277E-01	1.919E-01	FAIL ABUN
AG-108M	4.653E-04	3.378E-02	2.948E-02	1.723E-02	NOT IDENT.
AG-110M	-1.862E-02	4.263E-02	3.428E-02	2.175E-02	NOT IDENT.
IN-111	5.197E-01	1.736E+00	1.350E+00	8.858E-01	NOT IDENT.
IN-113M	-9.021E-03	4.813E-02	4.181E-02	2.455E-02	NOT IDENT.
SN-113	-9.021E-03	4.813E-02	4.181E-02	2.455E-02	NOT IDENT.
IN-114M	1.275E-01	1.776E-01	1.530E-01	9.060E-02	NOT IDENT.
CD-115	1.787E+01	2.291E+01	2.082E+01	1.169E+01	NOT IDENT.
SN-117M	3.007E-02	5.791E-02	5.217E-02	2.955E-02	NOT IDENT.
SB-122	-2.188E+00	4.092E+00	3.326E+00	2.088E+00	NOT IDENT.
I-123	2.025E+07	6.663E+07	0.000E+00	3.400E+07	SHORT HLIF
TE-123M	8.359E-03	2.751E-02	2.455E-02	1.404E-02	NOT IDENT.
I-124	-4.110E-01	1.261E+00	8.968E-01	6.433E-01	NOT IDENT.
SB-124	-1.937E-02	9.260E-02	7.466E-02	4.724E-02	FAIL ABUN
SB-125	-3.701E-02	9.717E-02	8.242E-02	4.958E-02	FAIL ABUN
TE-125M	6.401E-01	8.471E+00	7.676E+00	4.322E+00	NOT IDENT.
I-126	-1.328E-02	2.563E-01	2.137E-01	1.308E-01	NOT IDENT.
SB-126	4.047E-02	2.127E-01	1.667E-01	1.085E-01	NOT IDENT.
SB-127	2.098E-02	2.493E+00	2.084E+00	1.272E+00	FAIL ABUN
XE-127	-3.875E-02	4.609E-02	3.798E-02	2.352E-02	NOT IDENT.
I-131	-8.837E-02	1.328E-01	1.119E-01	6.776E-02	NOT IDENT.
TE-132	-1.035E+00	1.018E+00	8.085E-01	5.192E-01	NOT IDENT.
BA-133	2.810E-02	4.429E-02	3.666E-02	2.260E-02	NOT IDENT.
I-133	1.075E+03	3.437E+04	0.000E+00	1.754E+04	SHORT HLIF
CS-134	8.530E-02	8.044E-02	5.993E-02	4.104E-02	FAIL ABUN
CS-135	3.141E-01	1.767E-01	1.497E-01	9.013E-02	NOT IDENT.
I-135	-1.238E+18	1.134E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	3.832E-02	1.501E-01	1.304E-01	7.657E-02	FAIL ABUN
BA-137M	-2.286E-02	4.746E-02	3.760E-02	2.421E-02	NOT IDENT.
CS-137	-2.416E-02	5.017E-02	3.975E-02	2.559E-02	NOT IDENT.
CE-139	2.739E-03	2.880E-02	2.540E-02	1.470E-02	NOT IDENT.
BA-140	-2.562E-02	3.497E-01	2.972E-01	1.784E-01	NOT IDENT.
LA-140	1.637E-02	1.159E-01	1.004E-01	5.914E-02	FAIL ABUN
CE-141	-1.533E-02	5.930E-02	5.191E-02	3.025E-02	NOT IDENT.
CE-143	3.561E+03	1.035E+03	0.000E+00	5.280E+02	SHORT HLIF

CE-144	2.832E-02	1.878E-01	1.684E-01	9.580E-02 NOT IDENT.
PM-144	-7.599E-03	4.285E-02	3.514E-02	2.186E-02 NOT IDENT.
PR-144	-5.155E-01	2.907E+00	2.384E+00	1.483E+00 NOT IDENT.
PM-146	-5.235E-03	5.022E-02	4.328E-02	2.562E-02 NOT IDENT.
ND-147	-1.622E-01	7.437E-01	6.250E-01	3.795E-01 FAIL ABUN
PM-149	2.216E+02	1.882E+02	1.671E+02	9.603E+01 NOT IDENT.
EU-152	7.786E-03	9.461E-02	8.455E-02	4.827E-02 FAIL ABUN
GD-153	7.313E-02	6.467E-02	5.883E-02	3.299E-02 FAIL ABUN
EU-154	6.785E-02	1.594E-01	1.383E-01	8.133E-02 NOT IDENT.
EU-155	5.225E-02	9.620E-02	8.791E-02	4.857E-02 FAIL ABUN
TB-160	9.920E-02	1.840E-01	1.660E-01	9.385E-02 FAIL ABUN
HO-166M	-5.349E-02	7.632E-02	5.909E-02	3.894E-02 FAIL ABUN
TM-171	4.061E+00	1.767E+01	1.378E+01	9.015E+00 NOT IDENT.
LU-176	-1.566E-03	2.513E-02	2.066E-02	1.282E-02 FAIL ABUN
LU-177	3.420E+00	1.772E+00	1.310E+00	9.043E-01 FAIL ABUN
LU-177M	-3.698E-02	1.909E-01	1.440E-01	9.742E-02 FAIL ABUN
HF-181	-2.554E-03	5.279E-02	4.543E-02	2.693E-02 NOT IDENT.
W-181	-1.285E-01	2.227E-01	1.671E-01	1.136E-01 NOT IDENT.
TA-182	-1.798E-02	2.624E-01	2.172E-01	1.339E-01 FAIL ABUN
RE-183	6.853E-02	1.104E-01	9.793E-02	5.630E-02 FAIL ABUN
RE-184	7.745E-02	2.242E-01	1.945E-01	1.144E-01 NOT IDENT.
OS-185	-1.040E-02	4.920E-02	4.045E-02	2.510E-02 FAIL ABUN
RE-188	-7.498E-02	1.682E-01	1.453E-01	8.583E-02 NOT IDENT.
W-188	-2.595E+00	8.840E+00	6.420E+00	4.510E+00 FAIL ABUN
IR-192	-1.336E-02	3.593E-02	2.907E-02	1.833E-02 FAIL ABUN
AU-195	1.791E-01	1.790E-01	1.686E-01	9.133E-02 FAIL ABUN
TL-200	1.473E+03	1.584E+03	0.000E+00	8.083E+02 SHORT HLIF
TL-201	1.996E+00	1.026E+01	9.086E+00	5.236E+00 NOT IDENT.
TL-202	-2.084E-02	7.940E-02	6.772E-02	4.051E-02 NOT IDENT.
HG-203	-3.284E-02	4.357E-02	3.484E-02	2.223E-02 FAIL ABUN
BI-207	-3.025E-02	6.826E-02	5.509E-02	3.483E-02 FAIL ABUN
TL-207	-2.725E-01	7.032E-01	5.353E-01	3.588E-01 FAIL ABUN
PO-209	4.405E+00	9.338E+00	8.377E+00	4.764E+00 NOT IDENT.
PB-211	-2.716E-01	1.088E+00	8.095E-01	5.550E-01 NOT IDENT.
BI-212	1.141E+00	5.627E-01	4.160E-01	2.871E-01 FAIL ABUN
PO-215	-2.725E-01	7.032E-01	5.353E-01	3.588E-01 FAIL ABUN
RN-219	-1.624E-01	4.288E-01	3.660E-01	2.188E-01 FAIL ABUN
RN-220	1.508E+00	3.046E+01	2.610E+01	1.554E+01 NOT IDENT.
RA-223	-2.725E-01	7.032E-01	5.353E-01	3.588E-01 FAIL ABUN
AC-227	2.527E-01	3.708E-01	3.265E-01	1.892E-01 FAIL ABUN
TH-227	2.527E-01	3.716E-01	3.265E-01	1.896E-01 FAIL ABUN
TH-229	-1.189E-03	4.762E-01	4.131E-01	2.430E-01 FAIL ABUN
PA-231	5.000E-01	1.626E+00	1.393E+00	8.297E-01 FAIL ABUN
TH-231	-2.725E-01	7.032E-01	5.353E-01	3.588E-01 FAIL ABUN
U-231	-1.166E+00	1.226E+00	9.490E-01	6.255E-01 FAIL ABUN
PA-233	3.856E-02	6.584E-02	5.616E-02	3.359E-02 FAIL ABUN
PA-234	1.483E-01	3.342E-01	2.987E-01	1.705E-01 FAIL ABUN
PA-234M	3.847E+00	6.223E+00	5.537E+00	3.175E+00 NOT IDENT.
U-235	-1.148E-02	1.996E-01	1.736E-01	1.018E-01 FAIL ABUN
NP-236	-4.585E-02	7.809E-02	6.681E-02	3.984E-02 NOT IDENT.
NP-239	-1.203E-01	1.683E-01	1.463E-01	8.587E-02 FAIL ABUN
AM-241	3.327E-03	6.999E-02	5.467E-02	3.571E-02 NOT IDENT.
CM-243	1.062E-01	8.430E-02	7.957E-02	4.301E-02 FAIL ABUN
AM-246	7.435E-02	1.869E-01	1.638E-01	9.534E-02 NOT IDENT.
CM-247	1.066E-02	3.817E-02	3.412E-02	1.947E-02 NOT IDENT.
CF-249	-7.722E-04	4.291E-02	3.773E-02	2.189E-02 NOT IDENT.
CF-251	-3.338E-02	1.210E-01	1.043E-01	6.174E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	252.7090
46.50	252.7090
46.50	252.7090
48.70	278.1922
49.72	249.7411
51.35	279.6728
52.39	291.3388
52.97	266.6204
53.15	266.7626
53.44	289.8419
54.07	328.9343
56.28	360.1379
56.28	360.1413
57.37	0.0000
57.53	333.4274
57.53	333.4295
57.60	333.4933
57.98	337.9090
57.98	337.9090
59.32	350.5801
59.32	350.5801
59.40	350.6577
59.54	350.7922
59.72	350.9650
60.01	383.9177
61.10	358.8380
61.14	358.8770
61.30	392.2299
63.00	394.0121
63.29	394.3132
63.29	394.3132
63.58	458.5279
64.28	454.4113
65.12	443.8096
65.20	443.9023
65.20	443.9023
66.05	366.8541
66.72	410.7144
66.83	426.6311
66.91	426.7172
67.20	427.0330
67.20	427.0330
67.75	455.1333
67.85	446.2422
68.90	423.8409
68.90	423.8409
69.30	429.2847
69.67	429.6787
70.82	420.8127
70.82	420.8127
70.83	420.8229
72.80	396.6725
72.87	396.7370
72.87	396.7370
74.67	398.4391
74.81	398.5706
74.81	398.5706
74.81	398.5706
74.81	398.5706
74.81	398.5706
74.81	398.5706
74.81	398.5706
74.97	398.7212
75.28	399.0104
75.70	399.4025
77.11	400.7125
77.11	400.7125

77.11	400.7125
77.11	400.7125
77.11	400.7125
77.11	400.7125
77.11	400.7125
78.38	356.5629
79.62	357.5683
79.80	357.7125
79.80	357.7125
80.11	357.9628
80.18	358.0179
80.30	358.1155
80.30	358.1155
80.57	358.3318
81.00	358.6775
81.07	358.7327
81.07	358.7327
81.07	358.7327
81.07	358.7327
82.60	289.1685
83.37	289.6559
83.78	289.9174
83.78	289.9174
83.78	289.9174
83.78	289.9174
84.21	290.1892
84.90	290.6237
85.43	290.9559
86.29	291.4926
86.50	291.6222
86.54	291.6477
86.59	291.6784
86.72	291.7602
86.79	291.8011
86.94	291.8965
87.30	292.1197
87.30	292.1197
87.30	292.1197
87.30	292.1197
87.30	292.1197
87.30	292.1197
87.30	292.1197
87.57	292.2867
87.88	292.4775
88.03	292.5704
88.36	292.7740
88.47	292.8421
89.95	293.7486
91.11	294.4523
92.29	295.1663
92.38	295.2208
92.38	295.2208
93.35	295.8018
94.00	218.8272
94.67	250.9926
94.67	250.9954
94.90	263.0685
94.90	263.0685
94.90	263.0685
94.90	263.0685
95.87	272.8959
95.87	272.8959
96.73	241.3600
97.43	229.6736
98.44	213.1803
98.44	213.1803
98.88	226.7549
99.55	278.8954
99.55	278.8954
99.86	281.7469
100.00	305.0837
100.10	305.1444
103.18	245.7330
103.76	241.4969
105.00	261.0258
105.31	264.7921
108.00	250.6697
109.28	269.4619

111.00	269.3859
111.00	269.3859
111.76	269.7535
112.95	254.7471
115.19	261.2737
116.30	261.7807
117.00	251.0239
117.00	251.0239
117.66	241.1457
121.11	243.4995
121.62	233.4767
121.78	235.4001
122.06	241.0960
122.32	236.5450
122.32	236.5450
122.32	236.5450
122.32	236.5450
123.07	256.4236
127.23	247.8612
129.76	230.4972
131.20	229.6121
133.02	226.2945
133.54	226.6712
135.34	243.4792
136.00	240.8755
136.25	233.3486
136.48	233.4309
140.51	256.9315
140.51	0.0000
142.18	214.3299
142.65	203.9021
143.76	234.1085
144.24	229.4537
144.24	229.4537
144.24	229.4537
144.24	229.4537
145.22	226.8937
145.44	226.9678
147.16	211.0833
152.43	224.4128
152.70	228.4037
153.22	232.4824
154.21	240.6348
154.21	240.6348
154.21	240.6348
154.21	240.6348
155.03	244.8324
156.02	262.8283
158.56	210.6192
159.00	0.0000
159.00	215.6717
160.31	244.6750
161.27	225.2423
162.32	206.7698
162.64	216.7566
163.35	201.1167
163.89	225.0580
165.85	214.7234
167.43	201.2315
171.28	192.2520
171.86	189.3922
172.10	186.4446
176.55	225.8389
176.60	208.7119
181.06	200.7795
184.41	171.0762
185.71	171.3530
186.00	171.4163
190.27	166.1644
192.34	186.1205
193.63	186.4114
197.04	188.2077
198.01	187.3891
198.60	163.6913
200.40	204.5310
201.83	201.7538
202.84	201.9906
205.31	189.5185

208.36	166.6068
208.81	166.6925
209.75	174.7417
209.75	174.7417
210.97	182.8660
215.65	167.9816
216.55	161.8045
218.09	181.1483
222.10	155.3463
223.80	176.9525
226.40	166.7609
227.00	165.7975
227.08	165.8117
227.20	165.8338
228.16	179.9270
228.18	179.9304
228.18	179.9304
231.56	0.0000
235.69	195.9345
236.00	173.8598
236.00	173.8598
238.63	174.3348
238.63	174.3348
238.63	174.3348
238.63	174.3348
239.00	174.4019
240.98	174.7573
241.98	174.9359
241.98	174.9359
241.98	174.9359
244.69	137.2844
245.39	124.2979
247.94	126.8042
248.90	122.5490
249.79	139.0858
252.40	126.2702
252.85	126.3264
252.85	126.3264
254.15	0.0000
256.20	123.4371
256.20	123.4371
260.50	148.3018
260.90	130.6446
262.80	125.3387
264.65	130.0063
268.24	115.3994
268.79	124.9404
269.46	125.0202
269.46	125.0202
269.46	125.0202
269.46	125.0202
271.23	137.5267
273.65	174.8208
276.40	157.2892
277.35	119.1961
277.60	105.7251
277.60	105.7251
278.00	121.5176
278.60	131.7155
279.20	156.5701
279.53	167.8857
280.46	147.7295
281.68	169.3451
283.67	134.5892
284.30	130.1401
285.00	131.3543
285.90	126.9274
286.10	126.9502
286.10	126.9502
287.40	175.8950
288.45	0.0000
290.67	141.6988
290.80	141.7140
291.72	128.1601
293.26	0.0000
293.70	106.1311
295.21	95.9885
295.21	95.9885

295.21	95.9885
295.96	82.3301
296.50	82.3682
297.23	82.4209
298.57	82.5176
299.80	99.8167
299.80	99.8167
300.09	99.8415
300.09	99.8415
300.09	99.8415
300.09	99.8415
300.12	99.8433
301.29	118.9012
302.84	93.1767
303.76	119.1539
303.91	119.1697
304.40	120.9470
304.40	120.9470
304.84	100.2521
306.84	107.3496
308.46	114.4325
311.98	96.2254
316.51	112.8845
318.01	101.3726
319.02	93.2943
319.41	93.3252
320.08	100.0453
323.87	112.4023
323.87	112.4023
323.87	112.4023
323.87	112.4023
325.23	92.8351
328.77	100.5084
333.44	106.1975
334.20	110.9843
334.20	110.9843
334.30	110.9939
338.28	101.2773
338.28	101.2773
338.28	101.2773
338.28	101.2773
338.32	101.2808
338.32	101.2808
338.32	101.2808
340.50	101.4547
340.57	101.4617
344.27	101.7556
345.85	114.3945
350.59	0.0000
351.07	107.6788
351.92	94.8186
351.92	94.8186
351.92	94.8186
355.39	0.0000
356.01	76.3816
364.48	97.9030
366.43	91.6900
367.43	86.3083
367.94	0.0000
369.80	95.5600
374.96	81.3067
383.85	110.3375
387.95	104.2064
388.63	94.1075
391.69	103.5593
391.69	103.5593
392.90	108.2753
398.62	112.4276
400.65	86.5333
401.10	89.3525
401.81	98.7086
402.60	88.5131
404.84	92.5701
410.95	76.8412
411.60	78.0000
413.65	76.6071
414.70	78.1650
415.30	67.6703

415.76	78.2209
417.63	0.0000
418.52	91.3638
423.70	78.4495
427.08	80.5202
427.89	89.0932
432.53	78.9080
433.93	78.0286
439.47	79.2652
439.56	79.2702
439.89	84.0630
443.98	74.7068
444.90	70.9174
445.03	70.9231
445.03	70.9231
445.03	70.9231
445.03	70.9231
453.90	93.4936
463.38	69.8093
468.07	76.2359
473.00	83.8794
475.06	88.8672
475.35	90.8359
476.78	88.9602
477.59	85.0910
477.96	90.9807
482.03	91.2035
484.57	82.5042
487.03	75.7393
490.36	0.0000
492.35	68.0851
497.08	69.2651
507.63	0.0000
510.53	0.0000
510.84	71.8154
511.00	71.8226
511.85	71.8572
511.85	71.8572
513.99	60.7536
513.99	60.7536
520.41	73.2116
520.65	73.2206
527.90	62.4427
528.96	0.0000
529.64	68.5520
529.87	0.0000
531.02	76.6749
537.32	79.9812
543.00	72.1072
546.56	0.0000
549.76	70.3329
552.65	61.2561
555.20	71.5637
563.23	67.7644
563.90	82.1680
568.70	84.4349
569.32	67.9819
569.50	65.9297
569.67	65.9355
573.80	96.0198
574.00	92.9306
574.64	93.9965
578.91	77.8483
579.30	0.0000
583.14	68.4754
585.48	66.4805
591.81	66.6973
592.07	64.6205
593.00	65.6936
595.88	78.3211
600.56	68.0409
602.52	0.0000
602.71	78.8030
602.71	78.8030
603.60	82.1922
604.41	88.9380
604.70	88.9510
609.31	68.3405

609.31	68.3405
609.31	68.3405
609.31	68.3405
610.33	68.3742
612.46	69.0794
614.37	64.0842
618.01	66.5241
621.84	58.1857
621.84	58.1857
631.29	77.5848
633.02	47.8661
633.10	47.8688
634.78	66.0056
635.90	70.3022
636.97	74.6014
645.85	58.8655
646.12	56.7314
656.30	67.7623
657.75	68.8848
657.90	0.0000
661.65	77.6360
661.65	77.6360
664.57	0.0000
666.33	72.4020
666.33	72.4020
675.00	47.7383
677.61	72.7803
685.20	66.4916
692.80	62.3455
695.00	62.4081
696.49	67.9260
696.49	67.9260
697.00	66.8472
697.49	64.6699
698.33	69.0793
698.50	67.9885
699.00	69.1004
702.63	80.1980
706.10	64.9175
706.58	0.0000
706.67	58.3311
709.31	67.2139
711.68	70.5918
713.82	54.0977
717.42	56.3960
720.50	57.5780
721.93	0.0000
722.20	67.3721
722.78	74.4823
722.78	74.4823
722.89	74.4864
722.95	74.4885
723.30	76.2746
724.18	56.7828
727.18	60.4114
733.00	53.4375
735.90	59.0783
739.58	59.1705
742.81	55.8975
744.21	51.4566
747.13	50.4012
751.79	54.9889
752.31	48.2661
753.82	46.0499
755.35	52.8234
756.15	60.7104
756.87	66.3516
763.93	89.3320
765.79	77.6625
766.42	73.1650
766.84	74.9857
776.49	56.2359
778.00	54.4556
778.57	49.9297
778.89	50.8443
783.80	42.7578
785.46	52.8004
792.07	44.1183

795.84	30.4728
796.30	33.5264
798.80	57.9664
801.93	44.9039
805.60	49.5584
810.29	49.6507
810.76	47.8207
815.85	46.9957
817.79	44.2652
818.51	50.7354
819.60	48.9111
826.30	61.0677
828.27	0.0000
831.60	71.3923
831.96	73.2563
834.83	60.3408
836.80	0.0000
846.75	47.5622
848.13	59.7172
856.28	0.0000
856.80	43.6873
860.37	49.6836
867.32	63.9110
867.82	59.2225
871.10	45.1781
873.19	55.5747
874.81	65.0328
875.33	0.0000
876.40	57.5271
879.36	48.1487
880.27	47.2205
880.51	45.3363
881.50	52.9115
883.24	51.0548
884.67	51.0812
889.25	48.3242
896.60	45.6047
898.02	50.3811
899.00	54.2029
903.28	43.5379
911.07	39.1582
911.07	39.1582
911.07	39.1582
919.63	41.0575
920.93	41.2132
925.00	46.0723
925.24	46.0758
926.50	39.3744
935.52	48.1702
937.48	54.9530
944.10	40.5850
946.00	33.8430
949.00	51.3023
962.29	55.1034
964.01	51.8932
966.15	9.7371
968.20	9.7439
969.11	51.9831
969.11	51.9831
969.11	51.9831
977.42	54.3023
980.50	39.1387
983.50	53.8707
989.30	40.2363
996.32	60.9889
1001.03	46.3058
1001.68	48.2870
1004.76	60.1735
1021.30	0.0000
1024.50	0.0000
1034.80	65.7486
1036.00	53.8154
1037.82	58.8329
1038.57	54.8577
1038.76	0.0000
1045.16	46.9771
1046.59	47.0000
1048.07	43.0189

1050.47	45.0549
1050.47	45.0549
1062.04	53.2614
1063.62	53.2873
1076.63	48.4570
1077.35	48.4688
1078.86	45.4614
1085.78	42.5209
1099.22	48.7992
1112.02	45.9272
1112.84	43.1046
1115.52	44.2749
1120.29	37.5171
1120.29	37.5171
1120.29	37.5171
1120.29	37.5171
1120.51	50.1389
1121.28	51.1743
1124.00	0.0000
1129.67	35.9126
1131.51	0.0000
1147.95	0.0000
1167.94	45.6629
1173.22	51.9702
1175.09	53.0370
1177.93	61.4084
1189.05	58.4719
1204.90	58.7398
1205.75	0.0000
1213.00	69.3870
1221.42	60.0671
1230.97	62.3418
1235.34	70.8800
1236.41	0.0000
1238.25	61.4098
1246.25	47.7510
1260.41	0.0000
1271.85	30.9895
1274.45	38.4979
1274.54	38.4979
1291.56	36.5268
1298.22	0.0000
1312.09	45.3694
1325.50	36.8571
1325.50	36.8571
1332.49	28.2369
1333.61	21.7266
1360.21	22.9708
1362.66	0.0000
1365.15	29.5721
1368.21	21.9219
1368.53	0.0000
1376.25	16.4751
1384.27	12.5781
1394.10	16.5498
1395.20	20.2329
1407.95	17.5303
1434.06	20.4299
1436.60	26.0176
1457.56	0.0000
1460.81	18.6938
1489.15	10.3514
1509.49	13.2384
1596.49	17.3635
1620.62	10.6683
1678.03	0.0000
1691.02	12.8022
1691.02	12.8022
1706.46	0.0000
1750.46	0.0000
1764.49	3.4287
1764.49	3.4287
1764.49	3.4287
1764.49	3.4287
1770.23	8.5819
1771.40	20.0293
1791.20	0.0000
1808.65	9.0817

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492006

Total Uranium Activity	5.7213E+00	ug/g
Total Uranium Counting Unc.	3.2785E+00	ug/g
Total Uranium Tpu	1.6727E-06	ug/g
Total Uranium Mda	1.5954E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492006
ANALYST	: MXR1	DETECTOR	: GAM17
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 14:02:07.40	SAMPLE ALQT:	136.110 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 1.082E+01
GROSS GAMMA ERROR (pCi/GRAM)	: 1.646E+00
GROSS GAMMA MDA (pCi/GRAM)	: 4.318E+00
GROSS GAMMA DLC (pCi/GRAM)	: 2.097E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:01:19.42

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492007.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:02:31.
Sample ID : G243492007 Sample quantity : 1.24450E+02 GRAM
Detector name : GAM18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.60 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	64.31*	48	554	0.72	127.74	123	9	6.66E-03	91.7	
2	2	75.14*	383	413	1.04	149.39	145	14	5.31E-02	10.0	5.70E-01
3	2	77.41	562	351	0.88	153.93	145	14	7.80E-02	6.6	
4	5	87.66	300	359	1.33	174.44	171	23	4.16E-02	11.1	2.87E+00
5	5	90.12	190	492	1.48	179.35	171	23	2.63E-02	22.8	
6	5	93.12*	306	395	1.31	185.33	171	23	4.25E-02	13.7	
7	0	129.28	89	458	1.20	257.64	252	10	1.23E-02	46.4	
8	0	185.97*	237	402	1.23	370.99	366	11	3.29E-02	18.2	
9	0	209.83	167	361	1.59	418.69	414	11	2.32E-02	23.3	
10	2	238.96*	1601	273	1.16	476.92	472	17	2.22E-01	3.1	1.22E+00
11	2	241.90	334	295	1.54	482.79	472	17	4.64E-02	12.7	
12	0	270.63	158	251	1.45	540.23	535	11	2.19E-02	21.1	
13	0	295.48*	518	283	1.21	589.92	585	11	7.19E-02	7.8	
14	0	300.73	96	207	1.27	600.42	596	9	1.34E-02	28.8	
15	0	328.32	94	208	2.51	655.58	651	10	1.30E-02	30.5	
16	0	338.46*	303	228	1.04	675.85	671	11	4.21E-02	11.4	
17	0	352.15*	1003	207	1.31	703.23	696	14	1.39E-01	4.5	
18	0	511.15*	174	203	1.90	1021.13	1013	18	2.41E-02	23.4	
19	0	583.39*	559	133	1.67	1165.58	1159	16	7.77E-02	6.4	
20	0	609.55*	687	131	1.54	1217.88	1211	14	9.54E-02	5.3	
21	0	663.77	82	207	5.12	1326.28	1315	22	1.14E-02	46.3	
22	0	727.90	121	111	1.77	1454.52	1448	12	1.68E-02	19.8	
23	0	795.05	80	57	2.40	1588.79	1583	11	1.11E-02	21.6	
24	0	860.96	76	57	1.28	1720.59	1716	10	1.05E-02	21.9	
25	0	911.32*	393	95	2.17	1821.28	1813	18	5.46E-02	7.8	
26	0	969.21*	174	150	1.97	1937.05	1929	13	2.41E-02	16.7	
27	0	1120.89*	95	108	1.93	2240.35	2232	14	1.32E-02	26.3	
28	0	1238.52*	34	83	3.10	2475.57	2470	13	4.76E-03	57.8	
29	0	1460.59*	1652	43	2.49	2919.67	2908	21	2.29E-01	2.7	
30	0	1728.56	38	12	2.06	3455.58	3447	16	5.32E-03	25.9	
31	0	1764.39*	154	28	2.85	3527.23	3517	20	2.14E-02	12.3	
32	0	1848.01	18	13	0.88	3694.47	3689	10	2.52E-03	43.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 12:01:22

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492007.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:02:31
Sample ID : G243492007 Sample quantity : 124.45 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.60 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.468E+01	2.288E+00	4.577E-01	3.473E-02	53.915
CD-109	+	88.03	*	3.846E+00	9.234E-01	1.202E+00	1.111E-01	3.200
SN-126	+	64.28		4.636E-01	8.526E-01	8.311E-01	1.229E-01	0.558
	+	86.94		1.567E+00	7.370E-01	5.325E-01	2.209E-01	2.942
	+	87.57	*	3.769E-01	9.049E-02	1.185E-01	1.092E-02	3.180
TL-208		277.35		1.890E-01	3.025E-01	5.064E-01	5.319E-02	0.373
	+	510.84		5.629E-01	2.699E-01	1.726E-01	1.835E-02	3.261
	+	583.14	*	5.096E-01	7.668E-02	4.309E-02	3.378E-03	11.826
	+	860.37		6.298E-01	2.853E-01	3.538E-01	3.958E-02	1.780
BI-211		72.87		1.952E+00	3.183E+00	4.847E+00	4.002E-01	0.403
	+	351.07	*	4.292E+00	4.710E-01	2.373E-01	1.523E-02	18.087
PB-212	+	74.81		2.176E+00	5.123E-01	5.335E-01	6.687E-02	4.079
	+	77.11		1.785E+00	2.803E-01	2.985E-01	2.530E-02	5.980
	+	87.30		1.743E+00	4.534E-01	5.503E-01	7.474E-02	3.168
	+	238.63	*	1.595E+00	1.502E-01	7.643E-02	5.460E-03	20.873
	+	300.09		1.426E+00	8.289E-01	9.713E-01	7.975E-02	1.469
PO-212	+	74.81		2.176E+00	5.123E-01	5.335E-01	6.687E-02	4.079
	+	77.11		1.785E+00	2.803E-01	2.985E-01	2.530E-02	5.980
	+	87.30		1.743E+00	4.534E-01	5.503E-01	7.474E-02	3.168
		115.19		-5.355E-01	3.259E+00	5.214E+00	3.284E-01	-0.103
	+	238.63	*	1.595E+00	1.502E-01	7.643E-02	5.460E-03	20.873
	+	300.09		1.426E+00	8.289E-01	9.713E-01	7.975E-02	1.469
BI-214	+	609.31	*	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
	+	1120.29		8.166E-01	4.374E-01	3.794E-01	3.632E-02	2.153
	+	1764.49		1.738E+00	4.388E-01	2.565E-01	1.559E-02	6.775
PB-214	+	74.81		3.750E+00	8.565E-01	9.193E-01	1.026E-01	4.079
	+	77.11		3.060E+00	5.341E-01	5.117E-01	5.832E-02	5.980
	+	87.30		2.986E+00	7.530E-01	9.426E-01	1.131E-01	3.168
	+	241.98		1.997E+00	5.330E-01	4.594E-01	3.633E-02	4.346
	+	295.21		1.348E+00	2.399E-01	1.751E-01	1.486E-02	7.696
	+	351.92	*	1.493E+00	1.814E-01	8.270E-02	6.841E-03	18.054
PO-214	+	74.81		3.750E+00	8.565E-01	9.193E-01	1.026E-01	4.079
	+	77.11		3.060E+00	5.341E-01	5.117E-01	5.832E-02	5.980
	+	87.30		2.986E+00	7.530E-01	9.426E-01	1.131E-01	3.168

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	241.98		1.997E+00	5.330E-01	4.594E-01	3.633E-02	4.346
	+	295.21		1.348E+00	2.399E-01	1.751E-01	1.486E-02	7.696
	+	351.92	*	1.493E+00	1.814E-01	8.270E-02	6.841E-03	18.054
PO-216	+	74.81		2.176E+00	5.123E-01	5.335E-01	6.687E-02	4.079
	+	77.11		1.785E+00	2.803E-01	2.985E-01	2.530E-02	5.980
	+	87.30		1.743E+00	4.534E-01	5.503E-01	7.474E-02	3.168
	+	238.63	*	1.595E+00	1.502E-01	7.643E-02	5.460E-03	20.873
	+	300.09		1.426E+00	8.289E-01	9.713E-01	7.975E-02	1.469
PO-218	+	74.81		3.750E+00	8.565E-01	9.193E-01	1.026E-01	4.079
	+	77.11		3.060E+00	5.341E-01	5.117E-01	5.832E-02	5.980
	+	87.30		2.986E+00	7.530E-01	9.426E-01	1.131E-01	3.168
	+	241.98		1.997E+00	5.330E-01	4.594E-01	3.633E-02	4.346
	+	295.21		1.348E+00	2.399E-01	1.751E-01	1.486E-02	7.696
	+	351.92	*	1.493E+00	1.814E-01	8.270E-02	6.841E-03	18.054
RA-224	+	240.98	*	3.786E+00	9.881E-01	8.687E-01	4.839E-02	4.358
RA-226	+	609.31	*	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
	+	1120.29		8.166E-01	4.374E-01	3.794E-01	3.632E-02	2.153
	+	1764.49		1.738E+00	4.388E-01	2.565E-01	1.559E-02	6.775
AC-228	+	338.32		1.437E+00	6.708E-01	3.054E-01	1.245E-01	4.706
	+	911.07	*	1.539E+00	3.155E-01	1.697E-01	2.248E-02	9.071
	+	969.11		1.195E+00	4.914E-01	2.859E-01	6.846E-02	4.181
RA-228	+	338.32		1.437E+00	6.708E-01	3.054E-01	1.245E-01	4.706
	+	911.07	*	1.539E+00	3.155E-01	1.697E-01	2.248E-02	9.071
	+	969.11		1.195E+00	4.914E-01	2.859E-01	6.846E-02	4.181
TH-228	+	74.81		2.214E+00	4.789E-01	5.427E-01	4.573E-02	4.079
	+	77.11		1.816E+00	2.851E-01	3.036E-01	2.573E-02	5.980
	+	87.30		1.773E+00	4.257E-01	5.597E-01	5.144E-02	3.168
	+	238.63	*	1.623E+00	1.528E-01	7.774E-02	5.554E-03	20.873
	+	300.09		1.451E+00	1.195E+00	9.880E-01	5.822E-01	1.469
TH-230	+	609.31	*	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
	+	1120.29		8.166E-01	4.374E-01	3.794E-01	3.632E-02	2.153
	+	1764.49		1.738E+00	4.388E-01	2.565E-01	1.559E-02	6.775
TH-232	+	338.32		1.437E+00	3.369E-01	3.054E-01	1.767E-02	4.706
	+	911.07	*	1.539E+00	3.155E-01	1.697E-01	2.248E-02	9.071
	+	969.11		1.195E+00	4.914E-01	2.859E-01	6.846E-02	4.181
TH-234	+	63.29	*	1.171E+00	2.157E+00	2.208E+00	3.893E-01	0.530
	+	92.38		2.447E+00	8.013E-01	7.640E-01	1.377E-01	3.203
U-234	+	609.31	*	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
	+	1120.29		8.166E-01	4.374E-01	3.794E-01	3.632E-02	2.153
	+	1764.49		1.738E+00	4.388E-01	2.565E-01	1.559E-02	6.775
NP-237	+	86.50	*	1.107E+00	3.504E-01	3.730E-01	8.417E-02	2.967
		95.87		-5.191E-01	1.001E+00	1.406E+00	3.434E-01	-0.369
U-238	+	63.29	*	1.171E+00	2.157E+00	2.208E+00	3.893E-01	0.530
	+	92.38		2.447E+00	7.005E-01	7.640E-01	6.494E-02	3.203
AM-243	+	74.67	*	3.528E-01	7.623E-02	8.684E-02	7.246E-03	4.063
	+	86.72		4.150E+01	9.965E+00	1.415E+01	1.294E+00	2.933
		117.66		3.867E-02	3.584E+00	5.768E+00	3.548E-01	0.007
		142.18		-9.927E+00	1.624E+01	2.466E+01	1.358E+00	-0.402
ANH-511	+	511.00	*	1.216E-01	5.741E-02	3.730E-02	2.463E-03	3.260

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-8.022E-02	2.668E-01	4.320E-01	3.130E-02	-0.186
NA-22		1274.54	*	-2.990E-03	3.332E-02	5.428E-02	3.694E-03	-0.055
NA-24		1368.53	*	1.000E+00	3.332E-02	Half-Life too short		
AL-26		1129.67		-8.386E-01	1.419E+00	2.152E+00	1.437E-01	-0.390
		1808.65	*	5.996E-03	2.094E-02	3.601E-02	2.103E-03	0.167
TI-44		67.85		-1.017E-02	5.151E-02	7.507E-02	6.037E-03	-0.135
	+	78.38	*	3.294E-01	5.173E-02	7.992E-02	6.833E-03	4.122
SC-46		889.25	*	-1.717E-02	2.984E-02	4.624E-02	5.158E-03	-0.371
	+	1120.51		1.421E-01	7.552E-02	1.009E-01	6.968E-03	1.409
V-48		944.10		-1.558E-01	7.560E-01	1.207E+00	1.277E-01	-0.129
		983.50	*	-4.319E-02	6.457E-02	9.853E-02	9.745E-03	-0.438
		1312.09		-2.714E-02	6.908E-02	1.088E-01	7.928E-03	-0.249
CR-51		320.08	*	-2.668E-02	3.318E-01	5.321E-01	3.426E-02	-0.050
MN-52		744.21		1.604E-01	2.383E-01	4.131E-01	3.643E-02	0.388
		848.13		1.196E+00	6.307E+00	1.051E+01	1.100E+00	0.114
		935.52		4.629E-01	2.721E-01	4.893E-01	5.249E-02	0.946
		1246.25		3.440E+00	8.457E+00	1.241E+01	7.981E-01	0.277
		1333.61		7.092E-01	4.914E+00	8.150E+00	6.157E-01	0.087
		1434.06	*	8.527E-02	2.474E-01	4.166E-01	3.070E-02	0.205
MN-54		834.83	*	1.729E-02	3.135E-02	5.332E-02	5.462E-03	0.324
CO-56		846.75	*	-1.300E-03	3.007E-02	4.920E-02	5.136E-03	-0.026
		977.42		-3.009E-01	2.504E+00	3.923E+00	3.924E-01	-0.077
		1037.82		-9.335E-02	2.522E-01	3.984E-01	3.691E-02	-0.234
		1175.09		-2.077E-01	1.695E+00	2.778E+00	1.542E-01	-0.075
	+	1238.25		8.358E-02	9.680E-02	1.276E-01	8.502E-03	0.655
		1360.21		-5.602E-01	7.172E-01	1.055E+00	7.928E-02	-0.531
		1771.40		-8.582E-02	2.200E-01	2.797E-01	1.690E-02	-0.307
CO-57		122.06	*	3.092E-03	2.232E-02	3.603E-02	2.134E-03	0.086
		136.48		-1.407E-01	1.826E-01	2.802E-01	1.834E-02	-0.502
CO-58		810.76	*	-1.830E-02	3.129E-02	4.919E-02	4.856E-03	-0.372
FE-59		142.65		-8.941E-01	2.568E+00	3.948E+00	2.172E-01	-0.226
		192.34		-5.232E-01	8.255E-01	1.295E+00	1.502E-01	-0.404
		1099.22	*	-4.102E-02	7.310E-02	1.163E-01	9.569E-03	-0.353
		1291.56		1.118E-02	9.542E-02	1.582E-01	1.329E-02	0.071
CO-60		1173.22		8.331E-03	3.356E-02	5.660E-02	3.128E-03	0.147
		1332.49	*	-2.203E-02	3.016E-02	4.542E-02	3.432E-03	-0.485
ZN-65		1115.52	*	-4.635E-02	9.018E-02	1.215E-01	8.559E-03	-0.381
GE-68		1077.35	*	-7.424E-03	9.758E-01	1.627E+00	1.292E-01	-0.005
AS-73		53.44	*	3.200E-01	1.046E+00	1.734E+00	1.375E-01	0.185
AS-74		595.88	*	3.795E-02	8.165E-02	1.360E-01	9.775E-03	0.279
		634.78		5.111E-02	3.117E-01	5.073E-01	3.777E-02	0.101
SE-75		66.05		-7.716E-01	5.566E+00	8.152E+00	8.074E-01	-0.095
		96.73		-6.366E-01	8.386E-01	1.166E+00	1.537E-01	-0.546
		121.11		1.215E-02	1.246E-01	2.009E-01	1.875E-02	0.060
		136.00		-2.994E-02	3.446E-02	5.264E-02	2.998E-03	-0.569
		198.60		-5.427E-01	1.575E+00	2.536E+00	1.721E-01	-0.214
		264.65	*	-1.045E-02	3.815E-02	5.671E-02	3.243E-03	-0.184
		279.53		-2.979E-02	9.295E-02	1.490E-01	9.204E-03	-0.200
		303.91		6.513E-01	1.901E+00	2.754E+00	2.620E-01	0.236

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		400.65		-5.434E-02	2.149E-01	3.457E-01	3.150E-02	-0.157
BR-77	+	87.88		1.471E+03	3.532E+02	5.731E+02	5.295E+01	2.567
		200.40		2.069E+01	2.418E+02	4.048E+02	2.180E+01	0.051
	+	239.00		4.548E+02	3.767E+01	5.870E+01	3.265E+00	7.748
		249.79		-2.196E+01	9.646E+01	1.567E+02	8.782E+00	-0.140
		281.68		4.455E+01	1.349E+02	2.230E+02	1.273E+01	0.200
		297.23		7.118E+02	1.412E+02	2.025E+02	1.163E+01	3.515
		303.76		1.164E+02	2.850E+02	4.150E+02	2.388E+01	0.281
		439.47		2.538E+01	2.076E+02	3.416E+02	2.082E+01	0.074
		484.57		-1.080E+02	3.361E+02	5.430E+02	3.486E+01	-0.199
		520.65	*	-8.442E+00	1.483E+01	2.263E+01	1.509E+00	-0.373
		574.64		-1.741E+02	3.038E+02	4.739E+02	3.337E+01	-0.367
		578.91		-9.439E+00	1.335E+02	1.856E+02	1.312E+01	-0.051
		585.48		3.025E+03	4.461E+02	7.713E+02	5.487E+01	3.922
		755.35		1.327E+02	2.365E+02	4.063E+02	3.651E+01	0.327
		817.79		-2.257E+01	1.788E+02	2.916E+02	2.906E+01	-0.077
SR-82		698.33		-1.723E+01	2.933E+01	4.717E+01	3.840E+00	-0.365
		776.49	*	-2.561E-01	3.158E-01	4.904E-01	4.567E-02	-0.522
		1395.20		-2.335E+00	9.683E+00	1.536E+01	1.144E+00	-0.152
RB-83		520.41	*	-3.109E-02	5.613E-02	8.579E-02	5.721E-03	-0.362
		529.64		9.665E-03	8.547E-02	1.408E-01	9.478E-03	0.069
		552.65		-4.478E-02	1.568E-01	2.504E-01	1.725E-02	-0.179
RB-84		881.50	*	1.595E-02	5.620E-02	9.398E-02	1.036E-02	0.170
KR-85		513.99	*	2.438E+01	7.337E+00	1.252E+01	8.296E-01	1.947
SR-85		513.99	*	1.276E-01	3.840E-02	6.555E-02	4.343E-03	1.947
RB-86		1076.63	*	-1.653E-01	6.695E-01	1.096E+00	8.722E-02	-0.151
Y-88		898.02		-1.065E-02	3.450E-02	5.313E-02	6.023E-03	-0.200
		1836.01	*	1.807E-02	2.494E-02	4.546E-02	2.589E-03	0.398
ZR-88		392.90	*	-3.398E-03	2.491E-02	4.144E-02	2.384E-03	-0.082
Y-91		1204.90	*	-4.180E+00	1.637E+01	2.655E+01	1.569E+00	-0.157
NB-94		702.63	*	2.554E-03	2.727E-02	4.578E-02	3.755E-03	0.056
		871.10		-5.160E-03	2.637E-02	4.248E-02	4.607E-03	-0.121
NB-95		765.79	*	1.987E-02	3.598E-02	6.152E-02	5.628E-03	0.323
NB-95M		235.69	*	2.580E-02	1.160E-01	1.701E-01	1.248E-02	0.152
ZR-95		724.18		6.058E-02	8.532E-02	1.301E-01	1.206E-02	0.466
		756.15	*	3.626E-02	5.883E-02	1.013E-01	9.970E-03	0.358
NB-97		657.90	*	6.446E-02	5.883E-02	Half-Life too short		
		1024.50		-8.460E+00	5.883E-02	Half-Life too short		
ZR-97		254.15		-5.080E+00	5.883E-02	Half-Life too short		
		355.39		1.705E+01	5.883E-02	Half-Life too short		
		507.63	*	1.554E+01	5.883E-02	Half-Life too short		
		602.52		-1.553E+01	5.883E-02	Half-Life too short		
		1021.30		6.068E+00	5.883E-02	Half-Life too short		
		1147.95		-2.830E+01	5.883E-02	Half-Life too short		
		1362.66		2.168E+00	5.883E-02	Half-Life too short		
		1750.46		-3.093E+00	5.883E-02	Half-Life too short		
MO-99		140.51		-9.405E+00	3.937E+01	6.077E+01	1.634E+01	-0.155
		181.06		-1.121E+00	2.535E+01	3.745E+01	6.358E+00	-0.030
		366.43		-1.854E+01	1.078E+02	1.799E+02	1.039E+01	-0.103

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		739.58	*	-2.310E-01	1.515E+01	2.516E+01	3.838E+00	-0.009
		778.00		-4.206E+01	4.358E+01	6.666E+01	6.224E+00	-0.631
TC-99M		140.51	*	-1.916E+12	4.358E+01	Half-Life too short		
RH-101		127.23		1.670E-02	3.112E-02	4.565E-02	2.637E-03	0.366
		198.01	*	4.051E-04	2.839E-02	4.637E-02	2.493E-03	0.009
		325.23		3.701E-02	2.098E-01	2.984E-01	1.725E-02	0.124
RH-102		418.52		5.076E-02	2.306E-01	3.890E-01	2.312E-02	0.130
		475.06	*	6.531E-03	2.210E-02	3.713E-02	2.358E-03	0.176
		631.29		-6.357E-03	4.417E-02	7.036E-02	5.222E-03	-0.090
		697.49		-6.239E-03	6.237E-02	1.035E-01	8.417E-03	-0.060
		766.84		1.353E-01	9.065E-02	1.618E-01	1.482E-02	0.837
		1046.59		5.530E-02	9.329E-02	1.624E-01	1.401E-02	0.340
		1112.84		-5.424E-02	2.127E-01	2.942E-01	2.089E-02	-0.184
RU-103		497.08	*	-7.836E-03	3.214E-02	5.196E-02	6.747E-03	-0.151
	+	610.33		1.313E+01	2.529E+00	2.523E+00	4.046E-01	5.205
RH-106	+	511.85		6.096E-01	2.878E-01	3.690E-01	2.439E-02	1.652
		621.84	*	8.927E-02	2.612E-01	4.305E-01	5.417E-02	0.207
		1050.47		4.236E-01	1.834E+00	3.118E+00	2.664E-01	0.136
RU-106	+	511.85		6.096E-01	2.878E-01	3.690E-01	2.439E-02	1.652
		621.84	*	8.927E-02	2.610E-01	4.305E-01	3.168E-02	0.207
		1050.47		4.236E-01	1.834E+00	3.118E+00	2.664E-01	0.136
AG-108M		433.93	*	-4.625E-03	2.497E-02	4.104E-02	2.682E-03	-0.113
		614.37		7.218E-03	3.381E-02	4.806E-02	3.703E-03	0.150
		722.95		-1.584E-03	3.648E-02	5.209E-02	4.606E-03	-0.030
AG-110M		657.75	*	1.111E-03	2.979E-02	4.332E-02	3.417E-03	0.026
		677.61		-3.902E-02	2.352E-01	3.895E-01	3.160E-02	-0.100
		706.67		1.528E-01	1.686E-01	2.959E-01	2.518E-02	0.516
		763.93		-2.436E-01	1.422E-01	2.066E-01	1.931E-02	-1.179
		884.67		-8.223E-03	3.664E-02	5.874E-02	6.633E-03	-0.140
		937.48		1.996E-02	9.383E-02	1.550E-01	1.697E-02	0.129
		1384.27		-1.236E-01	1.472E-01	2.196E-01	1.703E-02	-0.563
IN-111		171.28		-1.886E-01	1.316E+00	2.207E+00	1.161E-01	-0.085
		245.39	*	3.695E-02	1.584E+00	2.288E+00	1.279E-01	0.016
IN-113M		391.69	*	1.611E-03	3.639E-02	6.113E-02	3.750E-03	0.026
SN-113		391.69	*	1.611E-03	3.639E-02	6.113E-02	3.750E-03	0.026
IN-114M		190.27	*	-3.430E-02	1.717E-01	2.504E-01	1.337E-02	-0.137
CD-115		260.90		-1.110E+01	2.013E+02	3.239E+02	1.828E+01	-0.034
		492.35		-1.856E+01	5.282E+01	8.494E+01	5.498E+00	-0.219
		527.90	*	1.532E+01	1.598E+01	2.766E+01	1.859E+00	0.554
SN-117M		156.02		3.257E+00	2.170E+00	3.853E+00	2.058E-01	0.845
		158.56	*	-4.444E-02	5.117E-02	8.387E-02	4.458E-03	-0.530
SB-122		563.90	*	1.640E+00	2.581E+00	4.374E+00	3.048E-01	0.375
		692.80		3.646E+00	5.930E+01	9.947E+01	8.020E+00	0.037
I-123		159.00	*	-6.412E+01	5.930E+01	Half-Life too short		
		528.96		5.243E+02	5.930E+01	Half-Life too short		
TE-123M		159.00	*	-2.647E-02	2.408E-02	3.906E-02	2.108E-03	-0.678
I-124		602.71	*	1.275E-01	8.790E-01	1.242E+00	8.978E-02	0.103
		722.78		-2.290E-01	5.280E+00	7.541E+00	6.409E-01	-0.030
		1325.50		3.027E+01	3.727E+01	6.559E+01	4.894E+00	0.461

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		1376.25		4.825E+01	3.588E+01	6.512E+01	4.876E+00	0.741
		1509.49		3.858E+00	1.641E+01	2.809E+01	2.012E+00	0.137
		1691.02		1.428E+00	4.164E+00	7.196E+00	4.641E-01	0.198
SB-124		602.71		5.472E-03	3.771E-02	5.326E-02	3.852E-03	0.103
		645.85		1.127E-01	3.768E-01	6.194E-01	5.021E-02	0.182
		709.31		3.661E-01	2.271E+00	3.826E+00	3.176E-01	0.096
		713.82		-9.559E-01	1.294E+00	2.039E+00	2.418E-01	-0.469
		722.78		-1.424E-02	3.284E-01	4.689E-01	4.074E-02	-0.030
	+	968.20		1.259E+01	4.396E+00	6.167E+00	6.271E-01	2.041
		1045.16		-4.759E-01	2.062E+00	3.391E+00	2.936E-01	-0.140
		1325.50		2.010E+00	2.475E+00	4.356E+00	3.251E-01	0.461
		1368.21		6.434E-01	1.339E+00	2.296E+00	2.937E-01	0.280
		1436.60		-5.670E-01	3.184E+00	5.063E+00	3.728E-01	-0.112
		1691.02	*	2.094E-02	6.107E-02	1.055E-01	7.282E-03	0.198
SB-125		427.89	*	4.825E-02	7.357E-02	1.267E-01	7.919E-03	0.381
		463.38		6.117E-01	2.442E-01	4.469E-01	3.203E-02	1.369
		600.56		-3.482E-02	1.573E-01	2.509E-01	1.999E-02	-0.139
		635.90		5.241E-02	2.203E-01	3.604E-01	2.973E-02	0.145
TE-125M		109.28	*	-1.177E+00	8.662E+00	1.392E+01	1.225E+00	-0.085
I-126		388.63		8.071E-02	1.842E-01	3.156E-01	1.814E-02	0.256
		666.33	*	6.842E-02	1.796E-01	2.689E-01	2.067E-02	0.254
		753.82		7.560E-01	1.288E+00	2.218E+00	1.988E-01	0.341
SB-126		223.80		1.868E+00	3.754E+00	6.339E+00	3.484E-01	0.295
		278.60		-4.240E-01	2.275E+00	3.671E+00	2.092E-01	-0.116
	+	296.50		1.498E+01	2.497E+00	3.639E+00	2.089E-01	4.116
		414.70		-3.129E-02	6.789E-02	1.104E-01	6.530E-03	-0.283
		415.30		3.758E-01	5.548E+00	9.289E+00	5.498E-01	0.040
		555.20		-1.072E+00	3.496E+00	5.571E+00	3.849E-01	-0.192
		573.80		-1.045E-01	9.334E-01	1.504E+00	1.058E-01	-0.069
		593.00		-8.883E-01	8.420E-01	1.211E+00	8.679E-02	-0.733
		656.30		1.478E+00	3.066E+00	4.654E+00	3.532E-01	0.318
		666.33		2.872E-02	7.541E-02	1.129E-01	8.676E-03	0.254
		675.00		-7.541E-01	1.708E+00	2.776E+00	2.168E-01	-0.272
		695.00		3.551E-02	7.111E-02	1.222E-01	9.893E-03	0.290
		697.00		4.230E-02	2.386E-01	4.029E-01	3.273E-02	0.105
		720.50	*	-1.976E-02	1.356E-01	1.999E-01	1.692E-02	-0.099
		856.80		3.021E-01	4.473E-01	6.762E-01	7.171E-02	0.447
		989.30		1.101E+00	1.144E+00	1.985E+00	1.942E-01	0.554
		1034.80		-1.484E+00	7.851E+00	1.244E+01	1.104E+00	-0.119
		1213.00		-1.552E+00	4.392E+00	7.070E+00	4.251E-01	-0.219
SB-127		61.10		-2.883E+01	9.685E+01	1.430E+02	1.590E+01	-0.202
		252.40		2.124E+00	5.055E+00	8.332E+00	3.473E+00	0.255
		290.80		-1.119E+01	2.800E+01	3.856E+01	3.797E+00	-0.290
		411.60		1.134E+01	1.395E+01	2.409E+01	3.586E+00	0.471
		444.90		-2.047E-01	1.160E+01	1.923E+01	2.229E+00	-0.011
		473.00		1.603E-01	1.751E+00	2.908E+00	3.505E-01	0.055
		543.00		-2.229E+00	1.907E+01	3.087E+01	4.293E+00	-0.072
		603.60		-1.382E+01	1.687E+01	2.168E+01	2.641E+00	-0.638
		685.20	*	-5.977E-01	1.545E+00	2.518E+00	2.897E-01	-0.237

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		698.50		-1.113E+01	1.765E+01	2.818E+01	4.511E+00	-0.395
		722.20		3.304E+00	3.673E+01	5.315E+01	6.203E+00	0.062
		783.80		6.720E+00	4.091E+00	7.330E+00	9.906E-01	0.917
XE-127		57.60		-2.893E+00	6.823E+00	1.123E+01	8.655E-01	-0.258
		145.22		2.352E-02	6.504E-01	1.033E+00	5.646E-02	0.023
		172.10		-6.407E-02	1.010E-01	1.658E-01	8.731E-03	-0.386
		202.84	*	-3.024E-03	4.038E-02	6.710E-02	3.622E-03	-0.045
		374.96		8.441E-02	1.607E-01	2.774E-01	1.600E-02	0.304
I-131		80.18		3.807E-01	5.524E+00	8.164E+00	7.129E-01	0.047
		284.30		1.479E-04	1.502E+00	2.442E+00	1.560E-01	0.000
		364.48	*	-1.294E-01	1.037E-01	1.621E-01	1.050E-02	-0.798
		636.97		2.937E-01	1.485E+00	2.422E+00	1.944E-01	0.121
		722.89		-3.160E-01	7.279E+00	1.039E+01	8.910E-01	-0.030
TE-132		49.72		-1.079E+01	3.822E+01	6.374E+01	6.870E+00	-0.169
		111.76		-2.822E+01	3.997E+01	6.239E+01	6.181E+00	-0.452
		116.30		2.330E+01	3.827E+01	6.305E+01	6.126E+00	0.370
		228.16	*	-8.884E-01	8.690E-01	1.356E+00	1.988E-01	-0.655
BA-133		53.15		1.206E+00	4.453E+00	7.373E+00	5.850E-01	0.164
		79.62		9.268E-01	1.337E+00	2.024E+00	3.082E-01	0.458
		81.00		-8.727E-02	1.032E-01	1.445E-01	2.302E-02	-0.604
		276.40		1.229E-01	3.545E-01	5.028E-01	6.494E-02	0.244
		302.84		2.011E-01	1.348E-01	2.075E-01	2.414E-02	0.969
		356.01	*	1.148E-02	3.672E-02	5.249E-02	6.063E-03	0.219
		383.85		-2.701E-01	2.341E-01	3.649E-01	3.958E-02	-0.740
I-133	+	510.53		5.970E+00	2.341E-01	Half-Life too short		
		529.87	*	8.951E-04	2.341E-01	Half-Life too short		
		706.58		1.468E+00	2.341E-01	Half-Life too short		
		856.28		6.254E-01	2.341E-01	Half-Life too short		
		875.33		-5.555E-02	2.341E-01	Half-Life too short		
		1236.41		3.750E+00	2.341E-01	Half-Life too short		
		1298.22		-1.596E-01	2.341E-01	Half-Life too short		
CS-134		475.35		4.997E-01	1.467E+00	2.471E+00	1.570E-01	0.202
		563.23		-9.118E-03	2.849E-01	4.623E-01	3.266E-02	-0.020
		569.32		7.243E-02	1.632E-01	2.660E-01	1.901E-02	0.272
		604.70		-1.383E-02	3.299E-02	4.421E-02	3.214E-03	-0.313
	+	795.84	*	1.023E-01	4.520E-02	7.099E-02	6.866E-03	1.441
		801.93		-1.183E-01	3.404E-01	5.038E-01	4.914E-02	-0.235
		1038.57		-8.502E-01	3.099E+00	4.936E+00	4.343E-01	-0.172
		1167.94		3.435E-01	1.898E+00	3.186E+00	1.806E-01	0.108
		1365.15		-1.400E-01	8.889E-01	1.423E+00	1.132E-01	-0.098
CS-135		268.24	*	2.696E-01	1.451E-01	2.301E-01	1.739E-02	1.172
I-135		288.45		-1.739E+11	1.451E-01	Half-Life too short		
		417.63		6.203E+11	1.451E-01	Half-Life too short		
		546.56		-5.624E+11	1.451E-01	Half-Life too short		
		836.80		2.676E+12	1.451E-01	Half-Life too short		
		1038.76		-9.415E+11	1.451E-01	Half-Life too short		
		1124.00		1.350E+13	1.451E-01	Half-Life too short		
		1131.51		-2.545E+11	1.451E-01	Half-Life too short		
		1260.41	*	-1.450E+11	1.451E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Ided	Line Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1457.56		1.110E+14	1.451E-01	Half-Life too short		
		1678.03		-4.622E+11	1.451E-01	Half-Life too short		
		1706.46		-2.031E+12	1.451E-01	Half-Life too short		
		1791.20		-1.553E+12	1.451E-01	Half-Life too short		
CS-136		66.91		4.499E-02	9.566E-01	1.412E+00	2.132E-01	0.032
	+	86.29		5.456E+00	1.409E+00	2.047E+00	2.699E-01	2.665
		153.22		3.263E-01	6.196E-01	1.070E+00	7.370E-02	0.305
		163.89		-2.588E-01	9.978E-01	1.653E+00	1.129E-01	-0.157
		176.55		5.338E-02	3.325E-01	5.629E-01	3.413E-02	0.095
		273.65		-1.828E-01	4.490E-01	6.227E-01	4.058E-02	-0.294
		340.57		6.288E-01	1.498E-01	2.546E-01	1.567E-02	2.470
		818.51		-7.585E-03	6.236E-02	1.017E-01	1.016E-02	-0.075
		1048.07	*	9.867E-02	9.649E-02	1.724E-01	1.545E-02	0.572
		1235.34		4.955E-01	5.992E-01	9.073E-01	9.329E-02	0.546
BA-137M		661.65	*	5.963E-02	3.091E-02	5.665E-02	4.318E-03	1.053
CS-137		661.65	*	6.304E-02	3.267E-02	5.988E-02	4.576E-03	1.053
CE-139		165.85	*	-5.450E-03	2.471E-02	4.140E-02	2.173E-03	-0.132
BA-140		162.64		-4.465E-03	6.947E-01	1.162E+00	7.044E-02	-0.004
		304.84		1.755E-01	1.257E+00	1.794E+00	4.894E-01	0.098
		423.70		1.123E-01	1.714E+00	2.863E+00	9.111E-01	0.039
		537.32	*	2.964E-02	2.290E-01	3.767E-01	1.232E-01	0.079
LA-140	+	328.77		6.151E-01	3.776E-01	5.060E-01	3.279E-02	1.216
		432.53		-6.372E-01	1.801E+00	2.933E+00	1.945E-01	-0.217
		487.03		7.718E-02	1.231E-01	2.101E-01	1.499E-02	0.367
		751.79		-7.680E-01	1.501E+00	2.398E+00	2.356E-01	-0.320
		815.85		3.595E-02	2.660E-01	4.429E-01	4.787E-02	0.081
		867.82		-3.146E-02	1.295E+00	1.891E+00	2.110E-01	-0.017
		919.63		1.669E+00	2.578E+00	3.780E+00	4.775E-01	0.442
		925.24		-4.959E-02	8.726E-01	1.413E+00	1.600E-01	-0.035
		1596.49	*	-2.397E-02	7.174E-02	1.143E-01	7.839E-03	-0.210
CE-141		145.44	*	2.631E-03	5.931E-02	9.420E-02	5.378E-03	0.028
CE-143		57.37		-2.237E-03	5.931E-02	Half-Life too short		
		231.56		1.594E-03	5.931E-02	Half-Life too short		
		293.26	*	1.743E-03	5.931E-02	Half-Life too short		
		350.59		8.297E-02	5.931E-02	Half-Life too short		
		490.36		-2.057E-03	5.931E-02	Half-Life too short		
	+	664.57		7.454E-03	5.931E-02	Half-Life too short		
		721.93		3.544E-04	5.931E-02	Half-Life too short		
CE-144		80.11		2.364E-01	2.160E+00	3.199E+00	2.770E-01	0.074
		133.54	*	1.796E-01	1.971E-01	2.922E-01	4.132E-02	0.615
PM-144		476.78		-8.674E-04	5.346E-02	8.809E-02	6.537E-03	-0.010
		618.01		-5.691E-03	2.642E-02	4.075E-02	3.102E-03	-0.140
		696.49	*	8.648E-03	2.750E-02	4.681E-02	3.800E-03	0.185
		778.57		-1.533E+00	1.798E+00	2.779E+00	2.598E-01	-0.552
PR-144		696.49	*	5.866E-01	1.865E+00	3.175E+00	2.577E-01	0.185
		1489.15		5.053E+00	9.152E+00	1.582E+01	1.143E+00	0.319
PM-146		453.90	*	4.653E-02	3.442E-02	6.098E-02	5.425E-03	0.763
		633.02		2.155E-01	1.127E+00	1.834E+00	6.806E-01	0.118
		735.90		-1.656E-02	1.195E-01	1.922E-01	5.502E-02	-0.086

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		747.13		7.290E-03	7.255E-02	1.213E-01	1.721E-02	0.060
ND-147	+	91.11		8.965E-01	4.175E-01	5.104E-01	4.801E-02	1.756
		319.41		-2.485E-01	3.182E+00	5.105E+00	2.949E-01	-0.049
		439.89		2.560E+00	5.249E+00	8.806E+00	5.374E-01	0.291
		531.02	*	-2.506E-01	5.056E-01	7.971E-01	1.112E-01	-0.314
PM-149		285.90	*	-1.015E+02	1.435E+02	2.237E+02	3.165E+01	-0.454
EU-152		121.78		6.244E-03	6.544E-02	1.055E-01	8.126E-03	0.059
		244.69		1.088E-01	3.146E-01	4.633E-01	2.588E-02	0.235
		344.27	*	-1.586E-02	9.744E-02	1.243E-01	8.114E-03	-0.128
		443.98		-1.357E-01	7.922E-01	1.302E+00	7.979E-02	-0.104
		778.89		-1.218E-01	2.041E-01	3.223E-01	3.014E-02	-0.378
		867.32		1.407E-01	7.283E-01	1.046E+00	1.128E-01	0.134
		964.01		5.541E-01	2.841E-01	4.585E-01	4.697E-02	1.208
		1085.78		-5.854E-02	2.953E-01	4.843E-01	3.753E-02	-0.121
		1112.02		-1.336E-02	2.846E-01	4.178E-01	2.974E-02	-0.032
		1407.95		2.240E-01	1.831E-01	3.264E-01	2.424E-02	0.686
GD-153		69.67		-6.015E-01	1.597E+00	2.612E+00	2.120E-01	-0.230
		83.37		9.000E+00	1.527E+01	2.274E+01	2.020E+00	0.396
		97.43	*	-2.174E-02	8.478E-02	1.215E-01	9.502E-03	-0.179
		103.18		-1.311E-01	9.715E-02	1.479E-01	1.067E-02	-0.887
EU-154		123.07		-4.498E-02	4.865E-02	7.044E-02	6.662E-03	-0.639
		247.94		-9.713E-02	3.237E-01	4.837E-01	4.556E-02	-0.201
		591.81		-5.840E-01	5.646E-01	7.442E-01	7.915E-02	-0.785
		723.30		7.757E-03	1.534E-01	2.211E-01	2.084E-02	0.035
		756.87		2.337E-01	6.245E-01	1.060E+00	1.300E-01	0.220
		873.19		-7.787E-02	2.343E-01	3.728E-01	5.193E-02	-0.209
		996.32		-2.482E-01	2.894E-01	4.266E-01	7.802E-02	-0.582
		1004.76		8.601E-02	1.729E-01	2.900E-01	3.566E-02	0.297
		1274.45	*	-3.459E-03	9.269E-02	1.517E-01	1.515E-02	-0.023
EU-155		48.70		-2.044E-01	3.284E+00	5.534E+00	4.198E-01	-0.037
		60.01		5.405E+00	5.684E+00	8.930E+00	6.815E-01	0.605
	+	86.54		4.543E-01	1.092E-01	1.759E-01	1.620E-02	2.582
		105.31	*	5.195E-02	9.785E-02	1.618E-01	1.157E-02	0.321
TB-160	+	86.79		1.236E+00	2.967E-01	4.860E-01	4.446E-02	2.543
		197.04		2.273E-01	4.748E-01	8.071E-01	4.335E-02	0.282
		215.65		1.992E-01	7.144E-01	1.059E+00	5.779E-02	0.188
		298.57		1.558E-01	1.463E-01	1.672E-01	9.603E-03	0.932
		879.36	*	3.874E-02	1.107E-01	1.861E-01	2.044E-02	0.208
		962.29		4.197E-01	5.284E-01	7.909E-01	8.125E-02	0.531
		966.15		1.072E+00	2.676E-01	4.440E-01	4.531E-02	2.414
		1177.93		1.770E-01	2.676E-01	4.654E-01	2.598E-02	0.380
		1271.85		-4.479E-01	5.733E-01	8.756E-01	5.918E-02	-0.512
HO-166M		80.57		2.118E-02	2.746E-01	4.060E-01	3.527E-02	0.052
		184.41		8.354E-02	3.191E-02	5.264E-02	2.797E-03	1.587
		280.46		-4.139E-02	7.196E-02	1.138E-01	6.490E-03	-0.364
		410.95		1.397E-01	1.985E-01	3.429E-01	2.019E-02	0.407
		711.68	*	-1.653E-02	4.704E-02	7.656E-02	6.382E-03	-0.216
		752.31		-1.228E-01	2.171E-01	3.455E-01	3.089E-02	-0.355
		810.29		-7.618E-03	4.604E-02	7.494E-02	7.379E-03	-0.102

---- Non-Identified Nuclides ----

Nuclide	Ided	Line Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TM-171		51.35		-3.949E+01	3.865E+01	6.219E+01	4.929E+00	-0.635
		52.39		-6.286E+00	2.002E+01	3.237E+01	2.571E+00	-0.194
		59.40		1.157E+01	3.155E+01	4.826E+01	3.664E+00	0.240
		66.72	*	-4.027E+00	3.174E+01	4.646E+01	3.715E+00	-0.087
LU-176	+	88.36		8.939E-01	2.146E-01	3.499E-01	3.213E-02	2.554
		201.83		-7.293E-03	2.404E-02	3.961E-02	2.136E-03	-0.184
		306.84	*	-2.016E-02	2.088E-02	3.057E-02	1.760E-03	-0.659
		401.10		-8.766E-01	5.580E+00	9.027E+00	5.247E-01	-0.097
LU-177		112.95		-3.795E-01	1.750E+00	2.797E+00	1.802E-01	-0.136
	+	208.36	*	3.704E+00	1.741E+00	1.988E+00	1.079E-01	1.863
LU-177M		52.97		5.161E-01	2.029E+00	3.356E+00	2.664E-01	0.154
		54.07		4.677E-01	1.051E+00	1.751E+00	1.384E-01	0.267
		61.30		-5.885E-01	1.762E+00	2.596E+00	2.006E-01	-0.227
		121.62		6.246E-02	3.397E-01	5.494E-01	3.259E-02	0.114
		147.16		2.243E-01	5.824E-01	9.378E-01	5.103E-02	0.239
		171.86		-3.749E-02	3.893E-01	6.537E-01	3.441E-02	-0.057
		218.09		1.913E-01	7.026E-01	1.178E+00	6.445E-02	0.162
		268.79		1.813E+00	7.570E-01	1.231E+00	6.981E-02	1.473
		319.02		-5.267E-02	2.199E-01	3.496E-01	2.018E-02	-0.151
		367.43		8.075E-02	7.031E-01	1.191E+00	6.880E-02	0.068
		413.65	*	-1.057E-01	1.454E-01	2.331E-01	1.377E-02	-0.453
HF-181		56.28		-7.825E-01	1.096E+00	1.783E+00	1.389E-01	-0.439
		57.53		-3.816E-01	5.768E-01	9.395E-01	7.244E-02	-0.406
	+	65.20		9.347E-01	1.715E+00	1.709E+00	1.356E-01	0.547
		133.02		2.637E-02	6.621E-02	9.609E-02	5.436E-03	0.274
		136.25		-4.377E-01	4.158E-01	6.295E-01	3.525E-02	-0.695
		345.85		-2.162E-02	1.824E-01	2.520E-01	1.458E-02	-0.086
		482.03	*	-1.109E-02	3.674E-02	5.946E-02	3.806E-03	-0.186
W-181		56.28		-2.997E-01	4.203E-01	6.835E-01	5.325E-02	-0.439
		57.53		-1.465E-01	2.213E-01	3.604E-01	2.779E-02	-0.407
	+	65.20	*	3.557E-01	6.527E-01	6.505E-01	5.159E-02	0.547
TA-182		67.75		3.093E-02	1.223E-01	1.821E-01	1.464E-02	0.170
		100.10		1.284E-01	1.790E-01	2.854E-01	2.146E-02	0.450
		152.43		-1.605E-01	3.105E-01	4.794E-01	2.579E-02	-0.335
		222.10		-4.841E-02	2.941E-01	4.838E-01	2.655E-02	-0.100
		1001.68		1.341E+00	1.661E+00	2.834E+00	2.705E-01	0.473
	+	1121.28		3.907E-01	2.077E-01	2.819E-01	1.942E-02	1.386
		1189.05		-7.184E-02	2.314E-01	3.731E-01	2.134E-02	-0.193
		1221.42	*	1.185E-01	1.624E-01	2.806E-01	1.717E-02	0.422
		1230.97		-9.119E-02	4.212E-01	6.009E-01	3.748E-02	-0.152
RE-183		57.98		-2.249E-02	2.187E-01	3.648E-01	2.803E-02	-0.062
		59.32		3.904E-02	1.319E-01	2.011E-01	1.528E-02	0.194
		67.20		3.013E-02	2.251E-01	3.337E-01	2.674E-02	0.090
		162.32	*	1.969E-02	9.233E-02	1.557E-01	8.217E-03	0.126
	+	208.81		2.771E+00	1.303E+00	1.504E+00	8.160E-02	1.842
		291.72		-3.219E-01	8.998E-01	1.244E+00	7.130E-02	-0.259
RE-184		57.98		-8.194E-02	7.966E-01	1.329E+00	1.021E-01	-0.062
		59.32		1.421E-01	4.800E-01	7.319E-01	5.561E-02	0.194
		67.20		1.097E-01	8.199E-01	1.215E+00	9.740E-02	0.090

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		161.27		1.185E-01	2.924E-01	5.021E-01	2.656E-02	0.236
		216.55		-1.373E-02	2.320E-01	3.711E-01	2.027E-02	-0.037
		252.85	*	8.568E-02	1.875E-01	3.142E-01	1.765E-02	0.273
		318.01		5.344E-02	3.757E-01	6.101E-01	3.522E-02	0.088
		792.07		5.786E-01	8.973E-01	1.354E+00	1.294E-01	0.427
		903.28		4.378E-01	8.979E-01	1.324E+00	1.487E-01	0.331
		920.93		1.579E-02	3.460E-01	5.238E-01	5.740E-02	0.030
OS-185		59.72		2.665E-01	3.474E-01	5.414E-01	4.118E-02	0.492
		61.14		-6.001E-02	1.959E-01	2.891E-01	2.231E-02	-0.208
		69.30		-1.671E-01	2.900E-01	4.708E-01	3.814E-02	-0.355
		592.07		-2.255E+00	2.206E+00	3.063E+00	2.193E-01	-0.736
		646.12	*	1.719E-02	3.159E-02	5.290E-02	3.978E-03	0.325
		717.42		1.370E-01	6.827E-01	1.153E+00	9.707E-02	0.119
		874.81		-1.722E-02	4.654E-01	7.596E-01	8.286E-02	-0.023
		880.27		4.938E-02	6.132E-01	1.010E+00	1.111E-01	0.049
RE-188		155.03	*	2.521E-01	1.505E-01	2.686E-01	1.438E-02	0.939
		477.96		-9.599E-02	2.518E+00	4.143E+00	2.640E-01	-0.023
		633.10		7.965E-01	2.293E+00	3.781E+00	2.811E-01	0.211
W-188	+	63.58		4.800E+01	8.808E+01	9.866E+01	7.752E+00	0.487
		227.08		-2.703E+00	1.074E+01	1.756E+01	9.680E-01	-0.154
		290.67	*	-2.696E+00	6.938E+00	9.567E+00	5.480E-01	-0.282
IR-192	+	295.96		1.047E+00	1.748E-01	2.570E-01	1.499E-02	4.073
		308.46		-5.872E-03	7.721E-02	1.242E-01	7.236E-03	-0.047
		316.51	*	1.047E-02	2.891E-02	4.751E-02	2.755E-03	0.220
		468.07		-1.171E-01	5.577E-02	7.923E-02	5.646E-03	-1.479
		604.41		-2.721E-01	4.615E-01	6.075E-01	7.381E-02	-0.448
		612.46		4.033E+00	8.860E-01	1.502E+00	1.317E-01	2.686
AU-195	+	65.12		1.637E-01	3.004E-01	3.019E-01	2.394E-02	0.542
		66.83		3.463E-03	1.045E-01	1.541E-01	1.233E-02	0.022
	+	75.70		1.150E+00	2.485E-01	4.202E-01	3.529E-02	2.738
		98.88	*	4.737E-01	2.333E-01	3.700E-01	2.831E-02	1.280
	+	129.76		4.268E+00	3.969E+00	4.497E+00	2.573E-01	0.949
TL-200		367.94	*	1.153E-04	3.969E+00	Half-Life too short		
		579.30		2.534E-04	3.969E+00	Half-Life too short		
		828.27		2.723E-03	3.969E+00	Half-Life too short		
		1205.75		1.547E-03	3.969E+00	Half-Life too short		
TL-201		68.90		-3.796E+00	7.636E+00	1.184E+01	9.572E-01	-0.321
		70.82		-7.105E-02	4.484E+00	6.655E+00	5.434E-01	-0.011
		80.30		4.069E-01	7.956E+00	1.175E+01	1.019E+00	0.035
		135.34		-2.169E+01	3.450E+01	5.338E+01	2.997E+00	-0.406
		167.43	*	1.411E+00	8.968E+00	1.523E+01	7.995E-01	0.093
TL-202		68.90		-2.438E-01	4.905E-01	7.605E-01	6.148E-02	-0.321
		70.82		-4.551E-03	2.872E-01	4.263E-01	3.481E-02	-0.011
		80.30		2.607E-02	5.098E-01	7.527E-01	6.527E-02	0.035
		439.56	*	8.390E-03	6.333E-02	1.042E-01	6.356E-03	0.080
HG-203		70.83		-1.095E-02	1.146E+00	1.702E+00	2.268E-01	-0.006
		72.87		3.998E-01	6.531E-01	9.928E-01	1.287E-01	0.403
		82.60		-1.112E+00	1.126E+00	1.678E+00	2.328E-01	-0.663
		279.20	*	-4.479E-03	3.513E-02	5.685E-02	3.448E-03	-0.079

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-207		72.80		9.380E-02	1.853E-01	2.809E-01	2.319E-02	0.334
	+	74.97		6.334E-01	1.368E-01	2.181E-01	1.824E-02	2.904
		84.90		2.053E-01	1.933E-01	2.928E-01	2.635E-02	0.701
		569.67		-2.170E-03	2.588E-02	4.081E-02	2.860E-03	-0.053
		1063.62	*	2.318E-02	4.273E-02	7.405E-02	6.113E-03	0.313
		1770.23		1.099E-01	3.820E-01	5.688E-01	3.441E-02	0.193
TL-207		81.07		-2.013E-01	2.260E-01	3.175E-01	2.769E-02	-0.634
		83.78		8.813E-02	1.295E-01	1.936E-01	1.725E-02	0.455
		94.90		2.781E-01	2.312E-01	3.903E-01	3.177E-02	0.713
		122.32		8.477E-02	1.530E+00	2.460E+00	1.671E-01	0.034
		144.24		9.093E-02	6.289E-01	9.871E-01	6.888E-02	0.092
		154.21		2.334E-01	3.427E-01	5.944E-01	3.955E-02	0.393
	+	269.46		5.519E-01	2.355E-01	2.972E-01	1.765E-02	1.857
		323.87	*	1.711E-01	6.217E-01	8.903E-01	1.470E-01	0.192
	+	338.28		6.003E+00	1.503E+00	2.061E+00	2.169E-01	2.912
		445.03		1.848E-01	1.880E+00	3.135E+00	3.280E-01	0.059
PO-209		260.50		-9.478E-01	8.117E+00	1.302E+01	7.351E-01	-0.073
		262.80		-6.148E+00	2.214E+01	3.519E+01	1.989E+00	-0.175
		896.60	*	7.981E-01	5.759E+00	9.509E+00	1.073E+00	0.084
BI-210		46.50	*	1.454E+00	4.941E+00	8.459E+00	6.545E-01	0.172
PB-210		46.50	*	1.454E+00	4.941E+00	8.459E+00	6.545E-01	0.172
PO-210		46.50	*	1.454E+00	4.941E+00	8.459E+00	5.627E-01	0.172
PB-211		404.84	*	-2.219E-01	7.767E-01	1.259E+00	7.847E-01	-0.176
		427.08		1.519E+00	1.887E+00	2.861E+00	1.769E+00	0.531
		831.96		-5.169E-01	1.068E+00	1.614E+00	1.015E+00	-0.320
BI-212	+	727.18	*	9.260E-01	3.787E-01	5.408E-01	5.386E-02	1.712
		785.46		4.377E-01	1.470E+00	2.367E+00	2.238E-01	0.185
		1620.62		5.747E-01	1.132E+00	1.974E+00	1.335E-01	0.291
PO-215		81.07		-2.013E-01	2.260E-01	3.175E-01	2.769E-02	-0.634
		83.78		8.813E-02	1.295E-01	1.936E-01	1.725E-02	0.455
		94.90		2.781E-01	2.312E-01	3.903E-01	3.177E-02	0.713
		122.32		8.477E-02	1.530E+00	2.460E+00	1.671E-01	0.034
		144.24		9.093E-02	6.289E-01	9.871E-01	6.888E-02	0.092
		154.21		2.334E-01	3.427E-01	5.944E-01	3.955E-02	0.393
	+	269.46		5.519E-01	2.355E-01	2.972E-01	1.765E-02	1.857
		323.87	*	1.711E-01	6.217E-01	8.903E-01	1.470E-01	0.192
	+	338.28		6.003E+00	1.503E+00	2.061E+00	2.169E-01	2.912
		445.03		1.848E-01	1.880E+00	3.135E+00	3.280E-01	0.059
RN-219	+	271.23		7.081E-01	3.045E-01	3.843E-01	3.081E-02	1.843
		401.81	*	-7.829E-02	3.454E-01	5.565E-01	7.576E-02	-0.141
RN-220		549.76	*	8.743E+00	2.012E+01	3.374E+01	2.318E+00	0.259
RA-223		81.07		-2.013E-01	2.260E-01	3.175E-01	2.769E-02	-0.634
		83.78		8.813E-02	1.295E-01	1.936E-01	1.725E-02	0.455
		94.90		2.781E-01	2.312E-01	3.903E-01	3.177E-02	0.713
		122.32		8.477E-02	1.530E+00	2.460E+00	1.671E-01	0.034
		144.24		9.093E-02	6.289E-01	9.871E-01	6.888E-02	0.092
		154.21		2.334E-01	3.427E-01	5.944E-01	3.955E-02	0.393
	+	269.46		5.519E-01	2.355E-01	2.972E-01	1.765E-02	1.857
		323.87	*	1.711E-01	6.217E-01	8.903E-01	1.470E-01	0.192

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	338.28		6.003E+00	1.503E+00	2.061E+00	2.169E-01	2.912
		445.03		1.848E-01	1.880E+00	3.135E+00	3.280E-01	0.059
AC-227		79.80		4.827E-01	1.681E+00	2.506E+00	5.391E-01	0.193
		236.00		2.612E-01	2.186E-01	3.344E-01	3.450E-02	0.781
		256.20	*	-2.014E-01	3.199E-01	5.067E-01	7.038E-02	-0.397
		286.10		-8.934E-01	1.297E+00	2.027E+00	2.335E-01	-0.441
	+	299.80		2.644E+00	1.580E+00	2.160E+00	3.514E-01	1.224
		304.40		1.894E-01	1.667E+00	2.376E+00	4.107E-01	0.080
		334.20		-5.716E-01	2.650E+00	3.036E+00	5.564E-01	-0.188
TH-227		79.80		4.827E-01	1.681E+00	2.506E+00	5.460E-01	0.193
	+	94.00		9.456E+00	3.302E+00	3.675E+00	7.953E-01	2.573
		236.00		2.612E-01	2.182E-01	3.344E-01	2.976E-02	0.781
		256.20	*	-2.014E-01	3.205E-01	5.067E-01	8.534E-02	-0.397
		286.10		-8.934E-01	1.572E+00	2.027E+00	2.030E+00	-0.441
	+	299.80		2.644E+00	1.580E+00	2.160E+00	3.514E-01	1.224
		304.40		1.894E-01	1.667E+00	2.376E+00	4.107E-01	0.080
		334.20		-5.716E-01	2.650E+00	3.036E+00	5.564E-01	-0.188
TH-229		85.43		2.439E-01	1.913E-01	2.917E-01	2.637E-02	0.836
	+	88.47		5.146E-01	1.236E-01	2.015E-01	1.846E-02	2.554
		100.00		1.351E-01	1.838E-01	2.933E-01	2.208E-02	0.461
		193.63	*	-1.020E-01	4.131E-01	6.839E-01	3.662E-02	-0.149
	+	210.97		2.128E+00	1.000E+00	1.177E+00	6.396E-02	1.809
PA-231		283.67	*	1.039E+00	1.290E+00	2.168E+00	2.979E-01	0.479
	+	301.29		1.057E+00	6.182E-01	8.751E-01	9.122E-02	1.208
TH-231		81.07		-2.013E-01	2.260E-01	3.175E-01	2.769E-02	-0.634
		83.78		8.813E-02	1.295E-01	1.936E-01	1.725E-02	0.455
		94.90		2.781E-01	2.312E-01	3.903E-01	3.177E-02	0.713
		122.32		8.477E-02	1.530E+00	2.460E+00	1.671E-01	0.034
		144.24		9.093E-02	6.289E-01	9.871E-01	6.888E-02	0.092
		154.21		2.334E-01	3.427E-01	5.944E-01	3.955E-02	0.393
	+	269.46		5.519E-01	2.355E-01	2.972E-01	1.765E-02	1.857
		323.87	*	1.711E-01	6.217E-01	8.903E-01	1.470E-01	0.192
	+	338.28		6.003E+00	1.503E+00	2.061E+00	2.169E-01	2.912
		445.03		1.848E-01	1.880E+00	3.135E+00	3.280E-01	0.059
U-231		84.21		9.048E+00	7.643E+00	1.164E+01	1.041E+00	0.778
	+	92.29		1.292E+01	3.699E+00	5.186E+00	4.415E-01	2.491
		95.87	*	-8.140E-01	1.558E+00	2.205E+00	1.766E-01	-0.369
		108.00		-5.667E-01	2.623E+00	4.204E+00	2.859E-01	-0.135
PA-233	+	75.28		1.848E+01	4.632E+00	6.419E+00	9.764E-01	2.880
	+	86.59		7.378E+00	2.579E+00	2.874E+00	7.758E-01	2.567
	+	300.12		7.370E-01	4.354E-01	6.070E-01	8.142E-02	1.214
		311.98	*	1.251E-02	5.144E-02	8.413E-02	5.154E-03	0.149
		340.50		2.985E+00	9.388E-01	1.140E+00	2.619E-01	2.617
		398.62		-8.908E-01	1.688E+00	2.720E+00	7.032E-01	-0.328
		415.76		-1.458E-01	1.327E+00	2.199E+00	4.535E-01	-0.066
PA-234	+	63.00		1.365E+00	2.511E+00	2.868E+00	4.323E-01	0.476
		94.67		3.430E-01	1.742E-01	2.938E-01	3.553E-02	1.168
		98.44		1.125E-01	1.137E-01	1.463E-01	8.140E-02	0.769
		99.86		3.536E-01	4.660E-01	7.442E-01	5.614E-02	0.475

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		111.00		-3.030E-02	1.633E-01	2.615E-01	2.805E-02	-0.116
		131.20		4.693E-02	1.053E-01	1.533E-01	8.726E-03	0.306
		152.70		7.260E-02	2.901E-01	4.630E-01	7.250E-02	0.157
	+	186.00		4.676E+00	2.223E+00	2.234E+00	6.805E-01	2.093
		226.40		8.762E-02	3.356E-01	5.609E-01	6.403E-02	0.156
		227.20		-1.711E-01	3.561E-01	5.765E-01	3.178E-02	-0.297
		248.90		-6.459E-01	6.969E-01	1.072E+00	2.297E-01	-0.603
		293.70		5.516E+00	1.169E+00	1.449E+00	2.328E-01	3.806
		369.80		3.577E-01	6.785E-01	1.166E+00	2.427E-01	0.307
		568.70		5.367E-01	7.998E-01	1.354E+00	9.481E-02	0.396
		569.50		-1.459E-02	2.299E-01	3.630E-01	2.543E-02	-0.040
		574.00		-2.708E-01	1.208E+00	1.931E+00	1.359E-01	-0.140
		699.00		-4.864E-01	5.910E-01	9.249E-01	1.746E-01	-0.526
		706.10		8.208E-01	9.182E-01	1.488E+00	6.623E-01	0.552
		733.00		3.450E-02	3.264E-01	4.723E-01	1.049E-01	0.073
		742.81		2.586E-01	1.113E+00	1.854E+00	1.247E+00	0.139
	+	796.30		1.985E+00	1.014E+00	1.373E+00	3.761E-01	1.445
		805.60		1.298E-01	8.790E-01	1.369E+00	4.244E-01	0.095
		819.60		-4.433E-01	9.648E-01	1.507E+00	5.779E-01	-0.294
		826.30		1.459E-01	6.639E-01	1.105E+00	4.976E-01	0.132
		831.60		-5.089E-01	5.541E-01	8.167E-01	2.477E-01	-0.623
		876.40		1.931E-01	6.853E-01	1.098E+00	1.131E+00	0.176
		880.51		3.874E-02	2.160E-01	3.584E-01	3.944E-02	0.108
		883.24		-5.229E-02	2.223E-01	3.518E-01	2.378E-01	-0.149
		899.00		-2.797E-01	7.045E-01	1.061E+00	4.703E-01	-0.264
		925.00		-2.154E-01	8.347E-01	1.326E+00	1.445E-01	-0.162
		926.50		-1.074E-01	1.316E-01	1.934E-01	5.053E-02	-0.555
		946.00	*	5.444E-02	2.318E-01	3.836E-01	7.567E-02	0.142
		949.00		1.526E-01	3.383E-01	5.697E-01	5.983E-02	0.268
		980.50		-4.921E-03	5.792E-01	9.373E-01	9.323E-02	-0.005
		1394.10		-2.843E-01	9.813E-01	1.518E+00	9.861E-01	-0.187
PA-234M		766.42		1.401E+01	1.178E+01	1.690E+01	8.588E+00	0.829
		1001.03	*	1.644E+00	3.730E+00	6.205E+00	6.694E-01	0.265
U-235	+	89.95		3.153E+00	1.737E+00	1.759E+00	5.442E-01	1.792
	+	93.35		2.942E+00	1.151E+00	1.187E+00	3.317E-01	2.479
		105.00		4.375E-01	9.583E-01	1.568E+00	4.613E-01	0.279
		143.76	*	1.420E-01	1.906E-01	3.045E-01	4.932E-02	0.466
		163.35		-2.525E-02	3.941E-01	6.576E-01	1.172E-01	-0.038
	+	185.71		1.732E-01	6.387E-02	8.259E-02	4.393E-03	2.097
		205.31		-4.664E-02	4.781E-01	6.966E-01	1.244E-01	-0.067
NP-236		94.67		2.627E-01	1.302E-01	2.231E-01	1.823E-02	1.178
		98.44		8.497E-02	7.205E-02	1.106E-01	8.514E-03	0.769
		111.00		-2.292E-02	1.235E-01	1.978E-01	1.301E-02	-0.116
		160.31	*	-9.134E-02	6.583E-02	1.053E-01	5.581E-03	-0.867
NP-239		99.55		1.777E-01	1.644E-01	2.510E-01	1.902E-02	0.708
		117.00	*	1.611E-01	1.761E-01	2.934E-01	1.816E-02	0.549
	+	209.75		2.144E+00	1.008E+00	1.214E+00	6.595E-02	1.765
		228.18		-1.938E-01	1.851E-01	2.913E-01	1.607E-02	-0.665
		277.60		9.971E-02	1.462E-01	2.457E-01	1.399E-02	0.406

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		334.30		-3.293E-01	1.500E+00	1.719E+00	9.944E-02	-0.192
AM-241		59.54	*	8.976E-02	1.833E-01	2.820E-01	2.339E-02	0.318
CM-243		99.55		1.829E-01	1.692E-01	2.583E-01	1.957E-02	0.708
		103.76	*	-6.444E-02	8.811E-02	1.383E-01	9.900E-03	-0.466
		117.00		1.657E-01	1.812E-01	3.019E-01	1.869E-02	0.549
	+	209.75		2.113E+00	9.936E-01	1.197E+00	6.502E-02	1.765
		228.18		-1.958E-01	1.870E-01	2.944E-01	1.624E-02	-0.665
		277.60		1.005E-01	1.474E-01	2.477E-01	1.411E-02	0.406
AM-246		798.80		-2.043E-02	1.239E-01	1.726E-01	1.667E-02	-0.118
		1036.00		-1.474E-02	2.254E-01	3.754E-01	3.323E-02	-0.039
		1062.04		8.624E-02	1.844E-01	3.182E-01	2.638E-02	0.271
		1078.86	*	-9.416E-03	1.076E-01	1.782E-01	1.409E-02	-0.053
CM-247		278.00		1.179E-01	6.150E-01	1.011E+00	5.758E-02	0.117
		287.40		3.154E-01	9.985E-01	1.648E+00	9.428E-02	0.191
		402.60	*	2.451E-03	3.099E-02	5.076E-02	2.956E-03	0.048
CF-249		252.85		3.189E-01	6.978E-01	1.169E+00	6.569E-02	0.273
		333.44		1.721E-01	2.079E-01	2.318E-01	1.341E-02	0.743
		387.95	*	1.738E-02	3.196E-02	5.505E-02	3.164E-03	0.316
CF-251		176.60	*	1.726E-02	1.034E-01	1.751E-01	9.246E-03	0.099
		227.00		-5.705E-02	3.169E-01	5.201E-01	2.866E-02	-0.110
		285.00		-1.103E+00	1.498E+00	2.344E+00	1.339E-01	-0.471

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492007		
Acquisition date	: 4-JAN-2010 14:02:31	Detector SN#	:
Detector ID	: GAM18	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.60	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492007	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.2445E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 23-APR-2009 11:59:23	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.468E+01	2.242E+00	4.572E-01	0.000E+00
CD-109	3.846E+00	9.049E-01	1.247E+00	0.000E+00
SN-126	3.769E-01	8.868E-02	1.230E-01	0.000E+00
TL-208	5.096E-01	7.514E-02	4.360E-02	0.000E+00
BI-211	4.292E+00	4.616E-01	2.418E-01	0.000E+00
PB-212	1.595E+00	1.472E-01	7.828E-02	0.000E+00
PO-212	1.595E+00	1.472E-01	7.828E-02	0.000E+00
BI-214	1.175E+00	1.602E-01	9.157E-02	0.000E+00
PB-214	1.493E+00	1.778E-01	8.426E-02	0.000E+00
PO-214	1.493E+00	1.778E-01	8.426E-02	0.000E+00
PO-216	1.595E+00	1.472E-01	7.828E-02	0.000E+00
PO-218	1.493E+00	1.778E-01	8.426E-02	0.000E+00
RA-224	3.786E+00	9.683E-01	8.897E-01	0.000E+00
RA-226	1.175E+00	1.602E-01	9.157E-02	0.000E+00
AC-228	1.539E+00	3.092E-01	1.707E-01	0.000E+00
RA-228	1.539E+00	3.092E-01	1.707E-01	0.000E+00
TH-228	1.623E+00	1.498E-01	7.963E-02	0.000E+00
TH-230	1.175E+00	1.602E-01	9.157E-02	0.000E+00
TH-232	1.539E+00	3.092E-01	1.707E-01	0.000E+00
TH-234	1.171E+00	2.114E+00	2.302E+00	0.000E+00
U-234	1.175E+00	1.602E-01	9.157E-02	0.000E+00
NP-237	1.107E+00	3.434E-01	3.873E-01	0.000E+00
U-238	1.171E+00	2.114E+00	2.302E+00	0.000E+00
AM-243	3.528E-01	7.470E-02	9.032E-02	0.000E+00
ANH-511	1.216E-01	5.627E-02	3.781E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	
BE-7	-8.022E-02		2.614E-01	4.383E-01	0.000E+00 NOT IDENT.
NA-22	-2.990E-03		3.266E-02	5.433E-02	0.000E+00 NOT IDENT.

NA-24	0.000E+00	4.828E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	5.996E-03	2.052E-02	3.587E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.070E-02	8.308E-02	0.000E+00	FAIL ABUN
SC-46	-1.717E-02	2.924E-02	4.652E-02	0.000E+00	FAIL ABUN
V-48	-4.319E-02	6.328E-02	9.897E-02	0.000E+00	NOT IDENT.
CR-51	-2.668E-02	3.252E-01	5.428E-01	0.000E+00	NOT IDENT.
MN-52	8.527E-02	2.424E-01	4.163E-01	0.000E+00	NOT IDENT.
MN-54	1.729E-02	3.072E-02	5.368E-02	0.000E+00	NOT IDENT.
CO-56	-1.300E-03	2.947E-02	4.953E-02	0.000E+00	FAIL ABUN
CO-57	3.092E-03	2.187E-02	3.723E-02	0.000E+00	NOT IDENT.
CO-58	-1.830E-02	3.066E-02	4.955E-02	0.000E+00	NOT IDENT.
FE-59	-4.102E-02	7.163E-02	1.166E-01	0.000E+00	NOT IDENT.
CO-60	-2.203E-02	2.955E-02	4.543E-02	0.000E+00	NOT IDENT.
ZN-65	-4.635E-02	8.837E-02	1.218E-01	0.000E+00	NOT IDENT.
GE-68	-7.424E-03	9.563E-01	1.632E+00	0.000E+00	NOT IDENT.
AS-73	3.200E-01	1.025E+00	1.812E+00	0.000E+00	NOT IDENT.
AS-74	3.795E-02	8.002E-02	1.376E-01	0.000E+00	NOT IDENT.
SE-75	-1.045E-02	3.739E-02	5.800E-02	0.000E+00	NOT IDENT.
BR-77	-8.442E+00	1.453E+01	2.293E+01	0.000E+00	FAIL ABUN
SR-82	-2.561E-01	3.095E-01	4.943E-01	0.000E+00	NOT IDENT.
RB-83	-3.109E-02	5.501E-02	8.694E-02	0.000E+00	NOT IDENT.
RB-84	1.595E-02	5.508E-02	9.455E-02	0.000E+00	NOT IDENT.
KR-85	0.000E+00	7.190E+00	1.269E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	3.764E-02	6.644E-02	0.000E+00	NOT IDENT.
RB-86	-1.653E-01	6.561E-01	1.099E+00	0.000E+00	NOT IDENT.
Y-88	1.807E-02	2.444E-02	4.526E-02	0.000E+00	NOT IDENT.
ZR-88	-3.398E-03	2.442E-02	4.216E-02	0.000E+00	NOT IDENT.
Y-91	-4.180E+00	1.604E+01	2.659E+01	0.000E+00	NOT IDENT.
NB-94	2.554E-03	2.672E-02	4.620E-02	0.000E+00	NOT IDENT.
NB-95	1.987E-02	3.526E-02	6.202E-02	0.000E+00	NOT IDENT.
NB-95M	2.580E-02	1.137E-01	1.742E-01	0.000E+00	NOT IDENT.
ZR-95	3.626E-02	5.765E-02	1.022E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	5.645E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.148E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.310E-01	1.485E+01	2.537E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	7.866E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.051E-04	2.782E-02	4.762E-02	0.000E+00	NOT IDENT.
RH-102	6.531E-03	2.165E-02	3.767E-02	0.000E+00	NOT IDENT.
RU-103	-7.836E-03	3.150E-02	5.269E-02	0.000E+00	FAIL ABUN
RH-106	8.927E-02	2.559E-01	4.353E-01	0.000E+00	FAIL ABUN
RU-106	8.927E-02	2.558E-01	4.353E-01	0.000E+00	FAIL ABUN
AG-108M	-4.625E-03	2.447E-02	4.170E-02	0.000E+00	NOT IDENT.
AG-110M	1.111E-03	2.919E-02	4.376E-02	0.000E+00	NOT IDENT.
IN-111	3.695E-02	1.553E+00	2.343E+00	0.000E+00	NOT IDENT.
IN-113M	1.611E-03	3.566E-02	6.219E-02	0.000E+00	NOT IDENT.
SN-113	1.611E-03	3.566E-02	6.219E-02	0.000E+00	NOT IDENT.
IN-114M	-3.430E-02	1.683E-01	2.573E-01	0.000E+00	NOT IDENT.
CD-115	1.532E+01	1.566E+01	2.802E+01	0.000E+00	NOT IDENT.
SN-117M	-4.444E-02	5.015E-02	8.637E-02	0.000E+00	NOT IDENT.
SB-122	1.640E+00	2.529E+00	4.428E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	5.716E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.647E-02	2.360E-02	4.023E-02	0.000E+00	NOT IDENT.
I-124	1.275E-01	8.614E-01	1.256E+00	0.000E+00	NOT IDENT.
SB-124	2.094E-02	5.985E-02	1.052E-01	0.000E+00	FAIL ABUN
SB-125	4.825E-02	7.210E-02	1.288E-01	0.000E+00	NOT IDENT.
TE-125M	-1.177E+00	8.489E+00	1.441E+01	0.000E+00	NOT IDENT.
I-126	6.842E-02	1.760E-01	2.716E-01	0.000E+00	NOT IDENT.
SB-126	-1.976E-02	1.329E-01	2.017E-01	0.000E+00	FAIL ABUN
SB-127	-5.977E-01	1.514E+00	2.542E+00	0.000E+00	NOT IDENT.
XE-127	-3.024E-03	3.957E-02	6.888E-02	0.000E+00	NOT IDENT.
I-131	-1.294E-01	1.016E-01	1.651E-01	0.000E+00	NOT IDENT.
TE-132	-8.884E-01	8.516E-01	1.389E+00	0.000E+00	NOT IDENT.
BA-133	1.148E-02	3.599E-02	5.347E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	2.258E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	4.430E-02	7.153E-02	0.000E+00	FAIL ABUN
CS-135	0.000E+00	1.422E-01	2.353E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.354E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.867E-02	9.456E-02	1.730E-01	0.000E+00	FAIL ABUN
BA-137M	0.000E+00	3.029E-02	5.722E-02	0.000E+00	NOT IDENT.
CS-137	0.000E+00	3.202E-02	6.048E-02	0.000E+00	NOT IDENT.
CE-139	-5.450E-03	2.421E-02	4.261E-02	0.000E+00	NOT IDENT.
BA-140	2.964E-02	2.244E-01	3.816E-01	0.000E+00	NOT IDENT.
LA-140	-2.397E-02	7.031E-02	1.140E-01	0.000E+00	FAIL ABUN
CE-141	2.631E-03	5.812E-02	9.712E-02	0.000E+00	NOT IDENT.
CE-143	0.000E+00	5.276E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-144	1.796E-01	1.931E-01	3.016E-01	0.000E+00	NOT IDENT.
PM-144	8.648E-03	2.695E-02	4.724E-02	0.000E+00	NOT IDENT.
PR-144	5.866E-01	1.828E+00	3.205E+00	0.000E+00	NOT IDENT.

PM-146	4.653E-02	3.373E-02	6.191E-02	0.000E+00	NOT IDENT.
ND-147	-2.506E-01	4.955E-01	8.076E-01	0.000E+00	FAIL ABUN
PM-149	-1.015E+02	1.406E+02	2.285E+02	0.000E+00	NOT IDENT.
EU-152	-1.586E-02	9.550E-02	1.267E-01	0.000E+00	NOT IDENT.
GD-153	-2.174E-02	8.308E-02	1.260E-01	0.000E+00	NOT IDENT.
EU-154	-3.459E-03	9.084E-02	1.518E-01	0.000E+00	NOT IDENT.
EU-155	5.195E-02	9.589E-02	1.676E-01	0.000E+00	FAIL ABUN
TB-160	3.874E-02	1.085E-01	1.872E-01	0.000E+00	FAIL ABUN
HO-166M	-1.653E-02	4.610E-02	7.726E-02	0.000E+00	NOT IDENT.
TM-171	-4.027E+00	3.110E+01	4.840E+01	0.000E+00	NOT IDENT.
LU-176	-2.016E-02	2.046E-02	3.121E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	1.706E+00	2.040E+00	0.000E+00	FAIL ABUN
LU-177M	-1.057E-01	1.425E-01	2.370E-01	0.000E+00	NOT IDENT.
HF-181	-1.109E-02	3.600E-02	6.033E-02	0.000E+00	FAIL ABUN
W-181	3.557E-01	6.397E-01	6.778E-01	0.000E+00	FAIL ABUN
TA-182	1.185E-01	1.591E-01	2.810E-01	0.000E+00	FAIL ABUN
RE-183	1.969E-02	9.048E-02	1.603E-01	0.000E+00	FAIL ABUN
RE-184	8.568E-02	1.837E-01	3.216E-01	0.000E+00	NOT IDENT.
OS-185	1.719E-02	3.096E-02	5.345E-02	0.000E+00	NOT IDENT.
RE-188	2.521E-01	1.475E-01	2.768E-01	0.000E+00	NOT IDENT.
W-188	-2.696E+00	6.799E+00	9.773E+00	0.000E+00	FAIL ABUN
IR-192	1.047E-02	2.833E-02	4.848E-02	0.000E+00	FAIL ABUN
AU-195	0.000E+00	2.286E-01	3.834E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.235E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	1.411E+00	8.788E+00	1.567E+01	0.000E+00	NOT IDENT.
TL-202	8.390E-03	6.207E-02	1.059E-01	0.000E+00	NOT IDENT.
HG-203	-4.479E-03	3.443E-02	5.810E-02	0.000E+00	NOT IDENT.
BI-207	2.318E-02	4.188E-02	7.431E-02	0.000E+00	FAIL ABUN
TL-207	1.711E-01	6.092E-01	9.081E-01	0.000E+00	FAIL ABUN
PO-209	7.981E-01	5.644E+00	9.565E+00	0.000E+00	NOT IDENT.
BI-210	1.454E+00	4.842E+00	8.853E+00	0.000E+00	NOT IDENT.
PB-210	1.454E+00	4.842E+00	8.853E+00	0.000E+00	NOT IDENT.
PO-210	1.454E+00	4.842E+00	8.853E+00	0.000E+00	NOT IDENT.
PB-211	-2.219E-01	7.612E-01	1.280E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	3.712E-01	5.456E-01	0.000E+00	FAIL ABUN
PO-215	1.711E-01	6.092E-01	9.081E-01	0.000E+00	FAIL ABUN
RN-219	-7.829E-02	3.385E-01	5.660E-01	0.000E+00	FAIL ABUN
RN-220	8.743E+00	1.971E+01	3.416E+01	0.000E+00	NOT IDENT.
RA-223	1.711E-01	6.092E-01	9.081E-01	0.000E+00	FAIL ABUN
AC-227	-2.014E-01	3.135E-01	5.185E-01	0.000E+00	FAIL ABUN
TH-227	-2.014E-01	3.141E-01	5.185E-01	0.000E+00	FAIL ABUN
TH-229	-1.020E-01	4.048E-01	7.025E-01	0.000E+00	FAIL ABUN
PA-231	1.039E+00	1.264E+00	2.215E+00	0.000E+00	FAIL ABUN
TH-231	1.711E-01	6.092E-01	9.081E-01	0.000E+00	FAIL ABUN
U-231	-8.140E-01	1.527E+00	2.286E+00	0.000E+00	FAIL ABUN
PA-233	1.251E-02	5.041E-02	8.586E-02	0.000E+00	FAIL ABUN
PA-234	5.444E-02	2.271E-01	3.855E-01	0.000E+00	FAIL ABUN
PA-234M	1.644E+00	3.655E+00	6.232E+00	0.000E+00	NOT IDENT.
U-235	1.420E-01	1.868E-01	3.140E-01	0.000E+00	FAIL ABUN
NP-236	-9.134E-02	6.452E-02	1.085E-01	0.000E+00	NOT IDENT.
NP-239	1.611E-01	1.726E-01	3.034E-01	0.000E+00	FAIL ABUN
AM-241	8.976E-02	1.797E-01	2.942E-01	0.000E+00	NOT IDENT.
CM-243	-6.444E-02	8.635E-02	1.432E-01	0.000E+00	FAIL ABUN
AM-246	-9.416E-03	1.054E-01	1.788E-01	0.000E+00	NOT IDENT.
CM-247	2.451E-03	3.037E-02	5.163E-02	0.000E+00	NOT IDENT.
CF-249	1.738E-02	3.132E-02	5.601E-02	0.000E+00	NOT IDENT.
CF-251	1.726E-02	1.013E-01	1.801E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:01:20.46

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492007.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 14:02:31.
Sample ID : G243492007 Sample quantity : 1.24450E+02 GRAM
Detector name : GAM18 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:01.60 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1652	10.67*	1.893E+00	2.468E+01	2.468E+01	9.27
CD-109	88.03	300	3.72*	6.484E+00	3.749E+00	3.846E+00	24.01
SN-126	64.28	48	9.60	3.250E+00	4.636E-01	4.636E-01	183.92
	86.94	300	8.90	6.484E+00	1.567E+00	1.567E+00	47.04
	87.57	300	37.00*	6.484E+00	3.769E-01	3.769E-01	24.01
TL-208	277.35	------	6.80	6.258E+00	------ Line Not Found		------
	510.84	174	21.60	4.308E+00	5.629E-01	5.629E-01	47.95
	583.14	559	84.20*	3.932E+00	5.096E-01	5.096E-01	15.05
	860.37	76	12.46	2.913E+00	6.298E-01	6.298E-01	45.30
BI-211	72.87	------	1.27	4.622E+00	------ Line Not Found		------
	351.07	1003	12.94*	5.449E+00	4.292E+00	4.292E+00	10.97
PB-212	74.81	383	10.70	4.956E+00	2.176E+00	2.176E+00	23.54
	77.11	562	18.00	5.274E+00	1.785E+00	1.785E+00	15.70
	87.30	300	8.00	6.484E+00	1.743E+00	1.743E+00	26.01
	238.63	1601	44.60*	6.789E+00	1.595E+00	1.595E+00	9.42
	300.09	96	3.41	5.977E+00	1.426E+00	1.426E+00	58.11
PO-212	74.81	383	10.70	4.956E+00	2.176E+00	2.176E+00	23.54
	77.11	562	18.00	5.274E+00	1.785E+00	1.785E+00	15.70
	87.30	300	8.00	6.484E+00	1.743E+00	1.743E+00	26.01
	115.19	------	0.60	8.058E+00	------ Line Not Found		------
	238.63	1601	44.60*	6.789E+00	1.595E+00	1.595E+00	9.42
	300.09	96	3.41	5.977E+00	1.426E+00	1.426E+00	58.11
BI-214	609.31	687	46.30*	3.811E+00	1.175E+00	1.175E+00	13.92
	1120.29	95	15.10	2.333E+00	8.166E-01	8.166E-01	53.56
	1764.49	154	15.80	1.694E+00	1.738E+00	1.738E+00	25.25
PB-214	74.81	383	6.21	4.956E+00	3.750E+00	3.750E+00	22.84
	77.11	562	10.50	5.274E+00	3.060E+00	3.060E+00	17.46
	87.30	300	4.67	6.484E+00	2.986E+00	2.986E+00	25.22
	241.98	334	7.49	6.745E+00	1.997E+00	1.997E+00	26.69
	295.21	518	19.20	6.038E+00	1.348E+00	1.348E+00	17.80
	351.92	1003	37.20*	5.449E+00	1.493E+00	1.493E+00	12.15
PO-214	74.81	383	6.21	4.956E+00	3.750E+00	3.750E+00	22.84

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	77.11	562	10.50	5.274E+00	3.060E+00	3.060E+00	17.46
	87.30	300	4.67	6.484E+00	2.986E+00	2.986E+00	25.22
	241.98	334	7.49	6.745E+00	1.997E+00	1.997E+00	26.69
	295.21	518	19.20	6.038E+00	1.348E+00	1.348E+00	17.80
	351.92	1003	37.20*	5.449E+00	1.493E+00	1.493E+00	12.15
PO-216	74.81	383	10.70	4.956E+00	2.176E+00	2.176E+00	23.54
	77.11	562	18.00	5.274E+00	1.785E+00	1.785E+00	15.70
	87.30	300	8.00	6.484E+00	1.743E+00	1.743E+00	26.01
	238.63	1601	44.60*	6.789E+00	1.595E+00	1.595E+00	9.42
	300.09	96	3.41	5.977E+00	1.426E+00	1.426E+00	58.11
PO-218	74.81	383	6.21	4.956E+00	3.750E+00	3.750E+00	22.84
	77.11	562	10.50	5.274E+00	3.060E+00	3.060E+00	17.46
	87.30	300	4.67	6.484E+00	2.986E+00	2.986E+00	25.22
	241.98	334	7.49	6.745E+00	1.997E+00	1.997E+00	26.69
	295.21	518	19.20	6.038E+00	1.348E+00	1.348E+00	17.80
	351.92	1003	37.20*	5.449E+00	1.493E+00	1.493E+00	12.15
RA-224	240.98	334	3.95*	6.745E+00	3.786E+00	3.786E+00	26.10
RA-226	609.31	687	46.30*	3.811E+00	1.175E+00	1.175E+00	13.92
	1120.29	95	15.10	2.333E+00	8.166E-01	8.166E-01	53.56
	1764.49	154	15.80	1.694E+00	1.738E+00	1.738E+00	25.25
AC-228	338.32	303	11.40	5.579E+00	1.437E+00	1.437E+00	46.66
	911.07	393	27.70*	2.779E+00	1.539E+00	1.539E+00	20.50
	969.11	174	16.60	2.638E+00	1.195E+00	1.195E+00	41.11
RA-228	338.32	303	11.40	5.579E+00	1.437E+00	1.437E+00	46.66
	911.07	393	27.70*	2.779E+00	1.539E+00	1.539E+00	20.50
	969.11	174	16.60	2.638E+00	1.195E+00	1.195E+00	41.11
TH-228	74.81	383	10.70	4.956E+00	2.176E+00	2.214E+00	21.63
	77.11	562	18.00	5.274E+00	1.785E+00	1.816E+00	15.70
	87.30	300	8.00	6.484E+00	1.743E+00	1.773E+00	24.01
	238.63	1601	44.60*	6.789E+00	1.595E+00	1.623E+00	9.42
	300.09	96	3.41	5.977E+00	1.426E+00	1.451E+00	82.36
TH-230	609.31	687	46.30*	3.811E+00	1.175E+00	1.175E+00	13.92
	1120.29	95	15.10	2.333E+00	8.166E-01	8.166E-01	53.56
	1764.49	154	15.80	1.694E+00	1.738E+00	1.738E+00	25.25
TH-232	338.32	303	11.40	5.579E+00	1.437E+00	1.437E+00	23.44
	911.07	393	27.70*	2.779E+00	1.539E+00	1.539E+00	20.50
	969.11	174	16.60	2.638E+00	1.195E+00	1.195E+00	41.11
TH-234	63.29	48	3.80*	3.250E+00	1.171E+00	1.171E+00	184.17
	92.38	306	5.41	6.972E+00	2.447E+00	2.447E+00	32.74
U-234	609.31	687	46.30*	3.811E+00	1.175E+00	1.175E+00	13.92
	1120.29	95	15.10	2.333E+00	8.166E-01	8.166E-01	53.56
	1764.49	154	15.80	1.694E+00	1.738E+00	1.738E+00	25.25
NP-237	86.50	300	12.60*	6.484E+00	1.107E+00	1.107E+00	31.66
	95.87	------	2.60	7.180E+00	------ Line Not Found		------
U-238	63.29	48	3.80*	3.250E+00	1.171E+00	1.171E+00	184.17
	92.38	306	5.41	6.972E+00	2.447E+00	2.447E+00	28.63
AM-243	74.67	383	66.00*	4.956E+00	3.528E-01	3.528E-01	21.60
	86.72	300	0.34	6.484E+00	4.150E+01	4.150E+01	24.01
	117.66	------	0.55	8.112E+00	------ Line Not Found		------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
	142.18	------	0.13	8.232E+00	------ Line Not Found		------
ANH-511	511.00	174	100.00*	4.308E+00	1.216E-01	1.216E-01	47.22

Flag: "*" = Keyline

Sample ID : G243492007 Acquisition date : 4-JAN-2010 14:02:31

Total number of lines in spectrum 32
Number of unidentified lines 2
Number of lines tentatively identified by NID 30 93.75%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.468E+01	2.468E+01	0.229E+01	9.27	
CD-109	464.00D	1.03	3.749E+00	3.846E+00	0.923E+00	24.01	
SN-126	1.00E+05Y	1.00	3.769E-01	3.769E-01	0.905E-01	24.01	
TL-208	1.41E+10Y	1.00	5.096E-01	5.096E-01	0.767E-01	15.05	
BI-211	7.04E+08Y	1.00	4.292E+00	4.292E+00	0.471E+00	10.97	
PB-212	1.41E+10Y	1.00	1.595E+00	1.595E+00	0.150E+00	9.42	
PO-212	1.41E+10Y	1.00	1.595E+00	1.595E+00	0.150E+00	9.42	
BI-214	1600.00Y	1.00	1.175E+00	1.175E+00	0.164E+00	13.92	
PB-214	1600.00Y	1.00	1.493E+00	1.493E+00	0.181E+00	12.15	
PO-214	1600.00Y	1.00	1.493E+00	1.493E+00	0.181E+00	12.15	
PO-216	1.41E+10Y	1.00	1.595E+00	1.595E+00	0.150E+00	9.42	
PO-218	1600.00Y	1.00	1.493E+00	1.493E+00	0.181E+00	12.15	
RA-224	1.41E+10Y	1.00	3.786E+00	3.786E+00	0.988E+00	26.10	
RA-226	1600.00Y	1.00	1.175E+00	1.175E+00	0.164E+00	13.92	
AC-228	1.41E+10Y	1.00	1.539E+00	1.539E+00	0.316E+00	20.50	
RA-228	1.41E+10Y	1.00	1.539E+00	1.539E+00	0.316E+00	20.50	
TH-228	1.91Y	1.02	1.595E+00	1.623E+00	0.153E+00	9.42	
TH-230	4.47E+09Y	1.00	1.175E+00	1.175E+00	0.164E+00	13.92	
TH-232	1.41E+10Y	1.00	1.539E+00	1.539E+00	0.316E+00	20.50	
TH-234	4.47E+09Y	1.00	1.171E+00	1.171E+00	2.157E+00	184.17	
U-234	4.47E+09Y	1.00	1.175E+00	1.175E+00	0.164E+00	13.92	
NP-237	2.14E+06Y	1.00	1.107E+00	1.107E+00	0.350E+00	31.66	
U-238	4.47E+09Y	1.00	1.171E+00	1.171E+00	2.157E+00	184.17	
AM-243	7380.00Y	1.00	3.528E-01	3.528E-01	0.762E-01	21.60	
ANH-511	1.00E+09Y	1.00	1.216E-01	1.216E-01	0.574E-01	47.22	
	Total Activity :		6.149E+01	6.161E+01			

Grand Total Activity : 6.149E+01 6.161E+01

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
5	90.12	190	492	1.48	179.35	171	23	2.63E-02	45.6	6.72E+00	T
0	129.28	89	458	1.20	257.64	252	10	1.23E-02	92.8	8.25E+00	T
0	185.97	237	402	1.23	370.99	366	11	3.29E-02	36.5	7.65E+00	T
0	209.83	167	361	1.59	418.69	414	11	2.32E-02	46.7	7.25E+00	T
0	270.63	158	251	1.45	540.23	535	11	2.19E-02	42.2	6.34E+00	T
0	328.32	94	208	2.51	655.58	651	10	1.30E-02	61.0	5.68E+00	T
0	663.77	82	207	5.12	1326.28	1315	22	1.14E-02	92.7	3.58E+00	T
0	727.90	121	111	1.77	1454.52	1448	12	1.68E-02	39.7	3.33E+00	T
0	795.05	80	57	2.40	1588.79	1583	11	1.11E-02	43.1	3.11E+00	T
0	1238.52	34	83	3.10	2475.57	2470	13	4.76E-03	****	2.15E+00	T
0	1728.56	38	12	2.06	3455.58	3447	16	5.32E-03	51.7	1.71E+00	
0	1848.01	18	13	0.88	3694.47	3689	10	2.52E-03	86.9	1.66E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:01:25.46

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243492007.CNF;1		
Acquisition date	: 4-JAN-2010 14:02:31.	Detector SN#	:
Detector ID	: GAM18	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:01.60	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492007	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.24450E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 23-APR-2009 11:59:23.2	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.468E+01	2.288E+00	4.577E-01	3.473E-02	53.915
CD-109	3.846E+00	9.234E-01	1.202E+00	1.111E-01	3.200
SN-126	3.769E-01	9.049E-02	1.185E-01	1.092E-02	3.180
TL-208	5.096E-01	7.668E-02	4.309E-02	3.378E-03	11.826
BI-211	4.292E+00	4.710E-01	2.373E-01	1.523E-02	18.087
PB-212	1.595E+00	1.502E-01	7.643E-02	5.460E-03	20.873
PO-212	1.595E+00	1.502E-01	7.643E-02	5.460E-03	20.873
BI-214	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
PB-214	1.493E+00	1.814E-01	8.270E-02	6.841E-03	18.054
PO-214	1.493E+00	1.814E-01	8.270E-02	6.841E-03	18.054
PO-216	1.595E+00	1.502E-01	7.643E-02	5.460E-03	20.873
PO-218	1.493E+00	1.814E-01	8.270E-02	6.841E-03	18.054
RA-224	3.786E+00	9.881E-01	8.687E-01	4.839E-02	4.358
RA-226	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
AC-228	1.539E+00	3.155E-01	1.697E-01	2.248E-02	9.071
RA-228	1.539E+00	3.155E-01	1.697E-01	2.248E-02	9.071
TH-228	1.623E+00	1.528E-01	7.774E-02	5.554E-03	20.873
TH-230	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-232	1.539E+00	3.155E-01	1.697E-01	2.248E-02	9.071
TH-234	1.171E+00	2.157E+00	2.208E+00	3.893E-01	0.530
U-234	1.175E+00	1.635E-01	9.055E-02	8.089E-03	12.975
NP-237	1.107E+00	3.504E-01	3.730E-01	8.417E-02	2.967
U-238	1.171E+00	2.157E+00	2.208E+00	3.893E-01	0.530
AM-243	3.528E-01	7.623E-02	8.684E-02	7.246E-03	4.063
ANH-511	1.216E-01	5.741E-02	3.730E-02	2.463E-03	3.260

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-8.022E-02		2.668E-01	4.320E-01	3.130E-02	-0.186
NA-22	-2.990E-03		3.332E-02	5.428E-02	3.694E-03	-0.055
NA-24	1.000E+00		2.463E+00	Half-Life too short		
AL-26	5.996E-03		2.094E-02	3.601E-02	2.103E-03	0.167
TI-44	3.294E-01	+	5.173E-02	7.992E-02	6.833E-03	4.122
SC-46	-1.717E-02		2.984E-02	4.624E-02	5.158E-03	-0.371
V-48	-4.319E-02		6.457E-02	9.853E-02	9.745E-03	-0.438
CR-51	-2.668E-02		3.318E-01	5.321E-01	3.426E-02	-0.050
MN-52	8.527E-02		2.474E-01	4.166E-01	3.070E-02	0.205
MN-54	1.729E-02		3.135E-02	5.332E-02	5.462E-03	0.324
CO-56	-1.300E-03		3.007E-02	4.920E-02	5.136E-03	-0.026
CO-57	3.092E-03		2.232E-02	3.603E-02	2.134E-03	0.086
CO-58	-1.830E-02		3.129E-02	4.919E-02	4.856E-03	-0.372
FE-59	-4.102E-02		7.310E-02	1.163E-01	9.569E-03	-0.353
CO-60	-2.203E-02		3.016E-02	4.542E-02	3.432E-03	-0.485
ZN-65	-4.635E-02		9.018E-02	1.215E-01	8.559E-03	-0.381
GE-68	-7.424E-03		9.758E-01	1.627E+00	1.292E-01	-0.005
AS-73	3.200E-01		1.046E+00	1.734E+00	1.375E-01	0.185
AS-74	3.795E-02		8.165E-02	1.360E-01	9.775E-03	0.279
SE-75	-1.045E-02		3.815E-02	5.671E-02	3.243E-03	-0.184
BR-77	-8.442E+00		1.483E+01	2.263E+01	1.509E+00	-0.373
SR-82	-2.561E-01		3.158E-01	4.904E-01	4.567E-02	-0.522
RB-83	-3.109E-02		5.613E-02	8.579E-02	5.721E-03	-0.362
RB-84	1.595E-02		5.620E-02	9.398E-02	1.036E-02	0.170
KR-85	2.438E+01		7.337E+00	1.252E+01	8.296E-01	1.947
SR-85	1.276E-01		3.840E-02	6.555E-02	4.343E-03	1.947
RB-86	-1.653E-01		6.695E-01	1.096E+00	8.722E-02	-0.151
Y-88	1.807E-02		2.494E-02	4.546E-02	2.589E-03	0.398
ZR-88	-3.398E-03		2.491E-02	4.144E-02	2.384E-03	-0.082
Y-91	-4.180E+00		1.637E+01	2.655E+01	1.569E+00	-0.157
NB-94	2.554E-03		2.727E-02	4.578E-02	3.755E-03	0.056
NB-95	1.987E-02		3.598E-02	6.152E-02	5.628E-03	0.323
NB-95M	2.580E-02		1.160E-01	1.701E-01	1.248E-02	0.152
ZR-95	3.626E-02		5.883E-02	1.013E-01	9.970E-03	0.358
NB-97	6.446E-02		2.880E-01	Half-Life too short		
ZR-97	1.554E+01		5.857E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MO-99	-2.310E-01		1.515E+01	2.516E+01	3.838E+00	-0.009
TC-99M	-1.916E+12		4.013E+12	Half-Life too short		
RH-101	4.051E-04		2.839E-02	4.637E-02	2.493E-03	0.009
RH-102	6.531E-03		2.210E-02	3.713E-02	2.358E-03	0.176
RU-103	-7.836E-03		3.214E-02	5.196E-02	6.747E-03	-0.151
RH-106	8.927E-02		2.612E-01	4.305E-01	5.417E-02	0.207
RU-106	8.927E-02		2.610E-01	4.305E-01	3.168E-02	0.207
AG-108M	-4.625E-03		2.497E-02	4.104E-02	2.682E-03	-0.113
AG-110M	1.111E-03		2.979E-02	4.332E-02	3.417E-03	0.026
IN-111	3.695E-02		1.584E+00	2.288E+00	1.279E-01	0.016
IN-113M	1.611E-03		3.639E-02	6.113E-02	3.750E-03	0.026
SN-113	1.611E-03		3.639E-02	6.113E-02	3.750E-03	0.026
IN-114M	-3.430E-02		1.717E-01	2.504E-01	1.337E-02	-0.137
CD-115	1.532E+01		1.598E+01	2.766E+01	1.859E+00	0.554
SN-117M	-4.444E-02		5.117E-02	8.387E-02	4.458E-03	-0.530
SB-122	1.640E+00		2.581E+00	4.374E+00	3.048E-01	0.375
I-123	-6.412E+01		2.916E+01	Half-Life too short		
TE-123M	-2.647E-02		2.408E-02	3.906E-02	2.108E-03	-0.678
I-124	1.275E-01		8.790E-01	1.242E+00	8.978E-02	0.103
SB-124	2.094E-02		6.107E-02	1.055E-01	7.282E-03	0.198
SB-125	4.825E-02		7.357E-02	1.267E-01	7.919E-03	0.381
TE-125M	-1.177E+00		8.662E+00	1.392E+01	1.225E+00	-0.085
I-126	6.842E-02		1.796E-01	2.689E-01	2.067E-02	0.254
SB-126	-1.976E-02		1.356E-01	1.999E-01	1.692E-02	-0.099
SB-127	-5.977E-01		1.545E+00	2.518E+00	2.897E-01	-0.237
XE-127	-3.024E-03		4.038E-02	6.710E-02	3.622E-03	-0.045
I-131	-1.294E-01		1.037E-01	1.621E-01	1.050E-02	-0.798
TE-132	-8.884E-01		8.690E-01	1.356E+00	1.988E-01	-0.655
BA-133	1.148E-02		3.672E-02	5.249E-02	6.063E-03	0.219
I-133	8.951E-04		1.152E-02	Half-Life too short		
CS-134	1.023E-01	+	4.520E-02	7.099E-02	6.866E-03	1.441
CS-135	2.696E-01		1.451E-01	2.301E-01	1.739E-02	1.172
I-135	-1.450E+11		3.242E+11	Half-Life too short		
CS-136	9.867E-02		9.649E-02	1.724E-01	1.545E-02	0.572
BA-137M	5.963E-02		3.091E-02	5.665E-02	4.318E-03	1.053
CS-137	6.304E-02		3.267E-02	5.988E-02	4.576E-03	1.053
CE-139	-5.450E-03		2.471E-02	4.140E-02	2.173E-03	-0.132
BA-140	2.964E-02		2.290E-01	3.767E-01	1.232E-01	0.079
LA-140	-2.397E-02		7.174E-02	1.143E-01	7.839E-03	-0.210
CE-141	2.631E-03		5.931E-02	9.420E-02	5.378E-03	0.028
CE-143	1.743E-03		2.692E-04	Half-Life too short		
CE-144	1.796E-01		1.971E-01	2.922E-01	4.132E-02	0.615
PM-144	8.648E-03		2.750E-02	4.681E-02	3.800E-03	0.185
PR-144	5.866E-01		1.865E+00	3.175E+00	2.577E-01	0.185
PM-146	4.653E-02		3.442E-02	6.098E-02	5.425E-03	0.763
ND-147	-2.506E-01		5.056E-01	7.971E-01	1.112E-01	-0.314
PM-149	-1.015E+02		1.435E+02	2.237E+02	3.165E+01	-0.454
EU-152	-1.586E-02		9.744E-02	1.243E-01	8.114E-03	-0.128

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
GD-153	-2.174E-02		8.478E-02	1.215E-01	9.502E-03	-0.179
EU-154	-3.459E-03		9.269E-02	1.517E-01	1.515E-02	-0.023
EU-155	5.195E-02		9.785E-02	1.618E-01	1.157E-02	0.321
TB-160	3.874E-02		1.107E-01	1.861E-01	2.044E-02	0.208
HO-166M	-1.653E-02		4.704E-02	7.656E-02	6.382E-03	-0.216
TM-171	-4.027E+00		3.174E+01	4.646E+01	3.715E+00	-0.087
LU-176	-2.016E-02		2.088E-02	3.057E-02	1.760E-03	-0.659
LU-177	3.704E+00	+	1.741E+00	1.988E+00	1.079E-01	1.863
LU-177M	-1.057E-01		1.454E-01	2.331E-01	1.377E-02	-0.453
HF-181	-1.109E-02		3.674E-02	5.946E-02	3.806E-03	-0.186
W-181	3.557E-01	+	6.527E-01	6.505E-01	5.159E-02	0.547
TA-182	1.185E-01		1.624E-01	2.806E-01	1.717E-02	0.422
RE-183	1.969E-02		9.233E-02	1.557E-01	8.217E-03	0.126
RE-184	8.568E-02		1.875E-01	3.142E-01	1.765E-02	0.273
OS-185	1.719E-02		3.159E-02	5.290E-02	3.978E-03	0.325
RE-188	2.521E-01		1.505E-01	2.686E-01	1.438E-02	0.939
W-188	-2.696E+00		6.938E+00	9.567E+00	5.480E-01	-0.282
IR-192	1.047E-02		2.891E-02	4.751E-02	2.755E-03	0.220
AU-195	4.737E-01		2.333E-01	3.700E-01	2.831E-02	1.280
TL-200	1.153E-04		6.300E-04	Half-Life too short		
TL-201	1.411E+00		8.968E+00	1.523E+01	7.995E-01	0.093
TL-202	8.390E-03		6.333E-02	1.042E-01	6.356E-03	0.080
HG-203	-4.479E-03		3.513E-02	5.685E-02	3.448E-03	-0.079
BI-207	2.318E-02		4.273E-02	7.405E-02	6.113E-03	0.313
TL-207	1.711E-01		6.217E-01	8.903E-01	1.470E-01	0.192
PO-209	7.981E-01		5.759E+00	9.509E+00	1.073E+00	0.084
BI-210	1.454E+00		4.941E+00	8.459E+00	6.545E-01	0.172
PB-210	1.454E+00		4.941E+00	8.459E+00	6.545E-01	0.172
PO-210	1.454E+00		4.941E+00	8.459E+00	5.627E-01	0.172
PB-211	-2.219E-01		7.767E-01	1.259E+00	7.847E-01	-0.176
BI-212	9.260E-01	+	3.787E-01	5.408E-01	5.386E-02	1.712
PO-215	1.711E-01		6.217E-01	8.903E-01	1.470E-01	0.192
RN-219	-7.829E-02		3.454E-01	5.565E-01	7.576E-02	-0.141
RN-220	8.743E+00		2.012E+01	3.374E+01	2.318E+00	0.259
RA-223	1.711E-01		6.217E-01	8.903E-01	1.470E-01	0.192
AC-227	-2.014E-01		3.199E-01	5.067E-01	7.038E-02	-0.397
TH-227	-2.014E-01		3.205E-01	5.067E-01	8.534E-02	-0.397
TH-229	-1.020E-01		4.131E-01	6.839E-01	3.662E-02	-0.149
PA-231	1.039E+00		1.290E+00	2.168E+00	2.979E-01	0.479
TH-231	1.711E-01		6.217E-01	8.903E-01	1.470E-01	0.192
U-231	-8.140E-01		1.558E+00	2.205E+00	1.766E-01	-0.369
PA-233	1.251E-02		5.144E-02	8.413E-02	5.154E-03	0.149
PA-234	5.444E-02		2.318E-01	3.836E-01	7.567E-02	0.142
PA-234M	1.644E+00		3.730E+00	6.205E+00	6.694E-01	0.265
U-235	1.420E-01		1.906E-01	3.045E-01	4.932E-02	0.466
NP-236	-9.134E-02		6.583E-02	1.053E-01	5.581E-03	-0.867
NP-239	1.611E-01		1.761E-01	2.934E-01	1.816E-02	0.549
AM-241	8.976E-02		1.833E-01	2.820E-01	2.339E-02	0.318

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	-6.444E-02		8.811E-02	1.383E-01	9.900E-03	-0.466
AM-246	-9.416E-03		1.076E-01	1.782E-01	1.409E-02	-0.053
CM-247	2.451E-03		3.099E-02	5.076E-02	2.956E-03	0.048
CF-249	1.738E-02		3.196E-02	5.505E-02	3.164E-03	0.316
CF-251	1.726E-02		1.034E-01	1.751E-01	9.246E-03	0.099

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243492007		
Acquisition date	: 4-JAN-2010 14:02:31	Detector SN#	:
Detector ID	: GAM18	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:01.60	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G243492007	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.2445E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 23-APR-2009 11:59:23	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.468E+01	2.242E+00	2.287E-01	1.144E+00
CD-109	3.846E+00	9.049E-01	6.240E-01	4.617E-01
SN-126	3.769E-01	8.868E-02	6.155E-02	4.525E-02
TL-208	5.096E-01	7.514E-02	2.181E-02	3.834E-02
BI-211	4.292E+00	4.616E-01	1.210E-01	2.355E-01
PB-212	1.595E+00	1.472E-01	3.916E-02	7.512E-02
PO-212	1.595E+00	1.472E-01	3.916E-02	7.512E-02
BI-214	1.175E+00	1.602E-01	4.581E-02	8.175E-02
PB-214	1.493E+00	1.778E-01	4.215E-02	9.071E-02
PO-214	1.493E+00	1.778E-01	4.215E-02	9.071E-02
PO-216	1.595E+00	1.472E-01	3.916E-02	7.512E-02
PO-218	1.493E+00	1.778E-01	4.215E-02	9.071E-02
RA-224	3.786E+00	9.683E-01	4.451E-01	4.940E-01
RA-226	1.175E+00	1.602E-01	4.581E-02	8.175E-02
AC-228	1.539E+00	3.092E-01	8.538E-02	1.578E-01
RA-228	1.539E+00	3.092E-01	8.538E-02	1.578E-01
TH-228	1.623E+00	1.498E-01	3.984E-02	7.641E-02
TH-230	1.175E+00	1.602E-01	4.581E-02	8.175E-02
TH-232	1.539E+00	3.092E-01	8.538E-02	1.578E-01
TH-234	1.171E+00	2.114E+00	1.152E+00	1.078E+00
U-234	1.175E+00	1.602E-01	4.581E-02	8.175E-02
NP-237	1.107E+00	3.434E-01	1.938E-01	1.752E-01
U-238	1.171E+00	2.114E+00	1.152E+00	1.078E+00
AM-243	3.528E-01	7.470E-02	4.519E-02	3.811E-02
ANH-511	1.216E-01	5.627E-02	1.892E-02	2.871E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	-8.022E-02	2.614E-01	2.193E-01	1.334E-01 NOT IDENT.
NA-22	-2.990E-03	3.266E-02	2.718E-02	1.666E-02 NOT IDENT.

NA-24	1.000E+06	4.828E+06	0.000E+00	2.463E+06	SHORT HLIF
AL-26	5.996E-03	2.052E-02	1.794E-02	1.047E-02	NOT IDENT.
TI-44	3.294E-01	5.070E-02	4.156E-02	2.587E-02	FAIL ABUN
SC-46	-1.717E-02	2.924E-02	2.327E-02	1.492E-02	FAIL ABUN
V-48	-4.319E-02	6.328E-02	4.952E-02	3.228E-02	NOT IDENT.
CR-51	-2.668E-02	3.252E-01	2.716E-01	1.659E-01	NOT IDENT.
MN-52	8.527E-02	2.424E-01	2.083E-01	1.237E-01	NOT IDENT.
MN-54	1.729E-02	3.072E-02	2.686E-02	1.567E-02	NOT IDENT.
CO-56	-1.300E-03	2.947E-02	2.478E-02	1.504E-02	FAIL ABUN
CO-57	3.092E-03	2.187E-02	1.863E-02	1.116E-02	NOT IDENT.
CO-58	-1.830E-02	3.066E-02	2.479E-02	1.564E-02	NOT IDENT.
FE-59	-4.102E-02	7.163E-02	5.833E-02	3.655E-02	NOT IDENT.
CO-60	-2.203E-02	2.955E-02	2.273E-02	1.508E-02	NOT IDENT.
ZN-65	-4.635E-02	8.837E-02	6.096E-02	4.509E-02	NOT IDENT.
GE-68	-7.424E-03	9.563E-01	8.166E-01	4.879E-01	NOT IDENT.
AS-73	3.200E-01	1.025E+00	9.065E-01	5.231E-01	NOT IDENT.
AS-74	3.795E-02	8.002E-02	6.885E-02	4.083E-02	NOT IDENT.
SE-75	-1.045E-02	3.739E-02	2.902E-02	1.908E-02	NOT IDENT.
BR-77	-8.442E+00	1.453E+01	1.147E+01	7.413E+00	FAIL ABUN
SR-82	-2.561E-01	3.095E-01	2.473E-01	1.579E-01	NOT IDENT.
RB-83	-3.109E-02	5.501E-02	4.349E-02	2.807E-02	NOT IDENT.
RB-84	1.595E-02	5.508E-02	4.730E-02	2.810E-02	NOT IDENT.
KR-85	2.438E+01	7.190E+00	6.350E+00	3.668E+00	NOT IDENT.
SR-85	1.276E-01	3.764E-02	3.324E-02	1.920E-02	NOT IDENT.
RB-86	-1.653E-01	6.561E-01	5.499E-01	3.348E-01	NOT IDENT.
Y-88	1.807E-02	2.444E-02	2.264E-02	1.247E-02	NOT IDENT.
ZR-88	-3.398E-03	2.442E-02	2.109E-02	1.246E-02	NOT IDENT.
Y-91	-4.180E+00	1.604E+01	1.330E+01	8.183E+00	NOT IDENT.
NB-94	2.554E-03	2.672E-02	2.311E-02	1.364E-02	NOT IDENT.
NB-95	1.987E-02	3.526E-02	3.103E-02	1.799E-02	NOT IDENT.
NB-95M	2.580E-02	1.137E-01	8.717E-02	5.802E-02	NOT IDENT.
ZR-95	3.626E-02	5.765E-02	5.111E-02	2.941E-02	NOT IDENT.
NB-97	6.446E+04	5.645E+05	0.000E+00	2.880E+05	SHORT HLIF
ZR-97	1.554E+07	1.148E+07	0.000E+00	5.857E+06	SHORT HLIF
MO-99	-2.310E-01	1.485E+01	1.269E+01	7.577E+00	NOT IDENT.
TC-99M	-1.916E+18	7.866E+18	0.000E+00	0.000E+00	SHORT HLIF
RH-101	4.051E-04	2.782E-02	2.382E-02	1.419E-02	NOT IDENT.
RH-102	6.531E-03	2.165E-02	1.885E-02	1.105E-02	NOT IDENT.
RU-103	-7.836E-03	3.150E-02	2.636E-02	1.607E-02	FAIL ABUN
RH-106	8.927E-02	2.559E-01	2.178E-01	1.306E-01	FAIL ABUN
RU-106	8.927E-02	2.558E-01	2.178E-01	1.305E-01	FAIL ABUN
AG-108M	-4.625E-03	2.447E-02	2.086E-02	1.248E-02	NOT IDENT.
AG-110M	1.111E-03	2.919E-02	2.190E-02	1.489E-02	NOT IDENT.
IN-111	3.695E-02	1.553E+00	1.172E+00	7.922E-01	NOT IDENT.
IN-113M	1.611E-03	3.566E-02	3.111E-02	1.820E-02	NOT IDENT.
SN-113	1.611E-03	3.566E-02	3.111E-02	1.820E-02	NOT IDENT.
IN-114M	-3.430E-02	1.683E-01	1.287E-01	8.587E-02	NOT IDENT.
CD-115	1.532E+01	1.566E+01	1.402E+01	7.989E+00	NOT IDENT.
SN-117M	-4.444E-02	5.015E-02	4.321E-02	2.559E-02	NOT IDENT.
SB-122	1.640E+00	2.529E+00	2.215E+00	1.290E+00	NOT IDENT.
I-123	-6.412E+07	5.716E+07	0.000E+00	2.916E+07	SHORT HLIF
TE-123M	-2.647E-02	2.360E-02	2.013E-02	1.204E-02	NOT IDENT.
I-124	1.275E-01	8.614E-01	6.282E-01	4.395E-01	NOT IDENT.
SB-124	2.094E-02	5.985E-02	5.264E-02	3.054E-02	FAIL ABUN
SB-125	4.825E-02	7.210E-02	6.443E-02	3.679E-02	NOT IDENT.
TE-125M	-1.177E+00	8.489E+00	7.208E+00	4.331E+00	NOT IDENT.
I-126	6.842E-02	1.760E-01	1.359E-01	8.982E-02	NOT IDENT.
SB-126	-1.976E-02	1.329E-01	1.009E-01	6.782E-02	FAIL ABUN
SB-127	-5.977E-01	1.514E+00	1.272E+00	7.726E-01	NOT IDENT.
XE-127	-3.024E-03	3.957E-02	3.446E-02	2.019E-02	NOT IDENT.
I-131	-1.294E-01	1.016E-01	8.261E-02	5.185E-02	NOT IDENT.
TE-132	-8.884E-01	8.516E-01	6.951E-01	4.345E-01	NOT IDENT.
BA-133	1.148E-02	3.599E-02	2.675E-02	1.836E-02	NOT IDENT.
I-133	8.951E+02	2.258E+04	0.000E+00	1.152E+04	SHORT HLIF
CS-134	1.023E-01	4.430E-02	3.578E-02	2.260E-02	FAIL ABUN
CS-135	2.696E-01	1.422E-01	1.177E-01	7.255E-02	NOT IDENT.
I-135	-1.450E+17	6.354E+17	0.000E+00	0.000E+00	SHORT HLIF
CS-136	9.867E-02	9.456E-02	8.655E-02	4.824E-02	FAIL ABUN
BA-137M	5.963E-02	3.029E-02	2.863E-02	1.545E-02	NOT IDENT.
CS-137	6.304E-02	3.202E-02	3.026E-02	1.634E-02	NOT IDENT.
CE-139	-5.450E-03	2.421E-02	2.132E-02	1.235E-02	NOT IDENT.
BA-140	2.964E-02	2.244E-01	1.909E-01	1.145E-01	NOT IDENT.
LA-140	-2.397E-02	7.031E-02	5.703E-02	3.587E-02	FAIL ABUN
CE-141	2.631E-03	5.812E-02	4.859E-02	2.965E-02	NOT IDENT.
CE-143	1.743E+03	5.276E+02	0.000E+00	2.692E+02	SHORT HLIF
CE-144	1.796E-01	1.931E-01	1.509E-01	9.853E-02	NOT IDENT.
PM-144	8.648E-03	2.695E-02	2.364E-02	1.375E-02	NOT IDENT.
PR-144	5.866E-01	1.828E+00	1.603E+00	9.327E-01	NOT IDENT.

PM-146	4.653E-02	3.373E-02	3.097E-02	1.721E-02 NOT IDENT.
ND-147	-2.506E-01	4.955E-01	4.040E-01	2.528E-01 FAIL ABUN
PM-149	-1.015E+02	1.406E+02	1.143E+02	7.175E+01 NOT IDENT.
EU-152	-1.586E-02	9.550E-02	6.340E-02	4.872E-02 NOT IDENT.
GD-153	-2.174E-02	8.308E-02	6.302E-02	4.239E-02 NOT IDENT.
EU-154	-3.459E-03	9.084E-02	7.596E-02	4.634E-02 NOT IDENT.
EU-155	5.195E-02	9.589E-02	8.383E-02	4.892E-02 FAIL ABUN
TB-160	3.874E-02	1.085E-01	9.365E-02	5.537E-02 FAIL ABUN
HO-166M	-1.653E-02	4.610E-02	3.865E-02	2.352E-02 NOT IDENT.
TM-171	-4.027E+00	3.110E+01	2.421E+01	1.587E+01 NOT IDENT.
LU-176	-2.016E-02	2.046E-02	1.561E-02	1.044E-02 FAIL ABUN
LU-177	3.704E+00	1.706E+00	1.021E+00	8.706E-01 FAIL ABUN
LU-177M	-1.057E-01	1.425E-01	1.186E-01	7.271E-02 NOT IDENT.
HF-181	-1.109E-02	3.600E-02	3.018E-02	1.837E-02 FAIL ABUN
W-181	3.557E-01	6.397E-01	3.391E-01	3.264E-01 FAIL ABUN
TA-182	1.185E-01	1.591E-01	1.406E-01	8.118E-02 FAIL ABUN
RE-183	1.969E-02	9.048E-02	8.019E-02	4.617E-02 FAIL ABUN
RE-184	8.568E-02	1.837E-01	1.609E-01	9.373E-02 NOT IDENT.
OS-185	1.719E-02	3.096E-02	2.674E-02	1.580E-02 NOT IDENT.
RE-188	2.521E-01	1.475E-01	1.385E-01	7.525E-02 NOT IDENT.
W-188	-2.696E+00	6.799E+00	4.890E+00	3.469E+00 FAIL ABUN
IR-192	1.047E-02	2.833E-02	2.425E-02	1.445E-02 FAIL ABUN
AU-195	4.737E-01	2.286E-01	1.918E-01	1.166E-01 FAIL ABUN
TL-200	1.153E+02	1.235E+03	0.000E+00	6.300E+02 SHORT HLIF
TL-201	1.411E+00	8.788E+00	7.841E+00	4.484E+00 NOT IDENT.
TL-202	8.390E-03	6.207E-02	5.298E-02	3.167E-02 NOT IDENT.
HG-203	-4.479E-03	3.443E-02	2.907E-02	1.757E-02 NOT IDENT.
BI-207	2.318E-02	4.188E-02	3.718E-02	2.136E-02 FAIL ABUN
TL-207	1.711E-01	6.092E-01	4.543E-01	3.108E-01 FAIL ABUN
PO-209	7.981E-01	5.644E+00	4.785E+00	2.880E+00 NOT IDENT.
BI-210	1.454E+00	4.842E+00	4.429E+00	2.470E+00 NOT IDENT.
PB-210	1.454E+00	4.842E+00	4.429E+00	2.470E+00 NOT IDENT.
PO-210	1.454E+00	4.842E+00	4.429E+00	2.470E+00 NOT IDENT.
PB-211	-2.219E-01	7.612E-01	6.403E-01	3.884E-01 NOT IDENT.
BI-212	9.260E-01	3.712E-01	2.730E-01	1.894E-01 FAIL ABUN
PO-215	1.711E-01	6.092E-01	4.543E-01	3.108E-01 FAIL ABUN
RN-219	-7.829E-02	3.385E-01	2.832E-01	1.727E-01 FAIL ABUN
RN-220	8.743E+00	1.971E+01	1.709E+01	1.006E+01 NOT IDENT.
RA-223	1.711E-01	6.092E-01	4.543E-01	3.108E-01 FAIL ABUN
AC-227	-2.014E-01	3.135E-01	2.594E-01	1.600E-01 FAIL ABUN
TH-227	-2.014E-01	3.141E-01	2.594E-01	1.602E-01 FAIL ABUN
TH-229	-1.020E-01	4.048E-01	3.515E-01	2.065E-01 FAIL ABUN
PA-231	1.039E+00	1.264E+00	1.108E+00	6.451E-01 FAIL ABUN
TH-231	1.711E-01	6.092E-01	4.543E-01	3.108E-01 FAIL ABUN
U-231	-8.140E-01	1.527E+00	1.143E+00	7.792E-01 FAIL ABUN
PA-233	1.251E-02	5.041E-02	4.295E-02	2.572E-02 FAIL ABUN
PA-234	5.444E-02	2.271E-01	1.929E-01	1.159E-01 FAIL ABUN
PA-234M	1.644E+00	3.655E+00	3.118E+00	1.865E+00 NOT IDENT.
U-235	1.420E-01	1.868E-01	1.571E-01	9.531E-02 FAIL ABUN
NP-236	-9.134E-02	6.452E-02	5.427E-02	3.292E-02 NOT IDENT.
NP-239	1.611E-01	1.726E-01	1.518E-01	8.804E-02 FAIL ABUN
AM-241	8.976E-02	1.797E-01	1.472E-01	9.167E-02 NOT IDENT.
CM-243	-6.444E-02	8.635E-02	7.166E-02	4.406E-02 FAIL ABUN
AM-246	-9.416E-03	1.054E-01	8.943E-02	5.379E-02 NOT IDENT.
CM-247	2.451E-03	3.037E-02	2.583E-02	1.550E-02 NOT IDENT.
CF-249	1.738E-02	3.132E-02	2.802E-02	1.598E-02 NOT IDENT.
CF-251	1.726E-02	1.013E-01	9.008E-02	5.170E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	260.4964
46.50	260.4964
46.50	260.4964
48.70	271.8045
49.72	269.3298
51.35	289.1374
52.39	264.9027
52.97	247.3073
53.15	250.2062
53.44	252.3042
54.07	249.2530
56.28	289.9629
56.28	289.9661
57.37	0.0000
57.53	294.0580
57.53	294.0596
57.60	283.9572
57.98	279.7142
57.98	279.7142
59.32	288.9586
59.32	288.9586
59.40	289.0399
59.54	289.1820
59.72	275.3855
60.01	267.2691
61.10	341.3229
61.14	341.3702
61.30	341.5584
63.00	327.9917
63.29	339.6332
63.29	339.6332
63.58	339.9637
64.28	340.7602
65.12	343.1329
65.20	343.2235
65.20	343.2235
66.05	355.6065
66.72	346.3610
66.83	336.4642
66.91	336.5503
67.20	336.8658
67.20	336.8658
67.75	328.8451
67.85	353.3716
68.90	379.3440
68.90	379.3440
69.30	378.0922
69.67	373.7200
70.82	371.1934
70.82	371.1934
70.83	371.2051
72.80	373.4590
72.87	373.5391
72.87	373.5391
74.67	399.0435
74.81	399.2105
74.81	399.2105
74.81	399.2105
74.81	399.2105
74.81	399.2105
74.81	399.2105
74.81	399.2105
74.97	399.4004
75.28	399.7698
75.70	400.2678
77.11	401.9280
77.11	401.9280

77.11	401.9280
77.11	401.9280
77.11	401.9280
77.11	401.9280
77.11	401.9280
78.38	387.0973
79.62	373.5931
79.80	381.2305
79.80	381.2305
80.11	381.5664
80.18	381.6426
80.30	383.2628
80.30	383.2628
80.57	383.5569
81.00	433.3318
81.07	433.4181
81.07	433.4181
81.07	433.4181
81.07	433.4181
82.60	441.8785
83.37	371.5214
83.78	374.9571
83.78	374.9571
83.78	374.9571
83.78	374.9571
84.21	357.3082
84.90	365.5331
85.43	367.5720
86.29	454.8477
86.50	455.1041
86.54	455.1521
86.59	455.2139
86.72	469.0330
86.79	469.1179
86.94	469.3088
87.30	409.4577
87.30	409.4577
87.30	409.4577
87.30	409.4577
87.30	409.4577
87.30	409.4577
87.30	409.4577
87.57	409.7516
87.88	410.0885
88.03	410.2529
88.36	410.6105
88.47	410.7296
89.95	412.3283
91.11	413.5715
92.29	414.8291
92.38	414.9257
92.38	414.9257
93.35	415.9510
94.00	416.6374
94.67	417.3340
94.67	417.3401
94.90	417.5805
94.90	417.5805
94.90	417.5805
94.90	417.5805
95.87	382.3293
95.87	382.3293
96.73	392.4945
97.43	369.7664
98.44	309.6832
98.44	309.6832
98.88	277.1351
99.55	316.7932
99.55	316.7932
99.86	331.4695
100.00	331.5823
100.10	331.6645
103.18	358.5730
103.76	337.9411
105.00	303.9697
105.31	308.4297
108.00	343.4025
109.28	332.6362

111.00	314.5970
111.00	314.5970
111.76	330.1865
112.95	313.8025
115.19	333.7654
116.30	308.4980
117.00	305.6987
117.00	305.6987
117.66	340.9937
121.11	308.3714
121.62	298.8129
121.78	298.9125
122.06	289.1906
122.32	289.3457
122.32	289.3457
122.32	289.3457
122.32	289.3457
123.07	325.2773
127.23	295.0434
129.76	321.6702
131.20	312.5070
133.02	295.0749
133.54	266.6780
135.34	316.1621
136.00	319.9526
136.25	332.5474
136.48	319.1146
140.51	326.1140
140.51	0.0000
142.18	355.7246
142.65	348.0210
143.76	305.1407
144.24	337.5569
144.24	337.5569
144.24	337.5569
144.24	337.5569
145.22	340.4614
145.44	340.5999
147.16	315.1119
152.43	351.8694
152.70	320.5620
153.22	326.3978
154.21	333.9738
154.21	333.9738
154.21	333.9738
154.21	333.9738
155.03	300.2154
156.02	307.7641
158.56	346.2001
159.00	0.0000
159.00	346.4573
160.31	345.4543
161.27	293.6681
162.32	287.9643
162.64	298.7886
163.35	303.5939
163.89	312.7781
165.85	311.1110
167.43	297.5771
171.28	291.3190
171.86	283.4653
172.10	305.2475
176.55	289.2162
176.60	289.2380
181.06	294.5440
184.41	276.9053
185.71	291.4692
186.00	291.5970
190.27	297.1753
192.34	306.5977
193.63	294.9120
197.04	295.4327
198.01	297.7220
198.60	311.1332
200.40	302.5098
201.83	316.3423
202.84	303.5531
205.31	297.5817

208.36	300.3673
208.81	295.9755
209.75	288.3368
209.75	288.3368
210.97	287.6707
215.65	274.0965
216.55	288.5226
218.09	264.5637
222.10	285.3800
223.80	263.6374
226.40	268.4309
227.00	273.5229
227.08	273.5507
227.20	279.4562
228.16	286.6492
228.18	286.6559
228.18	286.6559
231.56	0.0000
235.69	284.4536
236.00	282.9826
236.00	282.9826
238.63	272.6082
238.63	272.6082
238.63	272.6082
238.63	272.6082
239.00	272.7320
240.98	273.3971
241.98	273.7328
241.98	273.7328
241.98	273.7328
244.69	255.6621
245.39	238.2872
247.94	241.9612
248.90	257.9647
249.79	233.1187
252.40	208.6440
252.85	205.7292
252.85	205.7292
254.15	0.0000
256.20	249.0639
256.20	249.0639
260.50	223.8538
260.90	217.8499
262.80	216.2862
264.65	209.9265
268.24	188.8824
268.79	190.6439
269.46	205.5878
269.46	205.5878
269.46	205.5878
269.46	205.5878
271.23	199.4048
273.65	226.3811
276.40	194.7499
277.35	209.4714
277.60	209.5269
277.60	209.5269
278.00	226.2229
278.60	234.6798
279.20	234.8316
279.53	242.1904
280.46	244.5203
281.68	219.8378
283.67	199.4285
284.30	220.4592
285.00	239.4478
285.90	231.3054
286.10	231.3526
286.10	231.3526
287.40	194.9855
288.45	0.0000
290.67	213.7544
290.80	213.7854
291.72	225.7880
293.26	0.0000
293.70	184.0439
295.21	209.7041
295.21	209.7041

295.21	209.7041
295.96	209.8676
296.50	198.9783
297.23	199.1275
298.57	199.4058
299.80	199.6582
299.80	199.6582
300.09	199.7184
300.09	199.7184
300.09	199.7184
300.09	199.7184
300.12	199.7242
301.29	182.0933
302.84	173.8607
303.76	179.1434
303.91	179.1691
304.40	179.2588
304.40	179.2588
304.84	175.9248
306.84	205.3740
308.46	176.7828
311.98	174.1816
316.51	178.2053
318.01	186.0411
319.02	199.2173
319.41	198.2100
320.08	199.4222
323.87	186.2364
323.87	186.2364
323.87	186.2364
323.87	186.2364
325.23	193.4506
328.77	215.0939
333.44	158.0867
334.20	208.0020
334.20	208.0020
334.30	208.0222
338.28	191.8896
338.28	191.8896
338.28	191.8896
338.28	191.8896
338.32	191.8976
338.32	191.8976
338.32	191.8976
340.50	166.2074
340.57	166.2189
344.27	175.2162
345.85	170.5828
350.59	0.0000
351.07	142.8301
351.92	142.9414
351.92	142.9414
351.92	142.9414
355.39	0.0000
356.01	134.5001
364.48	173.4586
366.43	161.9915
367.43	153.9816
367.94	0.0000
369.80	155.2067
374.96	151.3413
383.85	176.3719
387.95	157.6218
388.63	164.1676
391.69	168.2834
391.69	168.2834
392.90	166.6011
398.62	173.8949
400.65	166.7287
401.10	166.7921
401.81	169.6841
402.60	164.1943
404.84	180.3815
410.95	158.7243
411.60	149.4099
413.65	182.5949
414.70	170.5006
415.30	154.5608

415.76	160.2736
417.63	0.0000
418.52	152.1167
423.70	155.5798
427.08	133.1589
427.89	138.0013
432.53	148.0428
433.93	136.7280
439.47	140.1828
439.56	140.1917
439.89	125.8204
443.98	157.0347
444.90	156.1781
445.03	151.3731
445.03	151.3731
445.03	151.3731
445.03	151.3731
453.90	114.5185
463.38	128.9900
468.07	184.3327
473.00	113.1526
475.06	117.2583
475.35	120.2397
476.78	133.1856
477.59	144.1198
477.96	137.2455
482.03	151.5003
484.57	147.7996
487.03	123.2114
490.36	0.0000
492.35	132.6380
497.08	122.0611
507.63	0.0000
510.53	0.0000
510.84	131.2727
511.00	131.2862
511.85	131.3608
511.85	131.3608
513.99	124.7997
513.99	124.7997
520.41	126.4557
520.65	126.4770
527.90	107.2174
528.96	0.0000
529.64	120.6273
529.87	0.0000
531.02	127.8961
537.32	118.1417
543.00	124.7517
546.56	0.0000
549.76	104.5754
552.65	117.2099
555.20	119.4725
563.23	121.1090
563.90	100.2680
568.70	113.1337
569.32	100.6008
569.50	114.2344
569.67	114.2477
573.80	123.9893
574.00	127.1563
574.64	135.6169
578.91	112.4245
579.30	0.0000
583.14	103.5508
585.48	93.4660
591.81	135.0334
592.07	131.4511
593.00	126.3543
595.88	118.1706
600.56	154.7847
602.52	0.0000
602.71	131.8215
602.71	131.8215
603.60	167.5331
604.41	158.6978
604.70	151.5896
609.31	129.8180

609.31	129.8180
609.31	129.8180
609.31	129.8180
610.33	109.1403
612.46	111.0631
614.37	105.8044
618.01	116.2058
621.84	109.1323
621.84	109.1323
631.29	110.7980
633.02	106.5535
633.10	102.2089
634.78	106.6587
635.90	105.6343
636.97	105.6983
645.85	84.3127
646.12	79.9453
656.30	86.5206
657.75	99.1824
657.90	0.0000
661.65	105.8331
661.65	105.8331
664.57	0.0000
666.33	107.5449
666.33	107.5449
675.00	111.2158
677.61	103.9427
685.20	116.4678
692.80	123.4707
695.00	117.0553
696.49	113.3956
696.49	113.3956
697.00	116.2374
697.49	125.6441
698.33	135.0762
698.50	135.0879
699.00	139.8148
702.63	122.2109
706.10	104.5322
706.58	0.0000
706.67	103.6218
709.31	112.2477
711.68	110.4921
713.82	113.4473
717.42	93.7632
720.50	102.4431
721.93	0.0000
722.20	100.9014
722.78	105.8154
722.78	105.8154
722.89	105.8200
722.95	105.8222
723.30	105.8426
724.18	102.6299
727.18	98.0231
733.00	93.2592
735.90	102.1783
739.58	102.4481
742.81	101.6502
744.21	89.2423
747.13	99.9396
751.79	107.8665
752.31	109.8206
753.82	92.5469
755.35	96.4742
756.15	97.4759
756.87	100.4051
763.93	155.9557
765.79	118.2818
766.42	104.7393
766.84	105.7290
776.49	109.1312
778.00	108.2313
778.57	107.2854
778.89	101.4482
783.80	75.2815
785.46	89.0375
792.07	90.8500

795.84	84.2651
796.30	89.3395
798.80	94.5039
801.93	101.2108
805.60	87.8828
810.29	91.0360
810.76	96.9951
815.85	76.3828
817.79	82.4073
818.51	82.4326
819.60	89.4287
826.30	88.6976
828.27	0.0000
831.60	123.8663
831.96	114.8947
834.83	103.0335
836.80	0.0000
846.75	80.4411
848.13	72.4409
856.28	0.0000
856.80	70.9792
860.37	83.9473
867.32	74.7746
867.82	76.0956
871.10	81.2809
873.19	85.4202
874.81	81.4079
875.33	0.0000
876.40	77.3885
879.36	75.4453
880.27	78.5337
880.51	75.4814
881.50	74.4926
883.24	79.6520
884.67	73.5688
889.25	79.8519
896.60	77.0126
898.02	83.2231
899.00	86.3396
903.28	74.1343
911.07	86.7651
911.07	86.7651
911.07	86.7651
919.63	53.3046
920.93	62.2217
925.00	66.4779
925.24	61.2903
926.50	77.9510
935.52	67.7996
937.48	89.7740
944.10	78.4958
946.00	72.2695
949.00	68.1606
962.29	93.9598
964.01	84.9826
966.15	95.9109
968.20	122.5467
969.11	79.7147
969.11	79.7147
969.11	79.7147
977.42	83.2724
980.50	76.4224
983.50	93.5107
989.30	67.0926
996.32	86.4893
1001.03	70.5977
1001.68	65.2642
1004.76	76.0514
1021.30	0.0000
1024.50	0.0000
1034.80	76.8936
1036.00	73.3682
1037.82	77.1322
1038.57	76.2229
1038.76	0.0000
1045.16	89.4509
1046.59	77.3783
1048.07	69.9568

1050.47	78.4189
1050.47	78.4189
1062.04	77.8038
1063.62	78.7852
1076.63	82.9174
1077.35	78.2236
1078.86	74.4951
1085.78	72.7837
1099.22	86.4170
1112.02	87.5365
1112.84	93.4985
1115.52	113.6377
1120.29	90.8650
1120.29	90.8650
1120.29	90.8650
1120.29	90.8650
1120.51	103.7849
1121.28	88.7420
1124.00	0.0000
1129.67	95.1512
1131.51	0.0000
1147.95	0.0000
1167.94	77.7372
1173.22	74.9509
1175.09	78.8925
1177.93	66.2924
1189.05	83.1620
1204.90	111.1161
1205.75	0.0000
1213.00	112.3897
1221.42	91.9264
1230.97	98.7014
1235.34	95.5551
1236.41	0.0000
1238.25	89.4287
1246.25	78.4451
1260.41	0.0000
1271.85	79.3113
1274.45	65.3060
1274.54	66.3131
1291.56	57.5626
1298.22	0.0000
1312.09	62.9947
1325.50	43.8608
1325.50	43.8608
1332.49	57.2383
1333.61	48.0540
1360.21	44.3018
1362.66	0.0000
1365.15	39.2061
1368.21	36.1414
1368.53	0.0000
1376.25	45.5392
1384.27	69.5003
1394.10	48.8884
1395.20	50.9841
1407.95	57.4285
1434.06	39.9628
1436.60	45.2526
1457.56	0.0000
1460.81	43.4295
1489.15	27.7483
1509.49	35.6749
1596.49	35.5095
1620.62	37.6515
1678.03	0.0000
1691.02	22.5817
1691.02	22.5817
1706.46	0.0000
1750.46	0.0000
1764.49	23.9648
1764.49	23.9648
1764.49	23.9648
1764.49	23.9648
1770.23	17.7745
1771.40	26.6691
1791.20	0.0000
1808.65	15.1263

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243492007

Total Uranium Activity	3.5497E+00	ug/g
Total Uranium Counting Unc.	6.2887E+00	ug/g
Total Uranium Tpu	3.2085E-06	ug/g
Total Uranium Mda	3.4267E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G243492007
ANALYST	: MXR1	DETECTOR	: GAM18
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 14:02:31.02	SAMPLE ALQT:	124.450 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 8.397E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.202E+00
GROSS GAMMA MDA (pCi/GRAM)	: 2.170E+00
GROSS GAMMA DLC (pCi/GRAM)	: 1.050E+00

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:02:09.91

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004732.CNF;1
Sample date       : 28-DEC-2009 00:00:00 Acquisition date : 4-JAN-2010 14:05:52.
Sample ID         : G1202004732          Sample quantity  : 1.37860E+02 GRAM
Detector name     : GAM22                Detector geometry: CAN
Elapsed live time: 0 02:00:00.00         Elapsed real time: 0 02:00:00.99  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 936923               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	64.30*	56	198	4.23	128.85	123	14	7.75E-03	59.2	
2	0	185.83*	13	161	1.17	371.68	367	9	1.80E-03	210.5	
3	0	510.93*	109	75	3.21	1021.37	1012	21	1.51E-02	28.7	
4	0	583.44*	21	77	0.80	1166.30	1155	17	2.85E-03	108.3	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 6-JAN-2010 12:02:12

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004732.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 28-DEC-2009 00:00:00 Acquisition date : 4-JAN-2010 14:05:52
Sample ID : G1202004732 Sample quantity : 137.86 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.99 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-208		277.35		-2.664E-02	2.280E-01	3.622E-01	5.972E-02	-0.074
	+	510.84		3.187E-01	1.875E-01	1.078E-01	1.405E-02	2.956
	+	583.14	*	1.691E-02	3.667E-02	2.974E-02	3.225E-03	0.569
		860.37		-4.346E-02	1.469E-01	2.372E-01	2.764E-02	-0.183
ANH-511	+	511.00	*	6.883E-02	4.009E-02	2.330E-02	2.334E-03	2.955

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.413E-02	1.606E-01	2.641E-01	2.756E-02	0.129
NA-22		1274.54	*	-4.296E-03	1.843E-02	2.951E-02	2.544E-03	-0.146
NA-24		1368.53	*	-2.654E-05	1.843E-02	Half-Life too short		
AL-26		1129.67		-7.004E-02	6.814E-01	1.087E+00	9.467E-02	-0.064
		1808.65	*	-6.436E-03	1.435E-02	2.108E-02	1.724E-03	-0.305
K-40		1460.81	*	-1.427E-01	2.683E-01	4.499E-01	4.121E-02	-0.317
TI-44		67.85		-1.741E-02	2.127E-02	2.884E-02	2.201E-03	-0.604
		78.38	*	-1.061E-02	1.447E-02	2.196E-02	1.862E-03	-0.483
SC-46		889.25	*	9.418E-03	1.841E-02	3.212E-02	3.595E-03	0.293
		1120.51		-9.088E-03	2.541E-02	4.038E-02	3.570E-03	-0.225
V-48		944.10		-7.805E-02	3.348E-01	5.381E-01	5.836E-02	-0.145
		983.50	*	1.073E-02	2.719E-02	4.647E-02	4.874E-03	0.231
		1312.09		1.908E-03	2.554E-02	4.260E-02	3.753E-03	0.045
CR-51		320.08	*	1.384E-02	1.800E-01	3.025E-01	3.917E-02	0.046
MN-52		744.21		-5.042E-02	5.250E-02	7.654E-02	8.317E-03	-0.659
		848.13		1.972E-01	1.378E+00	2.328E+00	2.592E-01	0.085
		935.52		9.348E-03	4.913E-02	8.274E-02	9.033E-03	0.113
		1246.25		-5.673E-03	9.994E-01	1.656E+00	1.400E-01	-0.003
		1333.61		-2.392E-01	1.098E+00	1.760E+00	1.570E-01	-0.136
		1434.06	*	-4.311E-03	5.148E-02	8.318E-02	7.433E-03	-0.052
MN-54		834.83	*	1.770E-02	1.855E-02	3.346E-02	3.717E-03	0.529
CO-56		846.75	*	5.915E-03	1.894E-02	3.250E-02	3.618E-03	0.182
		977.42		2.471E-02	1.483E+00	2.442E+00	2.576E-01	0.010
		1037.82		5.601E-02	1.499E-01	2.550E-01	2.629E-02	0.220

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	1175.09		2.333E-01	8.705E-01	1.499E+00	1.207E-01	0.156
	1238.25		1.910E-02	3.228E-02	5.719E-02	4.956E-03	0.334
	1360.21		3.167E-02	4.725E-01	7.843E-01	7.005E-02	0.040
	1771.40		-1.860E-01	1.702E-01	2.369E-01	1.969E-02	-0.785
CO-57	122.06	*	8.009E-03	1.392E-02	2.282E-02	1.882E-03	0.351
	136.48		-6.663E-02	1.057E-01	1.724E-01	1.599E-02	-0.387
CO-58	810.76	*	2.692E-03	1.742E-02	2.960E-02	3.277E-03	0.091
FE-59	142.65		-9.913E-01	1.413E+00	2.187E+00	1.935E-01	-0.453
	192.34		-5.149E-01	4.567E-01	6.919E-01	1.027E-01	-0.744
	1099.22	*	1.085E-02	3.419E-02	5.792E-02	5.676E-03	0.187
	1291.56		-3.914E-02	4.928E-02	7.193E-02	7.090E-03	-0.544
CO-60	1173.22		1.986E-02	1.798E-02	3.383E-02	2.721E-03	0.587
	1332.49	*	-1.045E-02	2.130E-02	3.285E-02	2.929E-03	-0.318
ZN-65	1115.52	*	2.195E-02	4.519E-02	7.701E-02	6.869E-03	0.285
GE-68	1077.35	*	-2.502E-01	5.703E-01	8.742E-01	8.241E-02	-0.286
AS-73	53.44	*	-2.708E-01	3.575E-01	5.381E-01	4.066E-02	-0.503
AS-74	595.88	*	-1.677E-02	3.792E-02	6.050E-02	6.271E-03	-0.277
	634.78		-1.659E-02	1.442E-01	2.351E-01	2.464E-02	-0.071
SE-75	66.05		-1.732E+00	1.972E+00	2.957E+00	2.821E-01	-0.586
	96.73		-2.021E-01	3.821E-01	5.950E-01	8.189E-02	-0.340
	121.11		3.770E-02	7.080E-02	1.159E-01	1.267E-02	0.325
	136.00		-1.703E-02	1.905E-02	3.054E-02	2.650E-03	-0.557
	198.60		-2.033E-01	1.100E+00	1.641E+00	1.918E-01	-0.124
	264.65	*	2.001E-02	2.507E-02	4.211E-02	5.668E-03	0.475
	279.53		4.107E-02	6.279E-02	1.042E-01	1.479E-02	0.394
	303.91		2.298E-01	1.076E+00	1.832E+00	2.791E-01	0.125
	400.65		4.725E-02	1.465E-01	2.456E-01	2.874E-02	0.192
BR-77	87.88		-4.139E+00	8.752E+00	1.314E+01	1.245E+00	-0.315
	200.40		-1.461E+00	1.038E+01	1.693E+01	1.862E+00	-0.086
	239.00		-8.412E-03	6.614E-01	1.074E+00	1.336E-01	-0.008
	249.79		-3.114E+00	4.494E+00	6.911E+00	8.885E-01	-0.451
	281.68		1.014E+00	6.002E+00	9.700E+00	1.351E+00	0.105
	297.23		1.314E+00	3.044E+00	5.247E+00	7.056E-01	0.250
	303.76		2.491E+00	1.067E+01	1.818E+01	2.405E+00	0.137
	439.47		-1.825E+00	8.695E+00	1.391E+01	1.339E+00	-0.131
	484.57		1.882E+00	1.328E+01	2.170E+01	2.145E+00	0.087
	520.65	*	2.224E-01	7.164E-01	1.113E+00	1.120E-01	0.200
	574.64		-1.526E+01	1.579E+01	1.993E+01	2.051E+00	-0.766
	578.91		-4.011E+00	6.010E+00	7.873E+00	8.114E-01	-0.509
	585.48		1.047E+01	1.163E+01	1.821E+01	1.881E+00	0.575
	755.35		-4.616E+00	1.031E+01	1.597E+01	1.741E+00	-0.289
	817.79		-1.074E+00	7.444E+00	1.226E+01	1.358E+00	-0.088
SR-82	698.33		8.015E-01	1.746E+01	2.861E+01	3.061E+00	0.028
	776.49	*	-1.036E-01	1.621E-01	2.434E-01	2.669E-02	-0.425
	1395.20		-1.981E+00	4.482E+00	6.837E+00	6.113E-01	-0.290
RB-83	520.41	*	9.589E-03	3.985E-02	6.150E-02	6.189E-03	0.156
	529.64		1.991E-02	5.371E-02	9.250E-02	9.348E-03	0.215
	552.65		1.117E-02	9.532E-02	1.607E-01	1.639E-02	0.070
RB-84	881.50	*	-8.581E-03	3.145E-02	5.074E-02	5.675E-03	-0.169

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
KR-85		513.99	*	2.162E+01	5.670E+00	9.836E+00	9.870E-01	2.198
SR-85		513.99	*	1.024E-01	2.686E-02	4.659E-02	4.675E-03	2.198
RB-86		1076.63	*	-1.175E-01	2.875E-01	4.436E-01	4.186E-02	-0.265
Y-88		898.02		1.157E-02	1.983E-02	3.477E-02	3.907E-03	0.333
		1836.01	*	1.693E-02	1.994E-02	3.714E-02	3.002E-03	0.456
ZR-88		392.90	*	1.068E-02	1.583E-02	2.725E-02	2.537E-03	0.392
Y-91		1204.90	*	1.074E+00	7.072E+00	1.198E+01	9.853E-01	0.090
NB-94		702.63	*	-1.214E-02	1.985E-02	3.065E-02	3.285E-03	-0.396
		871.10		9.874E-04	1.738E-02	2.906E-02	3.246E-03	0.034
NB-95		765.79	*	-6.198E-03	2.099E-02	3.301E-02	3.610E-03	-0.188
NB-95M		235.69	*	-9.005E-02	6.859E-02	1.013E-01	1.340E-02	-0.889
ZR-95		724.18		-4.149E-03	4.441E-02	7.164E-02	8.168E-03	-0.058
		756.15	*	-2.553E-02	3.649E-02	5.484E-02	6.366E-03	-0.466
NB-97		657.90	*	-6.312E-07	3.649E-02	Half-Life too short		
		1024.50		1.117E-03	3.649E-02	Half-Life too short		
ZR-97		254.15		8.644E-04	3.649E-02	Half-Life too short		
		355.39		-4.927E-04	3.649E-02	Half-Life too short		
		507.63	*	2.255E-03	3.649E-02	Half-Life too short		
		602.52		-1.198E-03	3.649E-02	Half-Life too short		
		1021.30		-1.172E-03	3.649E-02	Half-Life too short		
		1147.95		-5.128E-04	3.649E-02	Half-Life too short		
		1362.66		-1.255E-03	3.649E-02	Half-Life too short		
		1750.46		-4.275E-04	3.649E-02	Half-Life too short		
MO-99		140.51		-8.819E-01	2.161E+00	3.550E+00	9.848E-01	-0.248
		181.06		6.949E-01	1.636E+00	2.448E+00	4.687E-01	0.284
		366.43		1.420E+00	7.427E+00	1.244E+01	1.320E+00	0.114
		739.58	*	6.766E-01	9.398E-01	1.621E+00	2.683E-01	0.417
		778.00		-2.300E+00	2.784E+00	4.090E+00	4.487E-01	-0.562
TC-99M		140.51	*	-7.860E+00	2.784E+00	Half-Life too short		
RH-101		127.23		7.043E-03	1.744E-02	2.824E-02	2.360E-03	0.249
		198.01	*	1.087E-03	2.114E-02	3.205E-02	3.496E-03	0.034
		325.23		-9.463E-02	1.266E-01	2.007E-01	2.495E-02	-0.471
RH-102		418.52		1.156E-02	1.506E-01	2.477E-01	2.351E-02	0.047
		475.06	*	2.629E-04	1.581E-02	2.560E-02	2.518E-03	0.010
		631.29		4.766E-03	2.969E-02	4.964E-02	5.197E-03	0.096
		697.49		2.994E-02	4.744E-02	8.105E-02	8.669E-03	0.369
		766.84		-3.944E-02	5.766E-02	8.695E-02	9.511E-03	-0.454
		1046.59		3.932E-02	5.617E-02	9.882E-02	9.691E-03	0.398
		1112.84		-3.664E-02	1.126E-01	1.756E-01	1.572E-02	-0.209
RU-103		497.08	*	-9.323E-03	2.060E-02	3.178E-02	4.770E-03	-0.293
		610.33		1.885E-01	4.441E-01	7.536E-01	1.332E-01	0.250
RH-106	+	511.85		3.390E-01	1.974E-01	2.833E-01	2.840E-02	1.196
		621.84	*	8.070E-02	1.674E-01	2.872E-01	4.194E-02	0.281
		1050.47		2.194E-01	1.129E+00	1.884E+00	1.839E-01	0.116
RU-106	+	511.85		3.390E-01	1.974E-01	2.833E-01	2.840E-02	1.196
		621.84	*	8.070E-02	1.672E-01	2.872E-01	3.000E-02	0.281
		1050.47		2.194E-01	1.129E+00	1.884E+00	1.839E-01	0.116
AG-108M		433.93	*	5.824E-03	1.807E-02	3.019E-02	2.989E-03	0.193
		614.37		-1.192E-02	2.367E-02	3.762E-02	4.028E-03	-0.317

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	722.95		-1.609E-02	2.205E-02	3.324E-02	3.678E-03	-0.484
CD-109	88.03	*	-1.554E-01	3.604E-01	5.427E-01	5.150E-02	-0.286
AG-110M	657.75	*	-6.103E-04	1.697E-02	2.777E-02	2.985E-03	-0.022
	677.61		-1.271E-01	1.566E-01	2.346E-01	2.537E-02	-0.542
	706.67		-1.339E-02	1.127E-01	1.819E-01	1.987E-02	-0.074
	763.93		7.861E-02	8.580E-02	1.500E-01	1.668E-02	0.524
	884.67		-4.748E-03	2.504E-02	4.072E-02	4.644E-03	-0.117
	937.48		4.401E-02	5.339E-02	9.544E-02	1.064E-02	0.461
	1384.27		-4.415E-02	7.213E-02	1.059E-01	9.711E-03	-0.417
IN-111	171.28		1.064E-04	8.670E-02	1.443E-01	1.440E-02	0.001
	245.39	*	2.647E-02	9.587E-02	1.576E-01	2.000E-02	0.168
IN-113M	391.69	*	1.200E-02	2.361E-02	4.021E-02	3.840E-03	0.298
SN-113	391.69	*	1.200E-02	2.361E-02	4.021E-02	3.840E-03	0.298
IN-114M	190.27	*	5.956E-02	9.410E-02	1.432E-01	1.522E-02	0.416
CD-115	260.90		-4.929E+00	7.486E+00	1.148E+01	1.525E+00	-0.430
	492.35		1.575E+00	1.897E+00	3.265E+00	3.241E-01	0.482
	527.90	*	-4.491E-01	6.308E-01	9.559E-01	9.653E-02	-0.470
SN-117M	156.02		5.665E-01	8.276E-01	1.432E+00	1.343E-01	0.396
	158.56	*	-7.364E-03	2.302E-02	3.412E-02	3.236E-03	-0.216
SB-122	563.90	*	-3.936E-02	1.577E-01	2.572E-01	2.636E-02	-0.153
	692.80		-2.038E+00	3.815E+00	5.950E+00	6.353E-01	-0.343
I-123	159.00	*	-1.156E-04	3.815E+00	Half-Life too short		
	528.96		-4.386E-03	3.815E+00	Half-Life too short		
TE-123M	159.00	*	-7.599E-03	1.698E-02	2.503E-02	2.390E-03	-0.304
I-124	602.71	*	-9.353E-02	1.131E-01	1.749E-01	1.817E-02	-0.535
	722.78		-4.219E-01	6.656E-01	1.015E+00	1.096E-01	-0.415
	1325.50		1.455E+00	4.922E+00	8.430E+00	7.487E-01	0.173
	1376.25		2.852E-01	4.697E+00	7.755E+00	6.931E-01	0.037
	1509.49		2.041E+00	2.404E+00	4.382E+00	3.895E-01	0.466
	1691.02		1.353E-01	7.292E-01	1.240E+00	1.060E-01	0.109
SB-124	602.71		-1.737E-02	2.101E-02	3.249E-02	3.375E-03	-0.535
	645.85		-2.698E-01	2.524E-01	3.709E-01	4.056E-02	-0.727
	709.31		-7.804E-02	1.395E+00	2.263E+00	2.431E-01	-0.034
	713.82		-5.260E-01	8.327E-01	1.271E+00	1.735E-01	-0.414
	722.78		-1.136E-01	1.792E-01	2.734E-01	2.992E-02	-0.415
	968.20		-1.894E-01	1.325E+00	2.172E+00	2.309E-01	-0.087
	1045.16		5.118E-01	1.143E+00	1.958E+00	1.924E-01	0.261
	1325.50		4.184E-01	1.416E+00	2.424E+00	2.153E-01	0.173
	1368.21		-1.194E-01	8.385E-01	1.350E+00	1.846E-01	-0.088
	1436.60		-2.936E-01	1.860E+00	2.968E+00	2.653E-01	-0.099
	1691.02	*	8.594E-03	4.631E-02	7.873E-02	7.003E-03	0.109
SB-125	427.89	*	1.524E-02	5.405E-02	9.001E-02	8.733E-03	0.169
	463.38		-3.277E-02	1.502E-01	2.389E-01	2.477E-02	-0.137
	600.56		7.919E-02	9.874E-02	1.730E-01	1.888E-02	0.458
	635.90		-1.229E-02	1.447E-01	2.367E-01	2.619E-02	-0.052
TE-125M	109.28	*	9.556E-01	4.599E+00	7.441E+00	7.524E-01	0.128
I-126	388.63		-6.707E-02	7.807E-02	1.200E-01	1.136E-02	-0.559
	666.33	*	3.005E-02	5.990E-02	1.028E-01	1.086E-02	0.292
	753.82		-3.557E-01	5.338E-01	8.047E-01	8.769E-02	-0.442

---- Non-Identified Nuclides ----

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SB-126		223.80		1.045E+00	1.455E+00	2.466E+00	2.926E-01	0.424
		278.60		1.780E-01	9.797E-01	1.585E+00	2.216E-01	0.112
		296.50		-1.004E-01	5.205E-01	8.083E-01	1.089E-01	-0.124
		414.70		2.740E-03	2.721E-02	4.487E-02	4.247E-03	0.061
		415.30		-3.614E-01	2.252E+00	3.638E+00	3.445E-01	-0.099
		555.20		5.020E-02	1.369E+00	2.290E+00	2.339E-01	0.022
		573.80		-1.839E-01	4.426E-01	6.021E-01	6.194E-02	-0.305
		593.00		-2.785E-01	3.353E-01	5.143E-01	5.326E-02	-0.542
		656.30		-4.783E-01	1.163E+00	1.837E+00	1.934E-01	-0.260
		666.33		1.234E-02	2.460E-02	4.221E-02	4.460E-03	0.292
		675.00		1.443E-01	6.704E-01	1.121E+00	1.189E-01	0.129
		695.00		2.591E-02	3.136E-02	5.430E-02	5.802E-03	0.477
		697.00		1.346E-01	1.081E-01	1.917E-01	2.050E-02	0.702
		720.50	*	2.906E-02	4.840E-02	8.321E-02	8.973E-03	0.349
		856.80		-2.828E-02	1.589E-01	2.599E-01	2.897E-02	-0.109
		989.30		-5.168E-02	4.334E-01	7.020E-01	7.322E-02	-0.074
		1034.80		2.158E+00	2.812E+00	4.992E+00	4.964E-01	0.432
		1213.00		1.194E+00	1.394E+00	2.519E+00	2.083E-01	0.474
SN-126	+	64.28		3.504E-01	4.180E-01	3.676E-01	5.339E-02	0.953
		86.94		-1.227E-01	1.597E-01	2.227E-01	9.246E-02	-0.551
		87.57	*	-2.485E-02	3.607E-02	5.333E-02	5.036E-03	-0.466
SB-127		61.10		1.687E+00	6.567E+00	9.978E+00	8.000E-01	0.169
		252.40		-2.527E-02	6.823E-01	1.098E+00	4.690E-01	-0.023
		290.80		1.123E-01	3.144E+00	5.312E+00	7.496E-01	0.021
		411.60		1.058E+00	1.727E+00	2.944E+00	4.413E-01	0.359
		444.90		5.819E-01	1.369E+00	2.301E+00	2.708E-01	0.253
		473.00		4.096E-02	2.618E-01	3.829E-01	4.692E-02	0.107
		543.00		2.812E-01	2.116E+00	3.578E+00	5.043E-01	0.079
		603.60		-2.424E+00	1.812E+00	2.655E+00	3.280E-01	-0.913
		685.20	*	-2.295E-04	1.897E-01	3.104E-01	3.554E-02	-0.001
		698.50		-4.318E-02	2.458E+00	4.009E+00	6.375E-01	-0.011
		722.20		3.872E-01	4.055E+00	6.660E+00	7.569E-01	0.058
		783.80		1.319E-01	5.332E-01	8.137E-01	1.039E-01	0.162
XE-127		57.60		-5.588E-01	2.214E+00	3.628E+00	2.606E-01	-0.154
		145.22		-8.736E-02	3.489E-01	5.523E-01	4.940E-02	-0.158
		172.10		-1.374E-02	5.746E-02	9.429E-02	9.437E-03	-0.146
		202.84	*	-1.939E-02	2.324E-02	3.621E-02	4.014E-03	-0.535
		374.96		2.690E-02	9.807E-02	1.649E-01	1.679E-02	0.163
I-131		80.18		2.133E-01	9.369E-01	1.552E+00	1.344E-01	0.137
		284.30		-3.973E-01	4.723E-01	7.045E-01	9.942E-02	-0.564
		364.48	*	1.878E-03	3.471E-02	5.766E-02	6.371E-03	0.033
		636.97		5.375E-02	4.318E-01	7.194E-01	7.808E-02	0.075
		722.89		-1.353E+00	1.945E+00	2.945E+00	3.182E-01	-0.459
TE-132		49.72		-1.098E+00	1.554E+00	2.476E+00	2.147E-01	-0.443
		111.76		6.783E-02	3.691E+00	5.536E+00	4.965E-01	0.012
		116.30		3.361E-01	3.020E+00	4.839E+00	4.313E-01	0.069
		228.16	*	-6.233E-02	7.808E-02	1.195E-01	2.017E-02	-0.522
BA-133		53.15		-1.162E+00	1.559E+00	2.462E+00	1.868E-01	-0.472
		79.62		-3.161E-04	5.144E-01	8.402E-01	1.278E-01	0.000

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		81.00		-2.955E-02	3.903E-02	6.006E-02	9.572E-03	-0.492
		276.40		-2.963E-02	2.233E-01	3.545E-01	6.414E-02	-0.084
		302.84		-1.484E-02	7.755E-02	1.287E-01	2.146E-02	-0.115
		356.01	*	-2.195E-02	2.495E-02	3.854E-02	5.759E-03	-0.570
		383.85		-7.925E-04	1.697E-01	2.796E-01	3.741E-02	-0.003
I-133	+	510.53		1.698E-03	1.697E-01	Half-Life too short		
		529.87	*	4.919E-06	1.697E-01	Half-Life too short		
		706.58		-6.986E-05	1.697E-01	Half-Life too short		
		856.28		-1.849E-04	1.697E-01	Half-Life too short		
		875.33		4.512E-05	1.697E-01	Half-Life too short		
		1236.41		5.439E-04	1.697E-01	Half-Life too short		
		1298.22		4.963E-05	1.697E-01	Half-Life too short		
CS-134		475.35		5.773E-02	1.035E+00	1.681E+00	1.653E-01	0.034
		563.23		-2.934E-02	1.834E-01	3.015E-01	3.110E-02	-0.097
		569.32		-4.883E-02	1.211E-01	1.808E-01	1.875E-02	-0.270
		604.70		-2.011E-02	1.977E-02	3.003E-02	3.127E-03	-0.669
		795.84	*	8.552E-03	2.536E-02	4.024E-02	4.454E-03	0.213
		801.93		4.398E-02	2.087E-01	3.436E-01	3.804E-02	0.128
		1038.57		5.501E-01	1.935E+00	3.263E+00	3.230E-01	0.169
		1167.94		-2.598E-01	1.009E+00	1.629E+00	1.324E-01	-0.160
		1365.15		-3.617E-01	6.840E-01	1.000E+00	9.314E-02	-0.362
CS-135		268.24	*	-2.005E-02	9.202E-02	1.456E-01	2.105E-02	-0.138
I-135		288.45		6.362E+01	9.202E-02	Half-Life too short		
		417.63		-4.155E+01	9.202E-02	Half-Life too short		
		546.56		-1.504E+01	9.202E-02	Half-Life too short		
		836.80		7.891E+01	9.202E-02	Half-Life too short		
		1038.76		1.625E+01	9.202E-02	Half-Life too short		
		1124.00		-7.577E+01	9.202E-02	Half-Life too short		
		1131.51		-4.461E+00	9.202E-02	Half-Life too short		
		1260.41	*	1.304E+00	9.202E-02	Half-Life too short		
		1457.56		9.181E+01	9.202E-02	Half-Life too short		
		1678.03		-2.173E+01	9.202E-02	Half-Life too short		
		1706.46		5.761E+01	9.202E-02	Half-Life too short		
		1791.20		3.394E+00	9.202E-02	Half-Life too short		
CS-136		66.91		-1.938E-01	2.393E-01	3.228E-01	4.800E-02	-0.600
		86.29		-8.202E-02	3.160E-01	4.813E-01	6.405E-02	-0.170
		153.22		-2.286E-01	2.361E-01	3.735E-01	3.812E-02	-0.612
		163.89		6.247E-01	4.034E-01	7.164E-01	7.624E-02	0.872
		176.55		1.096E-02	1.499E-01	2.398E-01	2.536E-02	0.046
		273.65		5.886E-03	1.742E-01	2.798E-01	3.957E-02	0.021
		340.57		3.359E-03	4.553E-02	7.613E-02	9.118E-03	0.044
		818.51		1.051E-02	2.457E-02	4.278E-02	4.738E-03	0.246
		1048.07	*	-9.913E-03	3.754E-02	5.940E-02	6.005E-03	-0.167
		1235.34		5.920E-02	1.601E-01	2.767E-01	3.232E-02	0.214
BA-137M		661.65	*	-4.963E-03	1.746E-02	2.785E-02	2.937E-03	-0.178
CS-137		661.65	*	-5.246E-03	1.845E-02	2.944E-02	3.108E-03	-0.178
CE-139		165.85	*	-1.148E-02	1.606E-02	2.570E-02	2.521E-03	-0.447
BA-140		162.64		1.716E-01	2.818E-01	4.841E-01	4.895E-02	0.354
		304.84		1.256E-01	4.593E-01	7.819E-01	2.326E-01	0.161

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	423.70		-2.886E-01	7.246E-01	1.137E+00	3.715E-01	-0.254
	537.32	*	-2.135E-02	8.854E-02	1.446E-01	4.855E-02	-0.148
LA-140	328.77		1.565E-01	1.131E-01	2.010E-01	2.539E-02	0.779
	432.53		1.426E-01	7.897E-01	1.305E+00	1.300E-01	0.109
	487.03		-3.866E-02	5.037E-02	7.531E-02	7.807E-03	-0.513
	751.79		1.996E-01	6.058E-01	1.014E+00	1.179E-01	0.197
	815.85		6.010E-04	1.058E-01	1.770E-01	2.098E-02	0.003
	867.82		-2.206E-01	4.940E-01	7.837E-01	9.030E-02	-0.282
	919.63		1.510E+00	9.074E-01	1.727E+00	2.192E-01	0.874
	925.24		-2.243E-01	3.702E-01	5.673E-01	6.484E-02	-0.395
	1596.49	*	-2.143E-04	3.614E-02	6.015E-02	5.273E-03	-0.004
CE-141	145.44	*	1.735E-02	2.859E-02	4.950E-02	4.506E-03	0.351
CE-143	57.37		-1.302E+00	9.867E+00	1.630E+01	1.398E+00	-0.080
	231.56		-3.970E+00	3.296E+01	5.314E+01	1.738E+01	-0.075
	293.26	*	-2.796E-02	1.559E+00	2.624E+00	6.258E-01	-0.011
	350.59		-1.426E+01	2.428E+01	3.650E+01	1.163E+01	-0.391
	490.36		2.910E+01	3.662E+01	6.108E+01	1.951E+01	0.476
	664.57		-4.964E-01	1.413E+01	2.311E+01	7.593E+00	-0.021
	721.93		8.013E-01	1.655E+01	2.707E+01	8.083E+00	0.030
CE-144	80.11		2.095E-01	8.120E-01	1.347E+00	1.165E-01	0.155
	133.54	*	-5.508E-02	9.988E-02	1.634E-01	2.537E-02	-0.337
PM-144	476.78		8.609E-03	3.610E-02	5.952E-02	6.283E-03	0.145
	618.01		-1.248E-02	1.765E-02	2.733E-02	2.905E-03	-0.457
	696.49	*	2.934E-02	2.077E-02	3.720E-02	3.977E-03	0.789
	778.57		-9.267E-01	1.216E+00	1.799E+00	1.974E-01	-0.515
PR-144	696.49	*	1.981E+00	1.402E+00	2.511E+00	2.684E-01	0.789
	1489.15		2.633E-01	7.167E+00	1.174E+01	1.045E+00	0.022
PM-146	453.90	*	4.518E-03	2.409E-02	3.969E-02	4.612E-03	0.114
	633.02		-5.218E-01	7.938E-01	1.191E+00	4.507E-01	-0.438
	735.90		2.987E-02	7.705E-02	1.293E-01	3.794E-02	0.231
	747.13		7.595E-03	4.733E-02	7.804E-02	1.212E-02	0.097
ND-147	91.11		1.434E-01	8.548E-02	1.466E-01	1.448E-02	0.978
	319.41		-1.548E-01	1.189E+00	1.973E+00	2.497E-01	-0.078
	439.89		4.394E-01	1.956E+00	3.241E+00	3.121E-01	0.136
	531.02	*	1.115E-01	1.889E-01	3.295E-01	5.224E-02	0.338
PM-149	285.90	*	-3.141E+00	5.222E+00	7.934E+00	1.500E+00	-0.396
EU-152	121.78		3.281E-02	4.078E-02	6.768E-02	6.497E-03	0.485
	244.69		8.876E-03	1.879E-01	3.048E-01	3.859E-02	0.029
	344.27	*	-3.232E-04	5.482E-02	9.113E-02	1.095E-02	-0.004
	443.98		7.414E-02	5.276E-01	8.680E-01	8.379E-02	0.085
	778.89		-3.748E-02	1.400E-01	2.198E-01	2.412E-02	-0.171
	867.32		-1.830E-02	4.298E-01	7.116E-01	7.945E-02	-0.026
	964.01		-6.028E-02	1.638E-01	2.423E-01	2.586E-02	-0.249
	1085.78		-9.378E-02	1.685E-01	2.504E-01	2.334E-02	-0.374
	1112.02		-4.141E-02	1.550E-01	2.433E-01	2.180E-02	-0.170
	1407.95		4.231E-02	8.614E-02	1.516E-01	1.355E-02	0.279
GD-153	69.67		3.364E-01	6.826E-01	1.048E+00	8.132E-02	0.321
	83.37		-9.787E-01	6.174E+00	9.520E+00	8.544E-01	-0.103
	97.43	*	1.304E-02	3.846E-02	6.322E-02	5.559E-03	0.206

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Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		103.18		2.640E-02	5.093E-02	8.437E-02	7.210E-03	0.313
EU-154		123.07		2.395E-03	2.896E-02	4.611E-02	5.115E-03	0.052
		247.94		1.211E-02	2.140E-01	3.471E-01	5.158E-02	0.035
		591.81		-7.881E-02	3.276E-01	5.318E-01	6.915E-02	-0.148
		723.30		-8.776E-02	9.281E-02	1.363E-01	1.571E-02	-0.644
		756.87		-2.426E-01	4.316E-01	6.587E-01	9.035E-02	-0.368
		873.19		7.003E-03	1.533E-01	2.559E-01	3.623E-02	0.027
		996.32		3.555E-03	2.001E-01	3.288E-01	6.139E-02	0.011
		1004.76		1.469E-02	1.125E-01	1.870E-01	2.414E-02	0.079
		1274.45	*	-1.270E-02	5.161E-02	8.245E-02	9.318E-03	-0.154
EU-155		48.70		-1.970E+00	1.023E+00	1.467E+00	1.195E-01	-1.343
		60.01		7.826E-01	2.214E+00	3.395E+00	2.411E-01	0.230
		86.54		-1.356E-02	4.300E-02	6.522E-02	6.134E-03	-0.208
		105.31	*	-4.338E-02	5.407E-02	8.184E-02	7.025E-03	-0.530
TB-160		86.79		-8.757E-02	1.095E-01	1.607E-01	1.503E-02	-0.545
		197.04		5.074E-02	3.301E-01	5.018E-01	5.456E-02	0.101
		215.65		1.888E-01	3.967E-01	6.650E-01	7.687E-02	0.284
		298.57		-3.484E-02	5.433E-02	8.741E-02	1.171E-02	-0.399
		879.36	*	-1.159E-02	6.828E-02	1.114E-01	1.246E-02	-0.104
		962.29		-1.334E-01	2.498E-01	3.886E-01	4.153E-02	-0.343
		966.15		7.708E-02	9.354E-02	1.652E-01	1.760E-02	0.466
		1177.93		-1.049E-02	1.435E-01	2.372E-01	1.914E-02	-0.044
		1271.85		-1.434E-01	2.700E-01	4.112E-01	3.534E-02	-0.349
HO-166M		80.57		-2.563E-02	1.056E-01	1.696E-01	1.473E-02	-0.151
	+	184.41		6.459E-03	2.720E-02	3.734E-02	3.893E-03	0.173
		280.46		2.259E-02	5.092E-02	8.362E-02	1.168E-02	0.270
		410.95		1.227E-01	1.345E-01	2.340E-01	2.209E-02	0.525
		711.68	*	2.231E-02	3.198E-02	5.538E-02	5.954E-03	0.403
		752.31		1.145E-01	1.440E-01	2.508E-01	2.732E-02	0.456
		810.29		3.717E-03	2.814E-02	4.773E-02	5.276E-03	0.078
TM-171		51.35		-2.960E+00	1.288E+01	2.111E+01	1.647E+00	-0.140
		52.39		2.844E-01	6.541E+00	1.090E+01	8.369E-01	0.026
		59.40		6.662E+00	1.179E+01	1.840E+01	1.301E+00	0.362
		66.72	*	-1.053E+01	1.277E+01	1.730E+01	1.307E+00	-0.609
LU-176		88.36		1.557E-02	8.397E-02	1.315E-01	1.244E-02	0.118
		201.83		-1.254E-02	1.637E-02	2.564E-02	2.833E-03	-0.489
		306.84	*	-6.649E-04	1.356E-02	2.270E-02	2.977E-03	-0.029
		401.10		-5.090E-02	3.979E+00	6.526E+00	6.115E-01	-0.008
LU-177		112.95		-8.050E-02	4.589E-01	6.788E-01	5.643E-02	-0.119
		208.36	*	-7.463E-02	2.758E-01	4.449E-01	5.022E-02	-0.168
LU-177M		52.97		-1.369E-01	6.636E-01	1.088E+00	8.275E-02	-0.126
		54.07		-2.050E-01	3.808E-01	5.832E-01	4.368E-02	-0.351
		61.30		2.543E-01	6.421E-01	9.858E-01	7.092E-02	0.258
		121.62		1.666E-01	2.027E-01	3.369E-01	2.775E-02	0.495
		147.16		-1.739E-01	3.391E-01	5.548E-01	5.003E-02	-0.313
		171.86		-4.082E-02	2.598E-01	4.284E-01	4.284E-02	-0.095
		218.09		1.938E-01	4.557E-01	7.622E-01	8.880E-02	0.254
		268.79		-2.261E-01	4.523E-01	7.006E-01	9.524E-02	-0.323
		319.02		3.528E-02	1.434E-01	2.435E-01	3.085E-02	0.145

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		367.43		9.091E-02	5.134E-01	8.590E-01	9.069E-02	0.106
		413.65	*	2.057E-02	9.391E-02	1.562E-01	1.477E-02	0.132
HF-181		56.28		-4.484E-02	3.536E-01	5.850E-01	4.261E-02	-0.077
		57.53		-1.424E-02	1.869E-01	3.098E-01	2.227E-02	-0.046
	+	65.20		6.048E-01	7.176E-01	5.412E-01	4.035E-02	1.117
		133.02		-4.083E-04	2.885E-02	4.883E-02	4.162E-03	-0.008
		136.25		-1.498E-01	2.070E-01	3.357E-01	2.896E-02	-0.446
		345.85		2.177E-02	9.791E-02	1.650E-01	1.908E-02	0.132
		482.03	*	-1.016E-02	2.050E-02	3.159E-02	3.118E-03	-0.322
W-181		56.28		-1.913E-02	1.499E-01	2.480E-01	1.807E-02	-0.077
		57.53		-6.096E-03	7.931E-02	1.315E-01	9.449E-03	-0.046
	+	65.20	*	2.546E-01	3.021E-01	2.278E-01	1.698E-02	1.117
TA-182		67.75		-4.028E-02	4.851E-02	6.568E-02	5.009E-03	-0.613
		100.10		-3.053E-02	8.780E-02	1.381E-01	1.197E-02	-0.221
		152.43		-1.468E-01	1.705E-01	2.719E-01	2.509E-02	-0.540
		222.10		7.872E-04	1.800E-01	2.935E-01	3.464E-02	0.003
		1001.68		-5.358E-01	1.132E+00	1.766E+00	1.820E-01	-0.303
		1121.28		-3.553E-02	7.047E-02	1.101E-01	9.724E-03	-0.323
		1189.05		7.425E-02	1.207E-01	2.156E-01	1.753E-02	0.344
		1221.42	*	-6.031E-02	7.957E-02	1.198E-01	9.961E-03	-0.504
		1230.97		-4.061E-02	1.934E-01	3.134E-01	2.623E-02	-0.130
RE-183		57.98		-2.354E-02	7.816E-02	1.276E-01	9.134E-03	-0.184
		59.32		2.520E-02	4.534E-02	7.072E-02	5.002E-03	0.356
		67.20		-7.533E-02	8.469E-02	1.140E-01	8.652E-03	-0.661
		162.32	*	3.040E-02	5.812E-02	9.947E-02	9.596E-03	0.306
		208.81		-3.037E-01	5.057E-01	7.988E-01	9.030E-02	-0.380
		291.72		-1.700E-01	4.946E-01	8.165E-01	1.112E-01	-0.208
RE-184		57.98		-9.060E-02	3.009E-01	4.913E-01	3.516E-02	-0.184
		59.32		9.691E-02	1.744E-01	2.720E-01	1.924E-02	0.356
		67.20		-2.899E-01	3.259E-01	4.387E-01	3.329E-02	-0.661
		161.27		-1.943E-01	1.970E-01	3.109E-01	2.985E-02	-0.625
		216.55		1.099E-01	1.437E-01	2.443E-01	2.832E-02	0.450
		252.85	*	6.214E-02	1.333E-01	2.210E-01	2.867E-02	0.281
		318.01		9.364E-02	2.516E-01	4.301E-01	5.467E-02	0.218
		792.07		1.252E-02	4.741E-01	7.671E-01	8.446E-02	0.016
		903.28		-2.354E-01	4.773E-01	7.466E-01	8.337E-02	-0.315
		920.93		2.487E-01	2.131E-01	3.933E-01	4.340E-02	0.632
OS-185		59.72		5.085E-02	1.256E-01	1.934E-01	1.370E-02	0.263
		61.14		1.808E-02	6.855E-02	1.042E-01	7.485E-03	0.174
		69.30		-7.179E-03	1.189E-01	1.744E-01	1.349E-02	-0.041
		592.07		-6.343E-01	1.286E+00	2.039E+00	2.111E-01	-0.311
		646.12	*	-2.161E-02	2.178E-02	3.226E-02	3.390E-03	-0.670
		717.42		6.817E-02	4.488E-01	7.417E-01	7.990E-02	0.092
		874.81		5.585E-03	2.876E-01	4.787E-01	5.350E-02	0.012
		880.27		-9.842E-02	3.837E-01	6.200E-01	6.933E-02	-0.159
RE-188		155.03	*	6.839E-02	8.598E-02	1.495E-01	1.395E-02	0.457
		477.96		3.121E-01	1.561E+00	2.564E+00	2.526E-01	0.122
		633.10		-1.050E+00	1.454E+00	2.237E+00	2.343E-01	-0.469
W-188	+	63.58		3.300E+01	3.915E+01	3.730E+01	2.741E+00	0.885

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		227.08		-3.337E+00	6.400E+00	1.005E+01	1.205E+00	-0.332
		290.67	*	4.922E-01	3.940E+00	6.689E+00	9.135E-01	0.074
IR-192		295.96		-2.587E-02	5.710E-02	8.721E-02	1.180E-02	-0.297
		308.46		-2.917E-02	4.924E-02	7.921E-02	1.037E-02	-0.368
		316.51	*	-1.912E-03	1.841E-02	3.062E-02	3.914E-03	-0.062
		468.07		-2.770E-03	3.476E-02	5.589E-02	5.782E-03	-0.050
		604.41		-3.041E-01	2.587E-01	3.849E-01	5.486E-02	-0.790
		612.46		3.519E-01	3.921E-01	6.856E-01	7.884E-02	0.513
AU-195	+	65.12		1.194E-01	1.416E-01	1.075E-01	8.011E-03	1.110
		66.83		-3.383E-02	4.133E-02	5.602E-02	4.237E-03	-0.604
		75.70		2.574E-02	7.293E-02	1.155E-01	9.519E-03	0.223
		98.88	*	-3.049E-02	1.117E-01	1.767E-01	1.541E-02	-0.173
		129.76		-1.639E-01	1.405E+00	2.369E+00	1.997E-01	-0.069
TL-200		367.94	*	-8.035E-02	2.166E+00	3.574E+00	3.764E-01	-0.022
		579.30		-3.702E+00	1.759E+01	2.452E+01	2.527E+00	-0.151
		828.27		-9.219E+00	2.153E+01	3.442E+01	3.819E+00	-0.268
		1205.75		-1.079E+00	8.582E+00	1.407E+01	1.157E+00	-0.077
TL-201		68.90		-1.113E-01	3.623E-01	5.196E-01	4.005E-02	-0.214
		70.82		9.481E-02	1.967E-01	3.190E-01	2.503E-02	0.297
		80.30		-2.575E-02	3.552E-01	5.771E-01	4.999E-02	-0.045
		135.34		-2.508E+00	2.278E+00	3.600E+00	3.094E-01	-0.697
		167.43	*	-1.081E+00	7.060E-01	1.064E+00	1.048E-01	-1.017
TL-202		68.90		-3.628E-02	1.181E-01	1.694E-01	1.305E-02	-0.214
		70.82		3.082E-02	6.396E-02	1.037E-01	8.138E-03	0.297
		80.30		-8.373E-03	1.155E-01	1.877E-01	1.626E-02	-0.045
		439.56	*	7.779E-03	2.376E-02	3.973E-02	3.824E-03	0.196
HG-203		70.83		1.827E-01	3.802E-01	6.156E-01	8.083E-02	0.297
		72.87		-6.450E-02	2.117E-01	3.408E-01	4.366E-02	-0.189
		82.60		-1.506E-02	3.954E-01	6.426E-01	8.944E-02	-0.023
		279.20	*	1.350E-02	2.186E-02	3.622E-02	5.127E-03	0.373
BI-207		72.80		-2.118E-02	6.945E-02	1.119E-01	8.949E-03	-0.189
		74.97		1.644E-02	4.214E-02	6.693E-02	5.472E-03	0.246
		84.90		-8.942E-03	8.154E-02	1.262E-01	1.154E-02	-0.071
		569.67		-1.112E-02	1.905E-02	2.798E-02	2.874E-03	-0.397
		1063.62	*	1.000E-02	2.734E-02	4.633E-02	4.448E-03	0.216
		1770.23		-3.881E-01	3.675E-01	5.168E-01	4.296E-02	-0.751
TL-207		81.07		-6.643E-02	8.574E-02	1.325E-01	1.158E-02	-0.502
		83.78		1.829E-02	5.324E-02	8.470E-02	7.639E-03	0.216
		94.90		-4.116E-01	1.387E-01	1.805E-01	1.613E-02	-2.281
		122.32		5.087E-01	9.779E-01	1.598E+00	1.422E-01	0.318
		144.24		-1.042E-01	3.952E-01	6.257E-01	6.194E-02	-0.167
		154.21		-7.216E-03	2.102E-01	3.517E-01	3.552E-02	-0.021
		269.46		-1.042E-01	1.100E-01	1.639E-01	2.251E-02	-0.636
		323.87	*	-3.380E-01	3.900E-01	6.070E-01	1.206E-01	-0.557
		338.28		-2.108E-01	5.944E-01	9.193E-01	1.360E-01	-0.229
		445.03		5.001E-01	1.235E+00	2.073E+00	2.663E-01	0.241
PO-209		260.50		-3.077E+00	5.656E+00	8.748E+00	1.161E+00	-0.352
		262.80		-1.462E+01	1.625E+01	2.439E+01	3.259E+00	-0.599
		896.60	*	9.639E-01	3.775E+00	6.421E+00	7.192E-01	0.150

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BI-210	46.50	*	4.531E-02	1.664E+00	2.682E+00	2.492E-01	0.017
PB-210	46.50	*	4.531E-02	1.664E+00	2.682E+00	2.492E-01	0.017
PO-210	46.50	*	4.531E-02	1.664E+00	2.682E+00	2.256E-01	0.017
BI-211	72.87		-3.627E-01	1.190E+00	1.917E+00	1.534E-01	-0.189
	351.07	*	-4.182E-02	1.355E-01	2.114E-01	2.466E-02	-0.198
PB-211	404.84	*	3.375E-01	5.675E-01	9.027E-01	5.667E-01	0.374
	427.08		4.586E-01	1.233E+00	2.013E+00	1.254E+00	0.228
	831.96		-1.096E-01	6.359E-01	1.038E+00	6.545E-01	-0.106
BI-212	727.18	*	8.584E-02	1.555E-01	2.528E-01	3.019E-02	0.340
	785.46		-3.424E-02	1.001E+00	1.481E+00	1.628E-01	-0.023
	1620.62		3.588E-01	6.678E-01	1.200E+00	1.046E-01	0.299
PB-212	74.81		4.081E-02	1.444E-01	2.277E-01	2.826E-02	0.179
	77.11		-6.577E-02	8.220E-02	1.246E-01	1.042E-02	-0.528
	87.30		-1.176E-01	1.675E-01	2.468E-01	3.389E-02	-0.476
	238.63	*	-1.170E-02	3.733E-02	5.963E-02	7.879E-03	-0.196
	300.09		-2.106E-01	4.136E-01	6.722E-01	9.803E-02	-0.313
PO-212	74.81		4.081E-02	1.444E-01	2.277E-01	2.826E-02	0.179
	77.11		-6.577E-02	8.220E-02	1.246E-01	1.042E-02	-0.528
	87.30		-1.176E-01	1.675E-01	2.468E-01	3.389E-02	-0.476
	115.19		2.593E-01	1.984E+00	3.183E+00	2.637E-01	0.081
	238.63	*	-1.170E-02	3.733E-02	5.963E-02	7.879E-03	-0.196
	300.09		-2.106E-01	4.136E-01	6.722E-01	9.803E-02	-0.313
BI-214	609.31	*	7.597E-05	4.760E-02	7.889E-02	9.173E-03	0.001
	1120.29		-5.197E-02	1.584E-01	2.525E-01	2.789E-02	-0.206
	1764.49		-9.050E-02	1.865E-01	3.117E-01	2.597E-02	-0.290
PB-214	74.81		7.032E-02	2.488E-01	3.924E-01	4.325E-02	0.179
	77.11		-1.128E-01	1.412E-01	2.136E-01	2.416E-02	-0.528
	87.30		-2.014E-01	2.867E-01	4.228E-01	5.143E-02	-0.476
	241.98		-2.700E-01	2.072E-01	3.043E-01	4.184E-02	-0.887
	295.21		-5.908E-02	8.185E-02	1.227E-01	1.827E-02	-0.482
	351.92	*	-4.322E-03	4.691E-02	7.413E-02	9.449E-03	-0.058
PO-214	74.81		7.032E-02	2.488E-01	3.924E-01	4.325E-02	0.179
	77.11		-1.128E-01	1.412E-01	2.136E-01	2.416E-02	-0.528
	87.30		-2.014E-01	2.867E-01	4.228E-01	5.143E-02	-0.476
	241.98		-2.700E-01	2.072E-01	3.043E-01	4.184E-02	-0.887
	295.21		-5.908E-02	8.185E-02	1.227E-01	1.827E-02	-0.482
	351.92	*	-4.322E-03	4.691E-02	7.413E-02	9.449E-03	-0.058
PO-215	81.07		-6.643E-02	8.574E-02	1.325E-01	1.158E-02	-0.502
	83.78		1.829E-02	5.324E-02	8.470E-02	7.639E-03	0.216
	94.90		-4.116E-01	1.387E-01	1.805E-01	1.613E-02	-2.281
	122.32		5.087E-01	9.779E-01	1.598E+00	1.422E-01	0.318
	144.24		-1.042E-01	3.952E-01	6.257E-01	6.194E-02	-0.167
	154.21		-7.216E-03	2.102E-01	3.517E-01	3.552E-02	-0.021
	269.46		-1.042E-01	1.100E-01	1.639E-01	2.251E-02	-0.636
	323.87	*	-3.380E-01	3.900E-01	6.070E-01	1.206E-01	-0.557
	338.28		-2.108E-01	5.944E-01	9.193E-01	1.360E-01	-0.229
	445.03		5.001E-01	1.235E+00	2.073E+00	2.663E-01	0.241
PO-216	74.81		4.081E-02	1.444E-01	2.277E-01	2.826E-02	0.179
	77.11		-6.577E-02	8.220E-02	1.246E-01	1.042E-02	-0.528

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	87.30		-1.176E-01	1.675E-01	2.468E-01	3.389E-02	-0.476
	238.63	*	-1.170E-02	3.733E-02	5.963E-02	7.879E-03	-0.196
	300.09		-2.106E-01	4.136E-01	6.722E-01	9.803E-02	-0.313
PO-218	74.81		7.032E-02	2.488E-01	3.924E-01	4.325E-02	0.179
	77.11		-1.128E-01	1.412E-01	2.136E-01	2.416E-02	-0.528
	87.30		-2.014E-01	2.867E-01	4.228E-01	5.143E-02	-0.476
	241.98		-2.700E-01	2.072E-01	3.043E-01	4.184E-02	-0.887
	295.21		-5.908E-02	8.185E-02	1.227E-01	1.827E-02	-0.482
	351.92	*	-4.322E-03	4.691E-02	7.413E-02	9.449E-03	-0.058
RN-219	271.23		-2.359E-02	1.360E-01	2.155E-01	3.193E-02	-0.109
	401.81	*	4.771E-03	2.492E-01	4.096E-01	6.337E-02	0.012
RN-220	549.76	*	-2.101E+00	1.306E+01	2.151E+01	2.192E+00	-0.098
RA-223	81.07		-6.643E-02	8.574E-02	1.325E-01	1.158E-02	-0.502
	83.78		1.829E-02	5.324E-02	8.470E-02	7.639E-03	0.216
	94.90		-4.116E-01	1.387E-01	1.805E-01	1.613E-02	-2.281
	122.32		5.087E-01	9.779E-01	1.598E+00	1.422E-01	0.318
	144.24		-1.042E-01	3.952E-01	6.257E-01	6.194E-02	-0.167
	154.21		-7.216E-03	2.102E-01	3.517E-01	3.552E-02	-0.021
	269.46		-1.042E-01	1.100E-01	1.639E-01	2.251E-02	-0.636
	323.87	*	-3.380E-01	3.900E-01	6.070E-01	1.206E-01	-0.557
	338.28		-2.108E-01	5.944E-01	9.193E-01	1.360E-01	-0.229
	445.03		5.001E-01	1.235E+00	2.073E+00	2.663E-01	0.241
RA-224	240.98	*	7.666E-02	3.842E-01	6.293E-01	7.877E-02	0.122
RA-226	609.31	*	7.597E-05	4.760E-02	7.889E-02	9.173E-03	0.001
	1120.29		-5.197E-02	1.584E-01	2.525E-01	2.789E-02	-0.206
	1764.49		-9.050E-02	1.865E-01	3.117E-01	2.597E-02	-0.290
AC-227	79.80		3.988E-01	6.344E-01	1.068E+00	2.297E-01	0.373
	236.00		-1.343E-01	1.365E-01	2.068E-01	3.119E-02	-0.650
	256.20	*	-4.852E-02	2.307E-01	3.665E-01	6.689E-02	-0.132
	286.10		-3.091E-01	9.090E-01	1.414E+00	2.410E-01	-0.219
	299.80		-4.164E-01	7.610E-01	1.229E+00	2.489E-01	-0.339
	304.40		1.135E-01	1.009E+00	1.707E+00	3.580E-01	0.066
	334.20		-9.451E-01	1.350E+00	2.129E+00	4.506E-01	-0.444
TH-227	79.80		3.988E-01	6.345E-01	1.068E+00	2.326E-01	0.373
	94.00		-2.634E+00	1.269E+00	1.790E+00	3.927E-01	-1.471
	236.00		-1.343E-01	1.363E-01	2.068E-01	2.927E-02	-0.650
	256.20	*	-4.852E-02	2.307E-01	3.665E-01	7.545E-02	-0.132
	286.10		-3.091E-01	9.596E-01	1.414E+00	1.427E+00	-0.219
	299.80		-4.164E-01	7.610E-01	1.229E+00	2.489E-01	-0.339
	304.40		1.135E-01	1.009E+00	1.707E+00	3.580E-01	0.066
	334.20		-9.451E-01	1.350E+00	2.129E+00	4.506E-01	-0.444
AC-228	338.32		-5.255E-02	1.438E-01	2.197E-01	9.243E-02	-0.239
	911.07	*	-2.530E-02	8.425E-02	1.329E-01	1.761E-02	-0.190
	969.11		-9.580E-03	1.371E-01	2.261E-01	5.461E-02	-0.042
RA-228	338.32		-5.255E-02	1.438E-01	2.197E-01	9.243E-02	-0.239
	911.07	*	-2.530E-02	8.425E-02	1.329E-01	1.761E-02	-0.190
	969.11		-9.580E-03	1.371E-01	2.261E-01	5.461E-02	-0.042
TH-228	74.81		4.112E-02	1.455E-01	2.295E-01	1.891E-02	0.179
	77.11		-6.627E-02	8.282E-02	1.255E-01	1.050E-02	-0.528

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		87.30		-1.185E-01	1.684E-01	2.487E-01	2.340E-02	-0.476
		238.63	*	-1.178E-02	3.762E-02	6.009E-02	7.939E-03	-0.196
		300.09		-2.122E-01	4.348E-01	6.773E-01	4.074E-01	-0.313
TH-229		85.43		-5.128E-02	8.054E-02	1.202E-01	1.105E-02	-0.427
		88.47		1.305E-02	4.853E-02	7.641E-02	7.218E-03	0.171
		100.00		-1.636E-02	9.422E-02	1.499E-01	1.300E-02	-0.109
		193.63	*	-3.332E-01	2.743E-01	4.153E-01	4.465E-02	-0.802
		210.97		1.040E-01	4.135E-01	6.864E-01	7.815E-02	0.152
TH-230		609.31	*	7.597E-05	4.760E-02	7.889E-02	9.173E-03	0.001
		1120.29		-5.197E-02	1.584E-01	2.524E-01	2.789E-02	-0.206
		1764.49		-9.050E-02	1.865E-01	3.117E-01	2.597E-02	-0.290
PA-231		283.67	*	-7.326E-01	9.296E-01	1.387E+00	2.591E-01	-0.528
		301.29		-2.801E-02	2.920E-01	4.878E-01	7.757E-02	-0.057
TH-231		81.07		-6.643E-02	8.574E-02	1.325E-01	1.158E-02	-0.502
		83.78		1.829E-02	5.324E-02	8.470E-02	7.639E-03	0.216
		94.90		-4.116E-01	1.387E-01	1.805E-01	1.613E-02	-2.281
		122.32		5.087E-01	9.779E-01	1.598E+00	1.422E-01	0.318
		144.24		-1.042E-01	3.952E-01	6.257E-01	6.194E-02	-0.167
		154.21		-7.216E-03	2.102E-01	3.517E-01	3.552E-02	-0.021
		269.46		-1.042E-01	1.100E-01	1.639E-01	2.251E-02	-0.636
		323.87	*	-3.380E-01	3.900E-01	6.070E-01	1.206E-01	-0.557
		338.28		-2.108E-01	5.944E-01	9.193E-01	1.360E-01	-0.229
		445.03		5.001E-01	1.235E+00	2.073E+00	2.663E-01	0.241
U-231		84.21		1.954E-01	6.728E-01	1.068E+00	9.684E-02	0.183
		92.29		-7.706E-02	3.312E-01	5.746E-01	5.240E-02	-0.134
		95.87	*	-3.576E-01	1.739E-01	2.428E-01	2.156E-02	-1.473
		108.00		-1.320E-01	3.166E-01	4.932E-01	4.146E-02	-0.268
TH-232		338.32		-5.255E-02	1.422E-01	2.197E-01	2.613E-02	-0.239
		911.07	*	-2.530E-02	8.425E-02	1.329E-01	1.761E-02	-0.190
		969.11		-9.580E-03	1.371E-01	2.261E-01	5.461E-02	-0.042
PA-233		75.28		2.634E-01	1.243E+00	1.955E+00	2.955E-01	0.135
		86.59		-5.153E-01	7.296E-01	1.061E+00	2.870E-01	-0.486
		300.12		-1.067E-01	2.141E-01	3.478E-01	6.271E-02	-0.307
		311.98	*	9.680E-04	3.550E-02	5.962E-02	7.810E-03	0.016
		340.50		3.805E-02	3.293E-01	5.519E-01	1.389E-01	0.069
		398.62		7.118E-01	1.235E+00	2.084E+00	5.600E-01	0.342
		415.76		-4.704E-01	9.108E-01	1.420E+00	3.111E-01	-0.331
PA-234	+	63.00		1.032E+00	1.231E+00	1.203E+00	1.782E-01	0.858
		94.67		-1.248E-01	9.117E-02	1.341E-01	1.694E-02	-0.931
		98.44		-7.823E-03	4.675E-02	7.417E-02	4.139E-02	-0.105
		99.86		-5.659E-02	2.377E-01	3.766E-01	3.267E-02	-0.150
		111.00		1.128E-01	1.023E-01	1.724E-01	2.051E-02	0.654
		131.20		3.576E-02	5.206E-02	9.127E-02	7.729E-03	0.392
		152.70		-1.508E-01	1.731E-01	2.735E-01	4.750E-02	-0.551
	+	186.00		2.325E-01	9.818E-01	1.338E+00	4.253E-01	0.174
		226.40		-8.936E-02	2.226E-01	3.526E-01	5.498E-02	-0.253
		227.20		-1.689E-01	2.361E-01	3.653E-01	4.381E-02	-0.462
		248.90		-1.989E-01	4.917E-01	7.702E-01	1.875E-01	-0.258
		293.70		-1.833E-01	3.898E-01	5.946E-01	1.202E-01	-0.308

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		369.80		3.155E-01	4.922E-01	8.405E-01	1.896E-01	0.375
		568.70		-1.160E-01	6.270E-01	9.573E-01	9.830E-02	-0.121
		569.50		-9.240E-02	1.695E-01	2.501E-01	2.569E-02	-0.369
		574.00		-6.882E-01	9.913E-01	1.300E+00	1.337E-01	-0.529
		699.00		4.067E-02	4.424E-01	7.276E-01	1.463E-01	0.056
		706.10		8.872E-02	5.670E-01	9.358E-01	4.216E-01	0.095
		733.00		-2.982E-01	2.135E-01	2.778E-01	6.429E-02	-1.074
		742.81		-1.738E-01	7.373E-01	1.153E+00	7.791E-01	-0.151
		796.30		2.115E-01	4.701E-01	7.867E-01	2.196E-01	0.269
		805.60		-4.223E-01	6.588E-01	8.370E-01	2.630E-01	-0.505
		819.60		-6.098E-02	6.310E-01	1.044E+00	4.036E-01	-0.058
		826.30		1.517E-01	4.196E-01	7.162E-01	3.243E-01	0.212
		831.60		-1.159E-01	3.262E-01	5.228E-01	1.602E-01	-0.222
		876.40		2.604E-01	5.059E-01	7.558E-01	7.788E-01	0.345
		880.51		-3.535E-02	1.438E-01	2.325E-01	2.600E-02	-0.152
		883.24		-2.583E-02	1.477E-01	2.389E-01	1.615E-01	-0.108
		899.00		3.269E-01	4.384E-01	7.417E-01	3.285E-01	0.441
		925.00		-3.922E-01	5.884E-01	8.956E-01	9.854E-02	-0.438
		926.50		-2.106E-02	8.190E-02	1.308E-01	3.426E-02	-0.161
		946.00	*	4.005E-02	1.517E-01	2.569E-01	5.107E-02	0.156
		949.00		1.495E-01	2.123E-01	3.764E-01	4.067E-02	0.397
		980.50		2.045E-01	3.948E-01	6.823E-01	7.175E-02	0.300
		1394.10		-2.996E-01	6.346E-01	9.144E-01	5.956E-01	-0.328
PA-234M		766.42		-4.677E+00	6.536E+00	9.116E+00	4.666E+00	-0.513
		1001.03	*	-1.520E+00	2.690E+00	4.155E+00	4.761E-01	-0.366
TH-234	+	63.29	*	8.851E-01	1.059E+00	1.019E+00	1.774E-01	0.869
		92.38		-6.534E-02	3.009E-01	5.220E-01	9.565E-02	-0.125
U-234		609.31	*	7.597E-05	4.760E-02	7.889E-02	9.173E-03	0.001
		1120.29		-5.197E-02	1.584E-01	2.524E-01	2.789E-02	-0.206
		1764.49		-9.050E-02	1.865E-01	3.117E-01	2.597E-02	-0.290
U-235		89.95		-2.107E+00	8.757E-01	7.519E-01	2.335E-01	-2.802
		93.35		-1.684E-01	3.614E-01	6.157E-01	1.734E-01	-0.274
		105.00		-4.120E-01	5.472E-01	8.113E-01	2.418E-01	-0.508
		143.76	*	-6.400E-02	1.239E-01	1.931E-01	3.407E-02	-0.331
		163.35		3.454E-01	2.729E-01	4.700E-01	9.206E-02	0.735
	+	185.71		8.612E-03	3.627E-02	4.990E-02	5.225E-03	0.173
		205.31		-9.052E-03	3.160E-01	4.932E-01	1.004E-01	-0.018
NP-236		94.67		-9.376E-02	6.867E-02	1.019E-01	9.121E-03	-0.920
		98.44		-5.916E-03	3.519E-02	5.607E-02	4.901E-03	-0.106
		111.00		8.529E-02	7.706E-02	1.304E-01	1.088E-02	0.654
		160.31	*	-4.815E-02	5.087E-02	7.292E-02	6.970E-03	-0.660
NP-237		86.50	*	-3.224E-02	1.054E-01	1.597E-01	3.616E-02	-0.202
		95.87		-1.093E+00	5.885E-01	7.423E-01	1.835E-01	-1.473
U-238	+	63.29	*	8.851E-01	1.059E+00	1.019E+00	1.774E-01	0.869
		92.38		-6.534E-02	3.007E-01	5.220E-01	4.756E-02	-0.125
NP-239		99.55		-3.938E-02	7.994E-02	1.245E-01	1.082E-02	-0.316
		117.00	*	-1.291E-02	1.025E-01	1.617E-01	1.336E-02	-0.080
		209.75		-2.197E-01	4.292E-01	6.817E-01	7.730E-02	-0.322
		228.18		-1.009E-01	1.262E-01	1.940E-01	2.334E-02	-0.520

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	277.60		2.632E-02	1.090E-01	1.770E-01	2.467E-02	0.149
	334.30		-4.625E-01	7.547E-01	1.207E+00	1.456E-01	-0.383
AM-241	59.54	*	4.011E-02	6.905E-02	1.079E-01	8.431E-03	0.372
AM-243	74.67	*	4.373E-03	2.334E-02	3.658E-02	2.982E-03	0.120
	86.72		-3.093E+00	4.023E+00	5.920E+00	5.532E-01	-0.522
	117.66		-5.236E-01	2.080E+00	3.253E+00	2.687E-01	-0.161
	142.18		-7.555E-01	9.335E+00	1.567E+01	1.384E+00	-0.048
CM-243	99.55		-4.051E-02	8.221E-02	1.281E-01	1.113E-02	-0.316
	103.76	*	1.447E-02	4.859E-02	7.940E-02	6.769E-03	0.182
	117.00		-1.327E-02	1.054E-01	1.663E-01	1.374E-02	-0.080
	209.75		-2.164E-01	4.229E-01	6.717E-01	7.616E-02	-0.322
	228.18		-1.019E-01	1.274E-01	1.959E-01	2.357E-02	-0.520
	277.60		2.652E-02	1.098E-01	1.783E-01	2.486E-02	0.149
AM-246	798.80		-3.056E-02	7.589E-02	1.171E-01	1.292E-02	-0.261
	1036.00		3.259E-02	1.517E-01	2.539E-01	2.521E-02	0.128
	1062.04		8.411E-02	1.181E-01	2.072E-01	1.993E-02	0.406
	1078.86	*	-4.639E-02	6.721E-02	1.023E-01	9.621E-03	-0.454
CM-247	278.00		7.055E-02	4.535E-01	7.327E-01	1.023E-01	0.096
	287.40		2.361E-02	7.322E-01	1.171E+00	1.611E-01	0.020
	402.60	*	7.459E-03	2.191E-02	3.677E-02	3.450E-03	0.203
CF-249	252.85		2.405E-01	5.157E-01	8.551E-01	1.110E-01	0.281
	333.44		-4.997E-02	9.698E-02	1.562E-01	1.890E-02	-0.320
	387.95	*	-1.215E-02	2.252E-02	3.556E-02	3.380E-03	-0.342
CF-251	176.60	*	4.624E-03	7.679E-02	1.227E-01	1.247E-02	0.038
	227.00		-1.059E-01	2.072E-01	3.255E-01	3.902E-02	-0.325
	285.00		-8.617E-01	1.051E+00	1.571E+00	2.173E-01	-0.549

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004732		
Acquisition date	: 4-JAN-2010 14:05:52	Detector SN#	:
Detector ID	: GAM22	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:00.99	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 28-DEC-2009 00:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004732	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3786E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 2-DEC-2009 16:47:28	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
TL-208	1.691E-02	3.594E-02	3.039E-02	0.000E+00
ANH-511	6.883E-02	3.928E-02	2.386E-02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)	
BE-7	3.413E-02	1.574E-01	2.708E-01	0.000E+00 NOT IDENT.
NA-22	-4.296E-03	1.807E-02	2.969E-02	0.000E+00 NOT IDENT.
NA-24	0.000E+00	8.920E+01	0.000E+00	0.000E+00 SHORT HLIF
AL-26	-6.436E-03	1.406E-02	2.106E-02	0.000E+00 NOT IDENT.
K-40	-1.427E-01	2.629E-01	4.513E-01	0.000E+00 NOT IDENT.
TI-44	-1.061E-02	1.418E-02	2.330E-02	0.000E+00 NOT IDENT.
SC-46	9.418E-03	1.804E-02	3.254E-02	0.000E+00 NOT IDENT.
V-48	1.073E-02	2.664E-02	4.699E-02	0.000E+00 NOT IDENT.
CR-51	1.384E-02	1.764E-01	3.127E-01	0.000E+00 NOT IDENT.
MN-52	-4.311E-03	5.045E-02	8.347E-02	0.000E+00 NOT IDENT.
MN-54	1.770E-02	1.818E-02	3.394E-02	0.000E+00 NOT IDENT.
CO-56	5.915E-03	1.856E-02	3.296E-02	0.000E+00 NOT IDENT.
CO-57	8.009E-03	1.364E-02	2.402E-02	0.000E+00 NOT IDENT.
CO-58	2.692E-03	1.707E-02	3.004E-02	0.000E+00 NOT IDENT.
FE-59	1.085E-02	3.350E-02	5.843E-02	0.000E+00 NOT IDENT.
CO-60	-1.045E-02	2.087E-02	3.301E-02	0.000E+00 NOT IDENT.
ZN-65	2.195E-02	4.429E-02	7.767E-02	0.000E+00 NOT IDENT.
GE-68	-2.502E-01	5.589E-01	8.823E-01	0.000E+00 NOT IDENT.
AS-73	-2.708E-01	3.503E-01	5.749E-01	0.000E+00 NOT IDENT.
AS-74	-1.677E-02	3.716E-02	6.179E-02	0.000E+00 NOT IDENT.
SE-75	2.001E-02	2.456E-02	4.369E-02	0.000E+00 NOT IDENT.
BR-77	2.224E-01	7.021E-01	1.139E+00	0.000E+00 NOT IDENT.
SR-82	-1.036E-01	1.588E-01	2.473E-01	0.000E+00 NOT IDENT.
RB-83	9.589E-03	3.905E-02	6.297E-02	0.000E+00 NOT IDENT.
RB-84	-8.581E-03	3.083E-02	5.141E-02	0.000E+00 NOT IDENT.

KR-85	0.000E+00	5.556E+00	1.007E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.632E-02	4.772E-02	0.000E+00	NOT IDENT.
RB-86	-1.175E-01	2.818E-01	4.477E-01	0.000E+00	NOT IDENT.
Y-88	1.693E-02	1.954E-02	3.708E-02	0.000E+00	NOT IDENT.
ZR-88	1.068E-02	1.551E-02	2.806E-02	0.000E+00	NOT IDENT.
Y-91	1.074E+00	6.931E+00	1.207E+01	0.000E+00	NOT IDENT.
NB-94	-1.214E-02	1.945E-02	3.120E-02	0.000E+00	NOT IDENT.
NB-95	-6.198E-03	2.057E-02	3.354E-02	0.000E+00	NOT IDENT.
NB-95M	-9.005E-02	6.722E-02	1.054E-01	0.000E+00	NOT IDENT.
ZR-95	-2.553E-02	3.576E-02	5.574E-02	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.864E+01	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	7.447E+02	0.000E+00	0.000E+00	SHORT HLIF
MO-99	6.766E-01	9.210E-01	1.648E+00	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.880E+07	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.087E-03	2.071E-02	3.343E-02	0.000E+00	NOT IDENT.
RH-102	2.629E-04	1.550E-02	2.626E-02	0.000E+00	NOT IDENT.
RU-103	-9.323E-03	2.018E-02	3.257E-02	0.000E+00	NOT IDENT.
RH-106	8.070E-02	1.640E-01	2.930E-01	0.000E+00	FAIL ABUN
RU-106	8.070E-02	1.638E-01	2.930E-01	0.000E+00	FAIL ABUN
AG-108M	5.824E-03	1.771E-02	3.102E-02	0.000E+00	NOT IDENT.
CD-109	-1.554E-01	3.531E-01	5.746E-01	0.000E+00	NOT IDENT.
AG-110M	-6.103E-04	1.663E-02	2.831E-02	0.000E+00	NOT IDENT.
IN-111	2.647E-02	9.395E-02	1.638E-01	0.000E+00	NOT IDENT.
IN-113M	1.200E-02	2.314E-02	4.140E-02	0.000E+00	NOT IDENT.
SN-113	1.200E-02	2.314E-02	4.140E-02	0.000E+00	NOT IDENT.
IN-114M	5.956E-02	9.222E-02	1.495E-01	0.000E+00	NOT IDENT.
CD-115	-4.491E-01	6.182E-01	9.785E-01	0.000E+00	NOT IDENT.
SN-117M	-7.364E-03	2.256E-02	3.574E-02	0.000E+00	NOT IDENT.
SB-122	-3.936E-02	1.545E-01	2.629E-01	0.000E+00	NOT IDENT.
I-123	0.000E+00	2.530E+02	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-7.599E-03	1.664E-02	2.622E-02	0.000E+00	NOT IDENT.
I-124	-9.353E-02	1.109E-01	1.786E-01	0.000E+00	NOT IDENT.
SB-124	8.594E-03	4.539E-02	7.874E-02	0.000E+00	NOT IDENT.
SB-125	1.524E-02	5.297E-02	9.251E-02	0.000E+00	NOT IDENT.
TE-125M	9.556E-01	4.507E+00	7.847E+00	0.000E+00	NOT IDENT.
I-126	3.005E-02	5.870E-02	1.047E-01	0.000E+00	NOT IDENT.
SB-126	2.906E-02	4.743E-02	8.466E-02	0.000E+00	NOT IDENT.
SN-126	-2.485E-02	3.535E-02	5.648E-02	0.000E+00	FAIL ABUN
SB-127	-2.295E-04	1.859E-01	3.161E-01	0.000E+00	NOT IDENT.
XE-127	-1.939E-02	2.277E-02	3.775E-02	0.000E+00	NOT IDENT.
I-131	1.878E-03	3.402E-02	5.945E-02	0.000E+00	NOT IDENT.
TE-132	-6.233E-02	7.652E-02	1.243E-01	0.000E+00	NOT IDENT.
BA-133	-2.195E-02	2.445E-02	3.975E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	7.694E+00	0.000E+00	0.000E+00	SHORT HLIF
CS-134	8.552E-03	2.486E-02	4.086E-02	0.000E+00	NOT IDENT.
CS-135	-2.005E-02	9.018E-02	1.510E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	1.386E+07	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-9.913E-03	3.679E-02	5.999E-02	0.000E+00	NOT IDENT.
BA-137M	-4.963E-03	1.711E-02	2.838E-02	0.000E+00	NOT IDENT.
CS-137	-5.246E-03	1.809E-02	3.000E-02	0.000E+00	NOT IDENT.
CE-139	-1.148E-02	1.574E-02	2.690E-02	0.000E+00	NOT IDENT.
BA-140	-2.135E-02	8.677E-02	1.480E-01	0.000E+00	NOT IDENT.
LA-140	-2.143E-04	3.542E-02	6.023E-02	0.000E+00	NOT IDENT.
CE-141	1.735E-02	2.801E-02	5.193E-02	0.000E+00	NOT IDENT.
CE-143	-2.796E-02	1.528E+00	2.717E+00	0.000E+00	NOT IDENT.
CE-144	-5.508E-02	9.789E-02	1.717E-01	0.000E+00	NOT IDENT.
PM-144	2.934E-02	2.036E-02	3.787E-02	0.000E+00	NOT IDENT.
PR-144	1.981E+00	1.374E+00	2.556E+00	0.000E+00	NOT IDENT.
PM-146	4.518E-03	2.361E-02	4.075E-02	0.000E+00	NOT IDENT.
ND-147	1.115E-01	1.851E-01	3.372E-01	0.000E+00	NOT IDENT.
PM-149	-3.141E+00	5.118E+00	8.219E+00	0.000E+00	NOT IDENT.
EU-152	-3.232E-04	5.372E-02	9.406E-02	0.000E+00	NOT IDENT.
GD-153	1.304E-02	3.769E-02	6.682E-02	0.000E+00	NOT IDENT.
EU-154	-1.270E-02	5.058E-02	8.293E-02	0.000E+00	NOT IDENT.
EU-155	-4.338E-02	5.299E-02	8.637E-02	0.000E+00	NOT IDENT.
TB-160	-1.159E-02	6.691E-02	1.129E-01	0.000E+00	NOT IDENT.
HO-166M	2.231E-02	3.134E-02	5.636E-02	0.000E+00	FAIL ABUN
TM-171	-1.053E+01	1.251E+01	1.841E+01	0.000E+00	NOT IDENT.
LU-176	-6.649E-04	1.329E-02	2.348E-02	0.000E+00	NOT IDENT.
LU-177	-7.463E-02	2.702E-01	4.636E-01	0.000E+00	NOT IDENT.
LU-177M	2.057E-02	9.203E-02	1.607E-01	0.000E+00	NOT IDENT.
HF-181	-1.016E-02	2.009E-02	3.239E-02	0.000E+00	FAIL ABUN
W-181	0.000E+00	2.961E-01	2.426E-01	0.000E+00	FAIL ABUN
TA-182	-6.031E-02	7.798E-02	1.206E-01	0.000E+00	NOT IDENT.
RE-183	3.040E-02	5.695E-02	1.041E-01	0.000E+00	NOT IDENT.
RE-184	6.214E-02	1.306E-01	2.294E-01	0.000E+00	NOT IDENT.
OS-185	-2.161E-02	2.134E-02	3.289E-02	0.000E+00	NOT IDENT.
RE-188	6.839E-02	8.426E-02	1.566E-01	0.000E+00	NOT IDENT.

W-188	4.922E-01	3.861E+00	6.926E+00	0.000E+00	FAIL ABUN
IR-192	-1.912E-03	1.804E-02	3.166E-02	0.000E+00	NOT IDENT.
AU-195	-3.049E-02	1.094E-01	1.867E-01	0.000E+00	FAIL ABUN
TL-200	-8.035E-02	2.123E+00	3.684E+00	0.000E+00	NOT IDENT.
TL-201	-1.081E+00	6.918E-01	1.113E+00	0.000E+00	NOT IDENT.
TL-202	7.779E-03	2.329E-02	4.081E-02	0.000E+00	NOT IDENT.
HG-203	1.350E-02	2.142E-02	3.754E-02	0.000E+00	NOT IDENT.
BI-207	1.000E-02	2.679E-02	4.677E-02	0.000E+00	NOT IDENT.
TL-207	-3.380E-01	3.822E-01	6.273E-01	0.000E+00	NOT IDENT.
PO-209	9.639E-01	3.700E+00	6.504E+00	0.000E+00	NOT IDENT.
BI-210	4.531E-02	1.631E+00	2.873E+00	0.000E+00	NOT IDENT.
PB-210	4.531E-02	1.631E+00	2.873E+00	0.000E+00	NOT IDENT.
PO-210	4.531E-02	1.631E+00	2.873E+00	0.000E+00	NOT IDENT.
BI-211	-4.182E-02	1.328E-01	2.181E-01	0.000E+00	NOT IDENT.
PB-211	3.375E-01	5.562E-01	9.288E-01	0.000E+00	NOT IDENT.
BI-212	8.584E-02	1.524E-01	2.571E-01	0.000E+00	NOT IDENT.
PB-212	-1.170E-02	3.659E-02	6.198E-02	0.000E+00	NOT IDENT.
PO-212	-1.170E-02	3.659E-02	6.198E-02	0.000E+00	NOT IDENT.
BI-214	7.597E-05	4.664E-02	8.053E-02	0.000E+00	NOT IDENT.
PB-214	-4.322E-03	4.597E-02	7.648E-02	0.000E+00	NOT IDENT.
PO-214	-4.322E-03	4.597E-02	7.648E-02	0.000E+00	NOT IDENT.
PO-215	-3.380E-01	3.822E-01	6.273E-01	0.000E+00	NOT IDENT.
PO-216	-1.170E-02	3.659E-02	6.198E-02	0.000E+00	NOT IDENT.
PO-218	-4.322E-03	4.597E-02	7.648E-02	0.000E+00	NOT IDENT.
RN-219	4.771E-03	2.443E-01	4.215E-01	0.000E+00	NOT IDENT.
RN-220	-2.101E+00	1.280E+01	2.200E+01	0.000E+00	NOT IDENT.
RA-223	-3.380E-01	3.822E-01	6.273E-01	0.000E+00	NOT IDENT.
RA-224	7.666E-02	3.765E-01	6.539E-01	0.000E+00	NOT IDENT.
RA-226	7.597E-05	4.664E-02	8.053E-02	0.000E+00	NOT IDENT.
AC-227	-4.852E-02	2.261E-01	3.805E-01	0.000E+00	NOT IDENT.
TH-227	-4.852E-02	2.261E-01	3.805E-01	0.000E+00	NOT IDENT.
AC-228	-2.530E-02	8.257E-02	1.346E-01	0.000E+00	NOT IDENT.
RA-228	-2.530E-02	8.257E-02	1.346E-01	0.000E+00	NOT IDENT.
TH-228	-1.178E-02	3.686E-02	6.245E-02	0.000E+00	NOT IDENT.
TH-229	-3.332E-01	2.688E-01	4.334E-01	0.000E+00	NOT IDENT.
TH-230	7.597E-05	4.664E-02	8.053E-02	0.000E+00	NOT IDENT.
PA-231	-7.326E-01	9.111E-01	1.437E+00	0.000E+00	NOT IDENT.
TH-231	-3.380E-01	3.822E-01	6.273E-01	0.000E+00	NOT IDENT.
U-231	-3.576E-01	1.704E-01	2.567E-01	0.000E+00	NOT IDENT.
TH-232	-2.530E-02	8.257E-02	1.346E-01	0.000E+00	NOT IDENT.
PA-233	9.680E-04	3.479E-02	6.165E-02	0.000E+00	NOT IDENT.
PA-234	4.005E-02	1.487E-01	2.600E-01	0.000E+00	FAIL ABUN
PA-234M	-1.520E+00	2.636E+00	4.200E+00	0.000E+00	NOT IDENT.
TH-234	8.851E-01	1.038E+00	1.085E+00	0.000E+00	FAIL ABUN
U-234	7.597E-05	4.664E-02	8.053E-02	0.000E+00	NOT IDENT.
U-235	-6.400E-02	1.214E-01	2.027E-01	0.000E+00	FAIL ABUN
NP-236	-4.815E-02	4.985E-02	7.636E-02	0.000E+00	NOT IDENT.
NP-237	-3.224E-02	1.033E-01	1.692E-01	0.000E+00	NOT IDENT.
U-238	8.851E-01	1.038E+00	1.085E+00	0.000E+00	FAIL ABUN
NP-239	-1.291E-02	1.005E-01	1.703E-01	0.000E+00	NOT IDENT.
AM-241	4.011E-02	6.767E-02	1.150E-01	0.000E+00	NOT IDENT.
AM-243	4.373E-03	2.287E-02	3.885E-02	0.000E+00	NOT IDENT.
CM-243	1.447E-02	4.762E-02	8.382E-02	0.000E+00	NOT IDENT.
AM-246	-4.639E-02	6.587E-02	1.032E-01	0.000E+00	NOT IDENT.
CM-247	7.459E-03	2.147E-02	3.784E-02	0.000E+00	NOT IDENT.
CF-249	-1.215E-02	2.207E-02	3.662E-02	0.000E+00	NOT IDENT.
CF-251	4.624E-03	7.525E-02	1.283E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:02:10.98

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004732.CNF;1
Sample date : 28-DEC-2009 00:00:00 Acquisition date : 4-JAN-2010 14:05:52.
Sample ID : G1202004732 Sample quantity : 1.37860E+02 GRAM
Detector name : GAM22 Detector geometry: CAN
Elapsed live time: 0 02:00:00.00 Elapsed real time: 0 02:00:00.99 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
TL-208	277.35	------	6.80	6.182E+00	------ Line Not Found		------
	510.84	109	21.60	4.298E+00	3.187E-01	3.187E-01	58.83
	583.14	21	84.20*	3.929E+00	1.691E-02	1.691E-02	216.84
	860.37	------	12.46	2.924E+00	------ Line Not Found		------
ANH-511	511.00	109	100.00*	4.298E+00	6.883E-02	6.883E-02	58.24

Flag: "*" = Keyline

Sample ID : G1202004732 Acquisition date : 4-JAN-2010 14:05:52

Total number of lines in spectrum	4	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	4	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
TL-208	1.41E+10Y	1.00	1.691E-02	1.691E-02	3.667E-02	216.84	
ANH-511	1.00E+09Y	1.00	6.883E-02	6.883E-02	4.009E-02	58.24	
Total Activity :			8.574E-02	8.574E-02			
Grand Total Activity :			8.574E-02	8.574E-02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	64.30	56	198	4.23	128.85	123	14	7.75E-03	****	4.52E+00	T
0	185.83	13	161	1.17	371.68	367	9	1.80E-03	****	7.61E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 6-JAN-2010 12:02:15.94

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004732.CNF;1		
Acquisition date	: 4-JAN-2010 14:05:52.	Detector SN#	:
Detector ID	: GAM22	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 02:00:00.99	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 28-DEC-2009 00:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004732	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.37860E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 2-DEC-2009 16:47:28.08	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-208	1.691E-02	3.667E-02	2.974E-02	3.225E-03	0.569
ANH-511	6.883E-02	4.009E-02	2.330E-02	2.334E-03	2.955

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.413E-02		1.606E-01	2.641E-01	2.756E-02	0.129
NA-22	-4.296E-03		1.843E-02	2.951E-02	2.544E-03	-0.146
NA-24	-2.654E-05		4.551E-05	Half-Life too short		
AL-26	-6.436E-03		1.435E-02	2.108E-02	1.724E-03	-0.305
K-40	-1.427E-01		2.683E-01	4.499E-01	4.121E-02	-0.317
TI-44	-1.061E-02		1.447E-02	2.196E-02	1.862E-03	-0.483
SC-46	9.418E-03		1.841E-02	3.212E-02	3.595E-03	0.293
V-48	1.073E-02		2.719E-02	4.647E-02	4.874E-03	0.231
CR-51	1.384E-02		1.800E-01	3.025E-01	3.917E-02	0.046
MN-52	-4.311E-03		5.148E-02	8.318E-02	7.433E-03	-0.052

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
MN-54	1.770E-02		1.855E-02	3.346E-02	3.717E-03	0.529
CO-56	5.915E-03		1.894E-02	3.250E-02	3.618E-03	0.182
CO-57	8.009E-03		1.392E-02	2.282E-02	1.882E-03	0.351
CO-58	2.692E-03		1.742E-02	2.960E-02	3.277E-03	0.091
FE-59	1.085E-02		3.419E-02	5.792E-02	5.676E-03	0.187
CO-60	-1.045E-02		2.130E-02	3.285E-02	2.929E-03	-0.318
ZN-65	2.195E-02		4.519E-02	7.701E-02	6.869E-03	0.285
GE-68	-2.502E-01		5.703E-01	8.742E-01	8.241E-02	-0.286
AS-73	-2.708E-01		3.575E-01	5.381E-01	4.066E-02	-0.503
AS-74	-1.677E-02		3.792E-02	6.050E-02	6.271E-03	-0.277
SE-75	2.001E-02		2.507E-02	4.211E-02	5.668E-03	0.475
BR-77	2.224E-01		7.164E-01	1.113E+00	1.120E-01	0.200
SR-82	-1.036E-01		1.621E-01	2.434E-01	2.669E-02	-0.425
RB-83	9.589E-03		3.985E-02	6.150E-02	6.189E-03	0.156
RB-84	-8.581E-03		3.145E-02	5.074E-02	5.675E-03	-0.169
KR-85	2.162E+01		5.670E+00	9.836E+00	9.870E-01	2.198
SR-85	1.024E-01		2.686E-02	4.659E-02	4.675E-03	2.198
RB-86	-1.175E-01		2.875E-01	4.436E-01	4.186E-02	-0.265
Y-88	1.693E-02		1.994E-02	3.714E-02	3.002E-03	0.456
ZR-88	1.068E-02		1.583E-02	2.725E-02	2.537E-03	0.392
Y-91	1.074E+00		7.072E+00	1.198E+01	9.853E-01	0.090
NB-94	-1.214E-02		1.985E-02	3.065E-02	3.285E-03	-0.396
NB-95	-6.198E-03		2.099E-02	3.301E-02	3.610E-03	-0.188
NB-95M	-9.005E-02		6.859E-02	1.013E-01	1.340E-02	-0.889
ZR-95	-2.553E-02		3.649E-02	5.484E-02	6.366E-03	-0.466
NB-97	-6.312E-07		1.461E-05	Half-Life too short		
ZR-97	2.255E-03		3.799E-04	Half-Life too short		
MO-99	6.766E-01		9.398E-01	1.621E+00	2.683E-01	0.417
TC-99M	-7.860E+00		9.593E+00	Half-Life too short		
RH-101	1.087E-03		2.114E-02	3.205E-02	3.496E-03	0.034
RH-102	2.629E-04		1.581E-02	2.560E-02	2.518E-03	0.010
RU-103	-9.323E-03		2.060E-02	3.178E-02	4.770E-03	-0.293
RH-106	8.070E-02		1.674E-01	2.872E-01	4.194E-02	0.281
RU-106	8.070E-02		1.672E-01	2.872E-01	3.000E-02	0.281
AG-108M	5.824E-03		1.807E-02	3.019E-02	2.989E-03	0.193
CD-109	-1.554E-01		3.604E-01	5.427E-01	5.150E-02	-0.286
AG-110M	-6.103E-04		1.697E-02	2.777E-02	2.985E-03	-0.022
IN-111	2.647E-02		9.587E-02	1.576E-01	2.000E-02	0.168
IN-113M	1.200E-02		2.361E-02	4.021E-02	3.840E-03	0.298
SN-113	1.200E-02		2.361E-02	4.021E-02	3.840E-03	0.298
IN-114M	5.956E-02		9.410E-02	1.432E-01	1.522E-02	0.416
CD-115	-4.491E-01		6.308E-01	9.559E-01	9.653E-02	-0.470
SN-117M	-7.364E-03		2.302E-02	3.412E-02	3.236E-03	-0.216
SB-122	-3.936E-02		1.577E-01	2.572E-01	2.636E-02	-0.153
I-123	-1.156E-04		1.291E-04	Half-Life too short		
TE-123M	-7.599E-03		1.698E-02	2.503E-02	2.390E-03	-0.304
I-124	-9.353E-02		1.131E-01	1.749E-01	1.817E-02	-0.535
SB-124	8.594E-03		4.631E-02	7.873E-02	7.003E-03	0.109

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
SB-125	1.524E-02		5.405E-02	9.001E-02	8.733E-03	0.169
TE-125M	9.556E-01		4.599E+00	7.441E+00	7.524E-01	0.128
I-126	3.005E-02		5.990E-02	1.028E-01	1.086E-02	0.292
SB-126	2.906E-02		4.840E-02	8.321E-02	8.973E-03	0.349
SN-126	-2.485E-02		3.607E-02	5.333E-02	5.036E-03	-0.466
SB-127	-2.295E-04		1.897E-01	3.104E-01	3.554E-02	-0.001
XE-127	-1.939E-02		2.324E-02	3.621E-02	4.014E-03	-0.535
I-131	1.878E-03		3.471E-02	5.766E-02	6.371E-03	0.033
TE-132	-6.233E-02		7.808E-02	1.195E-01	2.017E-02	-0.522
BA-133	-2.195E-02		2.495E-02	3.854E-02	5.759E-03	-0.570
I-133	4.919E-06		3.926E-06	Half-Life too short		
CS-134	8.552E-03		2.536E-02	4.024E-02	4.454E-03	0.213
CS-135	-2.005E-02		9.202E-02	1.456E-01	2.105E-02	-0.138
I-135	1.304E+00		7.071E+00	Half-Life too short		
CS-136	-9.913E-03		3.754E-02	5.940E-02	6.005E-03	-0.167
BA-137M	-4.963E-03		1.746E-02	2.785E-02	2.937E-03	-0.178
CS-137	-5.246E-03		1.845E-02	2.944E-02	3.108E-03	-0.178
CE-139	-1.148E-02		1.606E-02	2.570E-02	2.521E-03	-0.447
BA-140	-2.135E-02		8.854E-02	1.446E-01	4.855E-02	-0.148
LA-140	-2.143E-04		3.614E-02	6.015E-02	5.273E-03	-0.004
CE-141	1.735E-02		2.859E-02	4.950E-02	4.506E-03	0.351
CE-143	-2.796E-02		1.559E+00	2.624E+00	6.258E-01	-0.011
CE-144	-5.508E-02		9.988E-02	1.634E-01	2.537E-02	-0.337
PM-144	2.934E-02		2.077E-02	3.720E-02	3.977E-03	0.789
PR-144	1.981E+00		1.402E+00	2.511E+00	2.684E-01	0.789
PM-146	4.518E-03		2.409E-02	3.969E-02	4.612E-03	0.114
ND-147	1.115E-01		1.889E-01	3.295E-01	5.224E-02	0.338
PM-149	-3.141E+00		5.222E+00	7.934E+00	1.500E+00	-0.396
EU-152	-3.232E-04		5.482E-02	9.113E-02	1.095E-02	-0.004
GD-153	1.304E-02		3.846E-02	6.322E-02	5.559E-03	0.206
EU-154	-1.270E-02		5.161E-02	8.245E-02	9.318E-03	-0.154
EU-155	-4.338E-02		5.407E-02	8.184E-02	7.025E-03	-0.530
TB-160	-1.159E-02		6.828E-02	1.114E-01	1.246E-02	-0.104
HO-166M	2.231E-02		3.198E-02	5.538E-02	5.954E-03	0.403
TM-171	-1.053E+01		1.277E+01	1.730E+01	1.307E+00	-0.609
LU-176	-6.649E-04		1.356E-02	2.270E-02	2.977E-03	-0.029
LU-177	-7.463E-02		2.758E-01	4.449E-01	5.022E-02	-0.168
LU-177M	2.057E-02		9.391E-02	1.562E-01	1.477E-02	0.132
HF-181	-1.016E-02		2.050E-02	3.159E-02	3.118E-03	-0.322
W-181	2.546E-01	+	3.021E-01	2.278E-01	1.698E-02	1.117
TA-182	-6.031E-02		7.957E-02	1.198E-01	9.961E-03	-0.504
RE-183	3.040E-02		5.812E-02	9.947E-02	9.596E-03	0.306
RE-184	6.214E-02		1.333E-01	2.210E-01	2.867E-02	0.281
OS-185	-2.161E-02		2.178E-02	3.226E-02	3.390E-03	-0.670
RE-188	6.839E-02		8.598E-02	1.495E-01	1.395E-02	0.457
W-188	4.922E-01		3.940E+00	6.689E+00	9.135E-01	0.074
IR-192	-1.912E-03		1.841E-02	3.062E-02	3.914E-03	-0.062
AU-195	-3.049E-02		1.117E-01	1.767E-01	1.541E-02	-0.173

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TL-200	-8.035E-02		2.166E+00	3.574E+00	3.764E-01	-0.022
TL-201	-1.081E+00		7.060E-01	1.064E+00	1.048E-01	-1.017
TL-202	7.779E-03		2.376E-02	3.973E-02	3.824E-03	0.196
HG-203	1.350E-02		2.186E-02	3.622E-02	5.127E-03	0.373
BI-207	1.000E-02		2.734E-02	4.633E-02	4.448E-03	0.216
TL-207	-3.380E-01		3.900E-01	6.070E-01	1.206E-01	-0.557
PO-209	9.639E-01		3.775E+00	6.421E+00	7.192E-01	0.150
BI-210	4.531E-02		1.664E+00	2.682E+00	2.492E-01	0.017
PB-210	4.531E-02		1.664E+00	2.682E+00	2.492E-01	0.017
PO-210	4.531E-02		1.664E+00	2.682E+00	2.256E-01	0.017
BI-211	-4.182E-02		1.355E-01	2.114E-01	2.466E-02	-0.198
PB-211	3.375E-01		5.675E-01	9.027E-01	5.667E-01	0.374
BI-212	8.584E-02		1.555E-01	2.528E-01	3.019E-02	0.340
PB-212	-1.170E-02		3.733E-02	5.963E-02	7.879E-03	-0.196
PO-212	-1.170E-02		3.733E-02	5.963E-02	7.879E-03	-0.196
BI-214	7.597E-05		4.760E-02	7.889E-02	9.173E-03	0.001
PB-214	-4.322E-03		4.691E-02	7.413E-02	9.449E-03	-0.058
PO-214	-4.322E-03		4.691E-02	7.413E-02	9.449E-03	-0.058
PO-215	-3.380E-01		3.900E-01	6.070E-01	1.206E-01	-0.557
PO-216	-1.170E-02		3.733E-02	5.963E-02	7.879E-03	-0.196
PO-218	-4.322E-03		4.691E-02	7.413E-02	9.449E-03	-0.058
RN-219	4.771E-03		2.492E-01	4.096E-01	6.337E-02	0.012
RN-220	-2.101E+00		1.306E+01	2.151E+01	2.192E+00	-0.098
RA-223	-3.380E-01		3.900E-01	6.070E-01	1.206E-01	-0.557
RA-224	7.666E-02		3.842E-01	6.293E-01	7.877E-02	0.122
RA-226	7.597E-05		4.760E-02	7.889E-02	9.173E-03	0.001
AC-227	-4.852E-02		2.307E-01	3.665E-01	6.689E-02	-0.132
TH-227	-4.852E-02		2.307E-01	3.665E-01	7.545E-02	-0.132
AC-228	-2.530E-02		8.425E-02	1.329E-01	1.761E-02	-0.190
RA-228	-2.530E-02		8.425E-02	1.329E-01	1.761E-02	-0.190
TH-228	-1.178E-02		3.762E-02	6.009E-02	7.939E-03	-0.196
TH-229	-3.332E-01		2.743E-01	4.153E-01	4.465E-02	-0.802
TH-230	7.597E-05		4.760E-02	7.889E-02	9.173E-03	0.001
PA-231	-7.326E-01		9.296E-01	1.387E+00	2.591E-01	-0.528
TH-231	-3.380E-01		3.900E-01	6.070E-01	1.206E-01	-0.557
U-231	-3.576E-01		1.739E-01	2.428E-01	2.156E-02	-1.473
TH-232	-2.530E-02		8.425E-02	1.329E-01	1.761E-02	-0.190
PA-233	9.680E-04		3.550E-02	5.962E-02	7.810E-03	0.016
PA-234	4.005E-02		1.517E-01	2.569E-01	5.107E-02	0.156
PA-234M	-1.520E+00		2.690E+00	4.155E+00	4.761E-01	-0.366
TH-234	8.851E-01	+	1.059E+00	1.019E+00	1.774E-01	0.869
U-234	7.597E-05		4.760E-02	7.889E-02	9.173E-03	0.001
U-235	-6.400E-02		1.239E-01	1.931E-01	3.407E-02	-0.331
NP-236	-4.815E-02		5.087E-02	7.292E-02	6.970E-03	-0.660
NP-237	-3.224E-02		1.054E-01	1.597E-01	3.616E-02	-0.202
U-238	8.851E-01	+	1.059E+00	1.019E+00	1.774E-01	0.869
NP-239	-1.291E-02		1.025E-01	1.617E-01	1.336E-02	-0.080
AM-241	4.011E-02		6.905E-02	1.079E-01	8.431E-03	0.372

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AM-243	4.373E-03		2.334E-02	3.658E-02	2.982E-03	0.120
CM-243	1.447E-02		4.859E-02	7.940E-02	6.769E-03	0.182
AM-246	-4.639E-02		6.721E-02	1.023E-01	9.621E-03	-0.454
CM-247	7.459E-03		2.191E-02	3.677E-02	3.450E-03	0.203
CF-249	-1.215E-02		2.252E-02	3.556E-02	3.380E-03	-0.342
CF-251	4.624E-03		7.679E-02	1.227E-01	1.247E-02	0.038

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202004732		
Acquisition date	: 4-JAN-2010 14:05:52	Detector SN#	:
Detector ID	: GAM22	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 02:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 02:00:00.99	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 28-DEC-2009 00:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004732	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.3786E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 2-DEC-2009 16:47:28	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
TL-208	1.691E-02	3.594E-02	1.520E-02	1.834E-02
ANH-511	6.883E-02	3.928E-02	1.194E-02	2.004E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU
BE-7	3.413E-02	1.574E-01	1.355E-01	8.028E-02 NOT IDENT.
NA-22	-4.296E-03	1.807E-02	1.485E-02	9.217E-03 NOT IDENT.
NA-24	-2.654E+01	8.920E+01	0.000E+00	4.551E+01 SHORT HLIF
AL-26	-6.436E-03	1.406E-02	1.053E-02	7.175E-03 NOT IDENT.
K-40	-1.427E-01	2.629E-01	2.258E-01	1.342E-01 NOT IDENT.
TI-44	-1.061E-02	1.418E-02	1.166E-02	7.236E-03 NOT IDENT.
SC-46	9.418E-03	1.804E-02	1.628E-02	9.206E-03 NOT IDENT.
V-48	1.073E-02	2.664E-02	2.351E-02	1.359E-02 NOT IDENT.
CR-51	1.384E-02	1.764E-01	1.564E-01	8.998E-02 NOT IDENT.
MN-52	-4.311E-03	5.045E-02	4.176E-02	2.574E-02 NOT IDENT.
MN-54	1.770E-02	1.818E-02	1.698E-02	9.277E-03 NOT IDENT.
CO-56	5.915E-03	1.856E-02	1.649E-02	9.471E-03 NOT IDENT.
CO-57	8.009E-03	1.364E-02	1.202E-02	6.958E-03 NOT IDENT.
CO-58	2.692E-03	1.707E-02	1.503E-02	8.708E-03 NOT IDENT.
FE-59	1.085E-02	3.350E-02	2.923E-02	1.709E-02 NOT IDENT.
CO-60	-1.045E-02	2.087E-02	1.651E-02	1.065E-02 NOT IDENT.
ZN-65	2.195E-02	4.429E-02	3.886E-02	2.259E-02 NOT IDENT.
GE-68	-2.502E-01	5.589E-01	4.414E-01	2.851E-01 NOT IDENT.
AS-73	-2.708E-01	3.503E-01	2.876E-01	1.787E-01 NOT IDENT.
AS-74	-1.677E-02	3.716E-02	3.091E-02	1.896E-02 NOT IDENT.
SE-75	2.001E-02	2.456E-02	2.186E-02	1.253E-02 NOT IDENT.
BR-77	2.224E-01	7.021E-01	5.700E-01	3.582E-01 NOT IDENT.
SR-82	-1.036E-01	1.588E-01	1.237E-01	8.104E-02 NOT IDENT.
RB-83	9.589E-03	3.905E-02	3.150E-02	1.992E-02 NOT IDENT.
RB-84	-8.581E-03	3.083E-02	2.572E-02	1.573E-02 NOT IDENT.

KR-85	2.162E+01	5.556E+00	5.040E+00	2.835E+00 NOT IDENT.
SR-85	1.024E-01	2.632E-02	2.388E-02	1.343E-02 NOT IDENT.
RB-86	-1.175E-01	2.818E-01	2.240E-01	1.438E-01 NOT IDENT.
Y-88	1.693E-02	1.954E-02	1.855E-02	9.969E-03 NOT IDENT.
ZR-88	1.068E-02	1.551E-02	1.404E-02	7.913E-03 NOT IDENT.
Y-91	1.074E+00	6.931E+00	6.037E+00	3.536E+00 NOT IDENT.
NB-94	-1.214E-02	1.945E-02	1.561E-02	9.924E-03 NOT IDENT.
NB-95	-6.198E-03	2.057E-02	1.678E-02	1.049E-02 NOT IDENT.
NB-95M	-9.005E-02	6.722E-02	5.271E-02	3.430E-02 NOT IDENT.
ZR-95	-2.553E-02	3.576E-02	2.789E-02	1.825E-02 NOT IDENT.
NB-97	-6.312E-01	2.864E+01	0.000E+00	1.461E+01 SHORT HLIF
ZR-97	2.255E+03	7.447E+02	0.000E+00	3.799E+02 SHORT HLIF
MO-99	6.766E-01	9.210E-01	8.247E-01	4.699E-01 NOT IDENT.
TC-99M	-7.860E+06	1.880E+07	0.000E+00	9.593E+06 SHORT HLIF
RH-101	1.087E-03	2.071E-02	1.672E-02	1.057E-02 NOT IDENT.
RH-102	2.629E-04	1.550E-02	1.314E-02	7.907E-03 NOT IDENT.
RU-103	-9.323E-03	2.018E-02	1.630E-02	1.030E-02 NOT IDENT.
RH-106	8.070E-02	1.640E-01	1.466E-01	8.368E-02 FAIL ABUN
RU-106	8.070E-02	1.638E-01	1.466E-01	8.358E-02 FAIL ABUN
AG-108M	5.824E-03	1.771E-02	1.552E-02	9.035E-03 NOT IDENT.
CD-109	-1.554E-01	3.531E-01	2.875E-01	1.802E-01 NOT IDENT.
AG-110M	-6.103E-04	1.663E-02	1.416E-02	8.483E-03 NOT IDENT.
IN-111	2.647E-02	9.395E-02	8.194E-02	4.793E-02 NOT IDENT.
IN-113M	1.200E-02	2.314E-02	2.071E-02	1.180E-02 NOT IDENT.
SN-113	1.200E-02	2.314E-02	2.071E-02	1.180E-02 NOT IDENT.
IN-114M	5.956E-02	9.222E-02	7.478E-02	4.705E-02 NOT IDENT.
CD-115	-4.491E-01	6.182E-01	4.895E-01	3.154E-01 NOT IDENT.
SN-117M	-7.364E-03	2.256E-02	1.788E-02	1.151E-02 NOT IDENT.
SB-122	-3.936E-02	1.545E-01	1.315E-01	7.883E-02 NOT IDENT.
I-123	-1.156E+02	2.530E+02	0.000E+00	1.291E+02 SHORT HLIF
TE-123M	-7.599E-03	1.664E-02	1.312E-02	8.489E-03 NOT IDENT.
I-124	-9.353E-02	1.109E-01	8.935E-02	5.657E-02 NOT IDENT.
SB-124	8.594E-03	4.539E-02	3.939E-02	2.316E-02 NOT IDENT.
SB-125	1.524E-02	5.297E-02	4.628E-02	2.703E-02 NOT IDENT.
TE-125M	9.556E-01	4.507E+00	3.926E+00	2.299E+00 NOT IDENT.
I-126	3.005E-02	5.870E-02	5.239E-02	2.995E-02 NOT IDENT.
SB-126	2.906E-02	4.743E-02	4.236E-02	2.420E-02 NOT IDENT.
SN-126	-2.485E-02	3.535E-02	2.826E-02	1.803E-02 FAIL ABUN
SB-127	-2.295E-04	1.859E-01	1.582E-01	9.486E-02 NOT IDENT.
XE-127	-1.939E-02	2.277E-02	1.889E-02	1.162E-02 NOT IDENT.
I-131	1.878E-03	3.402E-02	2.974E-02	1.735E-02 NOT IDENT.
TE-132	-6.233E-02	7.652E-02	6.220E-02	3.904E-02 NOT IDENT.
BA-133	-2.195E-02	2.445E-02	1.989E-02	1.248E-02 NOT IDENT.
I-133	4.919E+00	7.694E+00	0.000E+00	3.926E+00 SHORT HLIF
CS-134	8.552E-03	2.486E-02	2.044E-02	1.268E-02 NOT IDENT.
CS-135	-2.005E-02	9.018E-02	7.552E-02	4.601E-02 NOT IDENT.
I-135	1.304E+06	1.386E+07	0.000E+00	7.071E+06 SHORT HLIF
CS-136	-9.913E-03	3.679E-02	3.001E-02	1.877E-02 NOT IDENT.
BA-137M	-4.963E-03	1.711E-02	1.420E-02	8.729E-03 NOT IDENT.
CS-137	-5.246E-03	1.809E-02	1.501E-02	9.227E-03 NOT IDENT.
CE-139	-1.148E-02	1.574E-02	1.346E-02	8.030E-03 NOT IDENT.
BA-140	-2.135E-02	8.677E-02	7.405E-02	4.427E-02 NOT IDENT.
LA-140	-2.143E-04	3.542E-02	3.013E-02	1.807E-02 NOT IDENT.
CE-141	1.735E-02	2.801E-02	2.598E-02	1.429E-02 NOT IDENT.
CE-143	-2.796E-02	1.528E+00	1.359E+00	7.795E-01 NOT IDENT.
CE-144	-5.508E-02	9.789E-02	8.590E-02	4.994E-02 NOT IDENT.
PM-144	2.934E-02	2.036E-02	1.895E-02	1.039E-02 NOT IDENT.
PR-144	1.981E+00	1.374E+00	1.279E+00	7.010E-01 NOT IDENT.
PM-146	4.518E-03	2.361E-02	2.039E-02	1.204E-02 NOT IDENT.
ND-147	1.115E-01	1.851E-01	1.687E-01	9.445E-02 NOT IDENT.
PM-149	-3.141E+00	5.118E+00	4.112E+00	2.611E+00 NOT IDENT.
EU-152	-3.232E-04	5.372E-02	4.706E-02	2.741E-02 NOT IDENT.
GD-153	1.304E-02	3.769E-02	3.343E-02	1.923E-02 NOT IDENT.
EU-154	-1.270E-02	5.058E-02	4.149E-02	2.580E-02 NOT IDENT.
EU-155	-4.338E-02	5.299E-02	4.321E-02	2.704E-02 NOT IDENT.
TB-160	-1.159E-02	6.691E-02	5.648E-02	3.414E-02 NOT IDENT.
HO-166M	2.231E-02	3.134E-02	2.820E-02	1.599E-02 FAIL ABUN
TM-171	-1.053E+01	1.251E+01	9.209E+00	6.384E+00 NOT IDENT.
LU-176	-6.649E-04	1.329E-02	1.175E-02	6.781E-03 NOT IDENT.
LU-177	-7.463E-02	2.702E-01	2.320E-01	1.379E-01 NOT IDENT.
LU-177M	2.057E-02	9.203E-02	8.039E-02	4.695E-02 NOT IDENT.
HF-181	-1.016E-02	2.009E-02	1.621E-02	1.025E-02 FAIL ABUN
W-181	2.546E-01	2.961E-01	1.214E-01	1.510E-01 FAIL ABUN
TA-182	-6.031E-02	7.798E-02	6.033E-02	3.978E-02 NOT IDENT.
RE-183	3.040E-02	5.695E-02	5.210E-02	2.906E-02 NOT IDENT.
RE-184	6.214E-02	1.306E-01	1.148E-01	6.663E-02 NOT IDENT.
OS-185	-2.161E-02	2.134E-02	1.646E-02	1.089E-02 NOT IDENT.
RE-188	6.839E-02	8.426E-02	7.837E-02	4.299E-02 NOT IDENT.

W-188	4.922E-01	3.861E+00	3.465E+00	1.970E+00	FAIL ABUN
IR-192	-1.912E-03	1.804E-02	1.584E-02	9.204E-03	NOT IDENT.
AU-195	-3.049E-02	1.094E-01	9.339E-02	5.583E-02	FAIL ABUN
TL-200	-8.035E-02	2.123E+00	1.843E+00	1.083E+00	NOT IDENT.
TL-201	-1.081E+00	6.918E-01	5.569E-01	3.530E-01	NOT IDENT.
TL-202	7.779E-03	2.329E-02	2.042E-02	1.188E-02	NOT IDENT.
HG-203	1.350E-02	2.142E-02	1.878E-02	1.093E-02	NOT IDENT.
BI-207	1.000E-02	2.679E-02	2.340E-02	1.367E-02	NOT IDENT.
TL-207	-3.380E-01	3.822E-01	3.138E-01	1.950E-01	NOT IDENT.
PO-209	9.639E-01	3.700E+00	3.254E+00	1.888E+00	NOT IDENT.
BI-210	4.531E-02	1.631E+00	1.437E+00	8.320E-01	NOT IDENT.
PB-210	4.531E-02	1.631E+00	1.437E+00	8.320E-01	NOT IDENT.
PO-210	4.531E-02	1.631E+00	1.437E+00	8.320E-01	NOT IDENT.
BI-211	-4.182E-02	1.328E-01	1.091E-01	6.776E-02	NOT IDENT.
PB-211	3.375E-01	5.562E-01	4.647E-01	2.838E-01	NOT IDENT.
BI-212	8.584E-02	1.524E-01	1.286E-01	7.774E-02	NOT IDENT.
PB-212	-1.170E-02	3.659E-02	3.101E-02	1.867E-02	NOT IDENT.
PO-212	-1.170E-02	3.659E-02	3.101E-02	1.867E-02	NOT IDENT.
BI-214	7.597E-05	4.664E-02	4.029E-02	2.380E-02	NOT IDENT.
PB-214	-4.322E-03	4.597E-02	3.826E-02	2.345E-02	NOT IDENT.
PO-214	-4.322E-03	4.597E-02	3.826E-02	2.345E-02	NOT IDENT.
PO-215	-3.380E-01	3.822E-01	3.138E-01	1.950E-01	NOT IDENT.
PO-216	-1.170E-02	3.659E-02	3.101E-02	1.867E-02	NOT IDENT.
PO-218	-4.322E-03	4.597E-02	3.826E-02	2.345E-02	NOT IDENT.
RN-219	4.771E-03	2.443E-01	2.109E-01	1.246E-01	NOT IDENT.
RN-220	-2.101E+00	1.280E+01	1.100E+01	6.532E+00	NOT IDENT.
RA-223	-3.380E-01	3.822E-01	3.138E-01	1.950E-01	NOT IDENT.
RA-224	7.666E-02	3.765E-01	3.272E-01	1.921E-01	NOT IDENT.
RA-226	7.597E-05	4.664E-02	4.029E-02	2.380E-02	NOT IDENT.
AC-227	-4.852E-02	2.261E-01	1.903E-01	1.153E-01	NOT IDENT.
TH-227	-4.852E-02	2.261E-01	1.903E-01	1.154E-01	NOT IDENT.
AC-228	-2.530E-02	8.257E-02	6.734E-02	4.213E-02	NOT IDENT.
RA-228	-2.530E-02	8.257E-02	6.734E-02	4.213E-02	NOT IDENT.
TH-228	-1.178E-02	3.686E-02	3.125E-02	1.881E-02	NOT IDENT.
TH-229	-3.332E-01	2.688E-01	2.168E-01	1.371E-01	NOT IDENT.
TH-230	7.597E-05	4.664E-02	4.029E-02	2.380E-02	NOT IDENT.
PA-231	-7.326E-01	9.111E-01	7.191E-01	4.648E-01	NOT IDENT.
TH-231	-3.380E-01	3.822E-01	3.138E-01	1.950E-01	NOT IDENT.
U-231	-3.576E-01	1.704E-01	1.284E-01	8.693E-02	NOT IDENT.
TH-232	-2.530E-02	8.257E-02	6.734E-02	4.213E-02	NOT IDENT.
PA-233	9.680E-04	3.479E-02	3.085E-02	1.775E-02	NOT IDENT.
PA-234	4.005E-02	1.487E-01	1.301E-01	7.585E-02	FAIL ABUN
PA-234M	-1.520E+00	2.636E+00	2.101E+00	1.345E+00	NOT IDENT.
TH-234	8.851E-01	1.038E+00	5.430E-01	5.297E-01	FAIL ABUN
U-234	7.597E-05	4.664E-02	4.029E-02	2.380E-02	NOT IDENT.
U-235	-6.400E-02	1.214E-01	1.014E-01	6.194E-02	FAIL ABUN
NP-236	-4.815E-02	4.985E-02	3.820E-02	2.543E-02	NOT IDENT.
NP-237	-3.224E-02	1.033E-01	8.464E-02	5.272E-02	NOT IDENT.
U-238	8.851E-01	1.038E+00	5.430E-01	5.297E-01	FAIL ABUN
NP-239	-1.291E-02	1.005E-01	8.521E-02	5.125E-02	NOT IDENT.
AM-241	4.011E-02	6.767E-02	5.755E-02	3.453E-02	NOT IDENT.
AM-243	4.373E-03	2.287E-02	1.944E-02	1.167E-02	NOT IDENT.
CM-243	1.447E-02	4.762E-02	4.194E-02	2.429E-02	NOT IDENT.
AM-246	-4.639E-02	6.587E-02	5.164E-02	3.361E-02	NOT IDENT.
CM-247	7.459E-03	2.147E-02	1.893E-02	1.096E-02	NOT IDENT.
CF-249	-1.215E-02	2.207E-02	1.832E-02	1.126E-02	NOT IDENT.
CF-251	4.624E-03	7.525E-02	6.419E-02	3.839E-02	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	102.0585
46.50	102.0585
46.50	102.0585
48.70	131.4023
49.72	103.5960
51.35	100.6612
52.39	94.6281
52.97	101.3775
53.15	116.3492
53.44	112.7667
54.07	111.2024
56.28	116.0113
56.28	116.0126
57.37	113.6914
57.53	113.7656
57.53	113.7665
57.60	120.4364
57.98	123.4718
57.98	123.4718
59.32	104.5627
59.32	104.5627
59.40	104.5958
59.54	104.6540
59.72	110.4675
60.01	110.5944
61.10	115.3958
61.14	115.4137
61.30	115.4855
63.00	123.9933
63.29	124.1304
63.29	124.1304
63.58	124.2668
64.28	124.5951
65.12	124.9868
65.20	125.0241
65.20	125.0241
66.05	125.4173
66.72	116.3941
66.83	116.4411
66.91	116.4755
67.20	119.5503
67.20	119.5503
67.75	119.7882
67.85	119.8318
68.90	120.2838
68.90	120.2838
69.30	118.9679
69.67	110.1904
70.82	117.2142
70.82	117.2142
70.83	117.2184
72.80	138.4920
72.87	138.5257
72.87	138.5257
74.67	122.2038
74.81	122.2610
74.81	122.2610
74.81	122.2610
74.81	122.2610
74.81	122.2610
74.81	122.2610
74.81	122.2610
74.97	122.3269
75.28	130.5498
75.70	123.6382
77.11	143.5596
77.11	143.5596

77.11	143.5596
77.11	143.5596
77.11	143.5596
77.11	143.5596
77.11	143.5596
78.38	134.9534
79.62	130.3609
79.80	110.9218
79.80	110.9218
80.11	121.3124
80.18	121.3394
80.30	128.5865
80.30	128.5865
80.57	128.6964
81.00	141.2436
81.07	141.2750
81.07	141.2750
81.07	141.2750
81.07	141.2750
82.60	130.5559
83.37	125.6736
83.78	115.4342
83.78	115.4342
83.78	115.4342
83.78	115.4342
84.21	122.8764
84.90	130.4404
85.43	141.1029
86.29	141.4696
86.50	141.5588
86.54	141.5760
86.59	156.2815
86.72	156.3428
86.79	157.4242
86.94	157.4959
87.30	153.4608
87.30	153.4608
87.30	153.4608
87.30	153.4608
87.30	153.4608
87.30	153.4608
87.30	153.4608
87.57	153.5841
87.88	148.4614
88.03	148.5273
88.36	134.9648
88.47	135.0091
89.95	300.8544
91.11	159.4383
92.29	153.5808
92.38	153.6204
92.38	153.6204
93.35	158.3234
94.00	191.8381
94.67	232.9995
94.67	233.0028
94.90	297.6192
94.90	297.6192
94.90	297.6192
94.90	297.6192
95.87	233.7843
95.87	233.7843
96.73	172.7873
97.43	141.7414
98.44	152.9824
98.44	152.9831
98.88	155.3385
99.55	157.7972
99.55	157.7972
99.86	151.3935
100.00	151.4508
100.10	158.0325
103.18	127.4627
103.76	134.2597
105.00	153.4622
105.31	152.4803
108.00	164.6595
109.28	157.3786

111.00	144.6040
111.00	144.6040
111.76	171.8301
112.95	172.3336
115.19	161.9485
116.30	152.1615
117.00	151.2783
117.00	151.2783
117.66	157.2118
121.11	137.8162
121.62	139.1290
121.78	139.1800
122.06	146.1758
122.32	146.2630
122.32	146.2630
122.32	146.2630
122.32	146.2630
123.07	155.7449
127.23	151.3926
129.76	161.6121
131.20	133.9266
133.02	145.9549
133.54	153.2030
135.34	162.6828
136.00	163.8006
136.25	163.8876
136.48	164.8588
140.51	186.9194
140.51	0.0000
142.18	171.3308
142.65	172.3972
143.76	169.1677
144.24	158.4656
144.24	158.4656
144.24	158.4656
144.24	158.4656
145.22	156.9647
145.44	157.9424
147.16	179.4346
152.43	176.6968
152.70	176.7891
153.22	180.6531
154.21	162.5280
154.21	162.5280
154.21	162.5280
154.21	162.5280
155.03	151.6842
156.02	150.1175
158.56	164.8059
159.00	0.0000
159.00	172.3959
160.31	192.4350
161.27	197.4567
162.32	168.7720
162.64	163.2431
163.35	148.4252
163.89	139.1678
165.85	183.0739
167.43	194.0065
171.28	156.2712
171.86	165.0147
172.10	165.0847
176.55	167.3279
176.60	167.3425
181.06	164.3531
184.41	169.9546
185.71	181.6491
186.00	154.7697
190.27	124.3671
192.34	166.8377
193.63	168.1725
197.04	138.2513
198.01	148.4225
198.60	149.5560
200.40	169.9741
201.83	180.3722
202.84	181.6559
205.31	160.1803

208.36	170.0303
208.81	178.2478
209.75	175.4563
209.75	175.4563
210.97	151.3907
215.65	147.3245
216.55	134.2002
218.09	136.5545
222.10	137.3450
223.80	126.2909
226.40	146.4960
227.00	141.4204
227.08	141.4360
227.20	147.7007
228.16	154.1482
228.18	154.1527
228.18	154.1527
231.56	153.8312
235.69	206.2716
236.00	198.9899
236.00	198.9899
238.63	154.2640
238.63	154.2640
238.63	154.2640
238.63	154.2640
239.00	144.8267
240.98	164.2902
241.98	193.1667
241.98	193.1667
241.98	193.1667
244.69	140.6025
245.39	133.2693
247.94	139.0643
248.90	147.8063
249.79	156.5552
252.40	145.2492
252.85	128.1080
252.85	128.1080
254.15	0.0000
256.20	145.9563
256.20	145.9563
260.50	140.2277
260.90	145.7365
262.80	152.6230
264.65	119.1007
268.24	141.5760
268.79	148.2619
269.46	154.9782
269.46	154.9782
269.46	154.9782
269.46	154.9782
271.23	133.2817
273.65	134.7760
276.40	147.4129
277.35	148.6890
277.60	139.8524
277.60	139.8524
278.00	142.1406
278.60	140.0197
279.20	126.7749
279.53	126.8236
280.46	126.9628
281.68	129.3760
283.67	140.8560
284.30	140.9598
285.00	138.8359
285.90	136.7399
286.10	128.9240
286.10	128.9240
287.40	124.6260
288.45	0.0000
290.67	134.3364
290.80	134.3565
291.72	140.8170
293.26	124.7862
293.70	122.1345
295.21	127.7813
295.21	127.7813

295.21	127.7813
295.96	117.9125
296.50	110.7233
297.23	109.9059
298.57	125.5359
299.80	128.4405
299.80	128.4405
300.09	130.3060
300.09	130.3060
300.09	130.3060
300.09	130.3060
300.12	130.3094
301.29	112.2300
302.84	118.8218
303.76	108.8780
303.91	108.8955
304.40	110.7862
304.40	110.7862
304.84	108.0913
306.84	111.0831
308.46	118.6368
311.98	109.8571
316.51	117.8130
318.01	112.4272
319.02	112.5468
319.41	120.0383
320.08	120.1218
323.87	138.3652
323.87	138.3652
323.87	138.3652
323.87	138.3652
325.23	133.8792
328.77	102.4230
333.44	129.3523
334.20	137.9568
334.20	137.9568
334.30	135.1360
338.28	110.0627
338.28	110.0627
338.28	110.0627
338.28	110.0627
338.32	110.0683
338.32	110.0683
338.32	110.0683
340.50	113.1618
340.57	113.1691
344.27	108.8149
345.85	109.9421
350.59	110.4559
351.07	108.5859
351.92	102.9052
351.92	102.9052
351.92	102.9052
355.39	0.0000
356.01	121.6595
364.48	101.2337
366.43	102.3955
367.43	102.4916
367.94	101.5638
369.80	90.9792
374.96	96.3324
383.85	97.1183
387.95	104.4399
388.63	111.4709
391.69	85.8278
391.69	85.8278
392.90	80.9249
398.62	93.3837
400.65	102.6026
401.10	106.6690
401.81	109.7558
402.60	100.7629
404.84	87.8337
410.95	79.1626
411.60	82.2528
413.65	86.4651
414.70	86.5429
415.30	88.6238

415.76	92.7351
417.63	0.0000
418.52	77.6291
423.70	95.4067
427.08	88.4733
427.89	91.6205
432.53	86.8034
433.93	77.5919
439.47	82.0985
439.56	69.6327
439.89	74.8494
443.98	78.2245
444.90	72.0196
445.03	72.0272
445.03	72.0272
445.03	72.0272
445.03	72.0272
453.90	77.7903
463.38	84.7207
468.07	82.9007
473.00	69.3434
475.06	73.7252
475.35	73.7421
476.78	70.6116
477.59	72.7954
477.96	71.7453
482.03	78.4082
484.57	64.5674
487.03	81.9338
490.36	62.6821
492.35	60.6095
497.08	84.7117
507.63	0.0000
510.53	0.0000
510.84	62.5191
511.00	62.5260
511.85	62.5633
511.85	62.5633
513.99	60.4597
513.99	60.4597
520.41	73.1548
520.65	73.1678
527.90	88.7988
528.96	0.0000
529.64	67.6043
529.87	0.0000
531.02	63.9617
537.32	67.0298
543.00	57.9421
546.56	0.0000
549.76	61.9596
552.65	61.1385
555.20	65.0104
563.23	67.2472
563.90	72.0154
568.70	76.0417
569.32	76.0710
569.50	78.9338
569.67	78.9422
573.80	80.1052
574.00	86.6555
574.64	93.2353
578.91	80.3684
579.30	72.1844
583.14	60.4378
585.48	65.8803
591.81	67.5206
592.07	72.3541
593.00	79.1539
595.88	78.3287
600.56	66.9182
602.52	0.0000
602.71	100.0243
602.71	100.0243
603.60	111.7385
604.41	111.7946
604.70	105.0073
609.31	79.9530

609.31	79.9530
609.31	79.9530
609.31	79.9530
610.33	69.2709
612.46	80.1065
614.37	98.7808
618.01	79.3949
621.84	56.9817
621.84	56.9817
631.29	62.2412
633.02	74.1730
633.10	75.1650
634.78	64.3494
635.90	62.4104
636.97	59.4763
645.85	74.7299
646.12	71.7524
656.30	65.1560
657.75	54.1747
657.90	0.0000
661.65	56.3053
661.65	56.3053
664.57	53.3774
666.33	49.3978
666.33	49.3978
675.00	52.6771
677.61	63.9126
685.20	60.1067
692.80	85.9312
695.00	71.6947
696.49	62.5277
696.49	62.5277
697.00	65.6211
697.49	76.9196
698.33	88.2413
698.50	88.2501
699.00	84.1671
702.63	84.3323
706.10	61.8213
706.58	0.0000
706.67	66.9942
709.31	63.9917
711.68	49.6045
713.82	69.3187
717.42	54.9388
720.50	47.7604
721.93	60.2644
722.20	59.2335
722.78	68.6077
722.78	68.6077
722.89	68.6117
722.95	68.6130
723.30	71.7458
724.18	60.3352
727.18	45.8432
733.00	73.1531
735.90	47.0984
739.58	47.1872
742.81	56.7191
744.21	69.3717
747.13	49.4747
751.79	50.6475
752.31	44.3285
753.82	63.3740
755.35	64.4799
756.15	66.6209
756.87	65.5874
763.93	48.8348
765.79	65.8813
766.42	72.2791
766.84	71.2311
776.49	57.6854
778.00	63.0728
778.57	60.9521
778.89	54.5444
783.80	42.8833
785.46	45.0642
792.07	47.3614

795.84	42.0556
796.30	47.4581
798.80	59.3942
801.93	48.6685
805.60	44.5748
810.29	40.9515
810.76	40.9607
815.85	43.8584
817.79	46.7006
818.51	39.2417
819.60	47.6746
826.30	42.1985
828.27	55.3773
831.60	55.4627
831.96	54.5318
834.83	41.4242
836.80	0.0000
846.75	44.4912
848.13	46.4135
856.28	0.0000
856.80	51.3510
860.37	52.3854
867.32	46.8168
867.82	53.5166
871.10	43.0672
873.19	44.0652
874.81	45.0551
875.33	0.0000
876.40	38.3719
879.36	48.0277
880.27	48.0469
880.51	46.1300
881.50	49.0345
883.24	45.2231
884.67	46.2146
889.25	36.6601
896.60	40.6487
898.02	36.7999
899.00	33.9087
903.28	46.5896
911.07	32.1374
911.07	32.1374
911.07	32.1374
919.63	22.4806
920.93	27.3828
925.00	46.0427
925.24	44.0881
926.50	37.2499
935.52	39.3590
937.48	32.4976
944.10	45.4240
946.00	38.5423
949.00	30.6740
962.29	57.7036
964.01	56.7475
966.15	43.8435
968.20	44.8768
969.11	40.9035
969.11	40.9035
969.11	40.9035
977.42	45.0439
980.50	40.0886
983.50	40.1367
989.30	43.2467
996.32	47.4016
1001.03	48.4997
1001.68	47.5016
1004.76	43.5114
1021.30	0.0000
1024.50	0.0000
1034.80	28.6641
1036.00	36.8701
1037.82	36.8952
1038.57	35.8813
1038.76	0.0000
1045.16	34.9427
1046.59	30.8486
1048.07	43.2129

1050.47	36.0425
1050.47	36.0425
1062.04	34.1302
1063.62	38.2905
1076.63	38.4750
1077.35	36.4050
1078.86	33.3036
1085.78	28.1705
1099.22	25.1635
1112.02	41.0784
1112.84	44.2515
1115.52	41.1301
1120.29	40.1431
1120.29	40.1431
1120.29	40.1431
1120.29	40.1431
1120.51	40.1470
1121.28	40.1576
1124.00	0.0000
1129.67	26.4980
1131.51	0.0000
1147.95	0.0000
1167.94	31.0150
1173.22	19.7721
1175.09	28.2642
1177.93	33.0069
1189.05	25.5580
1204.90	30.4521
1205.75	34.2686
1213.00	31.4884
1221.42	41.1445
1230.97	38.3936
1235.34	32.6812
1236.41	0.0000
1238.25	27.9017
1246.25	21.2212
1260.41	0.0000
1271.85	27.2310
1274.45	27.2532
1274.54	27.2540
1291.56	32.2930
1298.22	0.0000
1312.09	22.6512
1325.50	24.7223
1325.50	24.7223
1332.49	35.6759
1333.61	34.6967
1360.21	23.9832
1362.66	0.0000
1365.15	27.0206
1368.21	26.0436
1368.53	0.0000
1376.25	17.0690
1384.27	23.1481
1394.10	26.2428
1395.20	25.2411
1407.95	17.2278
1434.06	25.5249
1436.60	24.5222
1457.56	0.0000
1460.81	24.6899
1489.15	25.9209
1509.49	16.6816
1596.49	29.3980
1620.62	15.2674
1678.03	0.0000
1691.02	21.3644
1691.02	21.3644
1706.46	0.0000
1750.46	0.0000
1764.49	23.7207
1764.49	23.7207
1764.49	23.7207
1764.49	23.7207
1770.23	39.5877
1771.40	38.6086
1791.20	0.0000
1808.65	11.9827

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202004732

Total Uranium Activity	2.6036E+00	ug/g
Total Uranium Counting Unc.	3.0892E+00	ug/g
Total Uranium Tpu	1.5761E-06	ug/g
Total Uranium Mda	1.6162E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G1202004732
ANALYST	: MXR1	DETECTOR	: GAM22
SAMPLE DATE	: 28-DEC-2009 00:00:00.00	COUNT TIME	: 0 02:00:00.00
ANALYSIS DATE:	4-JAN-2010 14:05:52.98	SAMPLE ALQT:	137.860 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 1.214E-01
GROSS GAMMA ERROR (pCi/GRAM)	: 9.053E-02
GROSS GAMMA MDA (pCi/GRAM)	: 1.180E-01
GROSS GAMMA DLC (pCi/GRAM)	: 5.595E-02

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 14:05:30.78

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004733.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 16:16:25.
Sample ID : G1202004733 Sample quantity : 1.11113E+02 GRAM
Detector name : GAM15 Detector geometry: CAN
Elapsed live time: 0 03:00:00.00 Elapsed real time: 0 03:00:01.81 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.35*	51	488	1.48	125.20	122	8	4.70E-03	79.8	
2	4	74.22	412	722	1.69	148.93	143	16	3.82E-02	13.9	4.73E-01
3	4	76.52*	605	579	1.32	153.52	143	16	5.60E-02	8.8	
4	1	86.68*	204	570	1.20	173.84	168	23	1.89E-02	20.2	2.44E+00
5	1	89.40	135	497	1.22	179.27	168	23	1.25E-02	28.7	
6	1	92.16*	278	552	1.46	184.79	168	23	2.58E-02	18.5	
7	0	104.46	95	469	1.28	209.39	206	9	8.75E-03	42.4	
8	0	185.35*	209	569	1.25	371.09	366	12	1.93E-02	25.3	
9	0	208.48	195	491	1.60	417.33	410	12	1.81E-02	23.8	
10	3	238.11*	1597	296	1.37	476.56	468	20	1.48E-01	3.3	1.07E+00
11	3	240.93*	359	396	1.91	482.20	468	20	3.33E-02	16.2	
12	0	269.58	203	291	2.79	539.49	534	12	1.88E-02	18.2	
13	1	294.70*	510	264	1.47	589.70	584	21	4.73E-02	7.3	1.15E+00
14	1	299.70*	89	263	1.73	599.69	584	21	8.27E-03	37.6	
15	0	337.88*	358	281	1.47	676.03	671	13	3.32E-02	11.2	
16	0	351.52*	850	267	1.47	703.29	697	12	7.87E-02	5.3	
17	0	462.44	99	149	1.44	925.04	920	11	9.17E-03	25.9	
18	0	510.69*	158	250	1.72	1021.52	1013	18	1.46E-02	28.0	
19	0	582.89*	505	182	1.72	1165.86	1157	17	4.67E-02	7.8	
20	0	609.06*	655	171	1.58	1218.19	1210	14	6.06E-02	5.9	
21	0	661.99	191	175	1.57	1324.01	1317	17	1.77E-02	17.4	
22	0	727.14*	96	139	1.35	1454.27	1446	16	8.86E-03	30.6	
23	0	767.86	69	55	2.34	1535.69	1532	8	6.41E-03	22.2	
24	0	795.14	71	68	1.13	1590.25	1585	12	6.59E-03	26.1	
25	0	860.29*	82	60	1.81	1720.50	1714	12	7.64E-03	22.7	
26	0	910.88*	346	105	1.80	1821.66	1812	17	3.20E-02	8.9	
27	3	964.33	70	33	1.90	1928.54	1924	21	6.49E-03	18.6	1.23E+00
28	3	968.71*	199	40	2.46	1937.29	1924	21	1.84E-02	10.8	
29	0	1121.01*	113	136	1.11	2241.83	2231	22	1.05E-02	28.6	
30	0	1377.65	58	46	1.54	2755.05	2746	17	5.39E-03	29.9	
31	0	1460.87*	1041	22	2.02	2921.46	2914	15	9.64E-02	3.3	
32	0	1510.65	36	39	3.62	3021.01	3010	25	3.35E-03	48.6	
33	0	1590.70	48	36	1.31	3181.10	3172	21	4.45E-03	34.6	
34	0	1764.78*	89	39	1.61	3529.26	3521	17	8.26E-03	20.1	
35	0	1848.42	16	16	1.41	3696.53	3689	11	1.49E-03	54.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 14:05:33

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004733.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 16:16:25
Sample ID : G1202004733 Sample quantity : 111.11 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA15 Detector geometry: CAN
Elapsed live time: 0 03:00:00.00 Elapsed real time: 0 03:00:01.81 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	+	1460.81	*	2.200E+01	2.219E+00	5.313E-01	4.062E-02	41.396
CD-109	+	88.03	*	2.877E+00	1.206E+00	1.510E+00	1.746E-01	1.906
SN-126		64.28		4.506E-02	9.371E-01	1.351E+00	2.316E-01	0.033
	+	86.94		1.172E+00	6.826E-01	6.266E-01	2.635E-01	1.870
	+	87.57	*	2.819E-01	1.181E-01	1.491E-01	1.720E-02	1.891
CS-135	+	268.24	*	7.384E-01	2.766E-01	2.723E-01	2.328E-02	2.711
BA-137M	+	661.65	*	2.375E-01	8.349E-02	5.664E-02	2.850E-03	4.194
CS-137	+	661.65	*	2.511E-01	8.826E-02	5.987E-02	3.029E-03	4.194
EU-155		48.70		4.812E-01	7.283E+00	1.217E+01	1.566E+00	0.040
		60.01		4.176E+00	9.890E+00	1.469E+01	1.796E+00	0.284
	+	86.54		3.398E-01	1.425E-01	1.830E-01	2.110E-02	1.857
	+	105.31	*	1.911E-01	1.629E-01	1.953E-01	1.691E-02	0.978
TL-208		277.35		6.914E-01	4.582E-01	7.802E-01	8.742E-02	0.886
	+	510.84		6.703E-01	3.820E-01	2.434E-01	2.450E-02	2.754
	+	583.14	*	6.055E-01	1.023E-01	6.415E-02	4.084E-03	9.440
	+	860.37		9.242E-01	4.262E-01	4.646E-01	3.993E-02	1.989
BI-211	+	72.87		2.320E+01	6.931E+00	6.686E+00	7.455E-01	3.470
	+	351.07	*	4.613E+00	5.824E-01	3.664E-01	2.517E-02	12.592
PB-212	+	74.81		2.754E+00	8.620E-01	7.304E-01	1.061E-01	3.770
	+	77.11		2.216E+00	4.602E-01	3.889E-01	4.319E-02	5.697
	+	87.30		1.304E+00	5.617E-01	6.927E-01	1.057E-01	1.882
	+	238.63	*	1.911E+00	2.020E-01	1.046E-01	8.658E-03	18.266
	+	300.09		1.644E+00	1.244E+00	1.405E+00	1.260E-01	1.171
PO-212	+	74.81		2.754E+00	8.620E-01	7.304E-01	1.061E-01	3.770
	+	77.11		2.216E+00	4.602E-01	3.889E-01	4.319E-02	5.697
	+	87.30		1.304E+00	5.617E-01	6.927E-01	1.057E-01	1.882
		115.19		-1.891E+00	3.945E+00	6.329E+00	4.842E-01	-0.299
	+	238.63	*	1.911E+00	2.020E-01	1.046E-01	8.658E-03	18.266
	+	300.09		1.644E+00	1.244E+00	1.405E+00	1.260E-01	1.171
BI-214	+	609.31	*	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
	+	1120.29		1.337E+00	7.755E-01	4.790E-01	4.419E-02	2.790
	+	1764.49		1.443E+00	5.875E-01	3.669E-01	2.283E-02	3.934
PB-214	+	74.81		4.745E+00	1.460E+00	1.259E+00	1.681E-01	3.770
	+	77.11		3.799E+00	8.404E-01	6.667E-01	8.979E-02	5.697

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	87.30		2.234E+00	9.517E-01	1.187E+00	1.645E-01	1.882
	+	241.98		2.582E+00	8.696E-01	5.981E-01	5.346E-02	4.317
	+	295.21		1.650E+00	2.862E-01	2.454E-01	2.269E-02	6.723
	+	351.92	*	1.605E+00	2.192E-01	1.228E-01	1.059E-02	13.067
PO-214	+	74.81		4.745E+00	1.460E+00	1.259E+00	1.681E-01	3.770
	+	77.11		3.799E+00	8.404E-01	6.667E-01	8.979E-02	5.697
	+	87.30		2.234E+00	9.517E-01	1.187E+00	1.645E-01	1.882
	+	241.98		2.582E+00	8.696E-01	5.981E-01	5.346E-02	4.317
	+	295.21		1.650E+00	2.862E-01	2.454E-01	2.269E-02	6.723
	+	351.92	*	1.605E+00	2.192E-01	1.228E-01	1.059E-02	13.067
PO-216	+	74.81		2.754E+00	8.620E-01	7.304E-01	1.061E-01	3.770
	+	77.11		2.216E+00	4.602E-01	3.889E-01	4.319E-02	5.697
	+	87.30		1.304E+00	5.617E-01	6.927E-01	1.057E-01	1.882
	+	238.63	*	1.911E+00	2.020E-01	1.046E-01	8.658E-03	18.266
	+	300.09		1.644E+00	1.244E+00	1.405E+00	1.260E-01	1.171
PO-218	+	74.81		4.745E+00	1.460E+00	1.259E+00	1.681E-01	3.770
	+	77.11		3.799E+00	8.404E-01	6.667E-01	8.979E-02	5.697
	+	87.30		2.234E+00	9.517E-01	1.187E+00	1.645E-01	1.882
	+	241.98		2.582E+00	8.696E-01	5.981E-01	5.346E-02	4.317
	+	295.21		1.650E+00	2.862E-01	2.454E-01	2.269E-02	6.723
	+	351.92	*	1.605E+00	2.192E-01	1.228E-01	1.059E-02	13.067
RA-224	+	240.98	*	4.895E+00	1.626E+00	1.190E+00	8.283E-02	4.113
RA-226	+	609.31	*	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
	+	1120.29		1.337E+00	7.755E-01	4.790E-01	4.419E-02	2.790
	+	1764.49		1.443E+00	5.875E-01	3.669E-01	2.283E-02	3.934
AC-228	+	338.32		2.146E+00	9.993E-01	4.308E-01	1.760E-01	4.982
	+	911.07	*	1.837E+00	3.856E-01	2.356E-01	2.619E-02	7.796
	+	969.11		1.868E+00	5.919E-01	3.558E-01	8.227E-02	5.251
RA-228	+	338.32		2.146E+00	9.993E-01	4.308E-01	1.760E-01	4.982
	+	911.07	*	1.837E+00	3.856E-01	2.356E-01	2.619E-02	7.796
	+	969.11		1.868E+00	5.919E-01	3.558E-01	8.227E-02	5.251
TH-228	+	74.81		2.802E+00	8.375E-01	7.431E-01	8.298E-02	3.770
	+	77.11		2.254E+00	4.682E-01	3.956E-01	4.393E-02	5.697
	+	87.30		1.326E+00	5.558E-01	7.047E-01	8.118E-02	1.882
	+	238.63	*	1.944E+00	2.055E-01	1.064E-01	8.808E-03	18.266
	+	300.09		1.673E+00	1.598E+00	1.429E+00	8.436E-01	1.171
TH-230	+	609.31	*	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
	+	1120.29		1.337E+00	7.755E-01	4.790E-01	4.419E-02	2.790
	+	1764.49		1.443E+00	5.875E-01	3.669E-01	2.283E-02	3.934
TH-232	+	338.32		2.146E+00	4.984E-01	4.308E-01	2.773E-02	4.982
	+	911.07	*	1.837E+00	3.856E-01	2.356E-01	2.619E-02	7.796
	+	969.11		1.868E+00	5.919E-01	3.558E-01	8.227E-02	5.251
TH-234	+	63.29	*	1.775E+00	2.856E+00	3.605E+00	7.116E-01	0.492
	+	92.38		2.404E+00	1.003E+00	9.487E-01	1.808E-01	2.534
U-234	+	609.31	*	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
	+	1120.29		1.337E+00	7.755E-01	4.790E-01	4.419E-02	2.790
	+	1764.49		1.443E+00	5.875E-01	3.669E-01	2.283E-02	3.934
U-235	+	89.95		2.437E+00	1.599E+00	1.966E+00	6.219E-01	1.239
	+	93.35		2.890E+00	1.355E+00	1.025E+00	2.930E-01	2.820

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	105.00		1.871E+00	1.682E+00	1.848E+00	5.513E-01	1.012
		143.76	*	8.046E-02	2.542E-01	4.000E-01	6.675E-02	0.201
		163.35		1.045E-01	5.409E-01	8.785E-01	1.606E-01	0.119
	+	185.71		1.746E-01	8.898E-02	7.953E-02	5.372E-03	2.196
		205.31		-1.122E-01	7.144E-01	9.886E-01	1.814E-01	-0.113
NP-237	+	86.50	*	8.278E-01	3.867E-01	4.462E-01	1.053E-01	1.855
		95.87		-1.442E+00	1.337E+00	1.722E+00	4.321E-01	-0.837
U-238	+	63.29	*	1.775E+00	2.856E+00	3.605E+00	7.116E-01	0.492
	+	92.38		2.404E+00	9.269E-01	9.487E-01	9.980E-02	2.534
AM-243	+	74.67	*	4.465E-01	1.334E-01	1.190E-01	1.323E-02	3.752
	+	86.72		3.104E+01	1.301E+01	1.666E+01	1.913E+00	1.863
		117.66		-2.701E+00	4.248E+00	6.769E+00	5.056E-01	-0.399
		142.18		3.802E+00	2.136E+01	3.352E+01	2.284E+00	0.113
ANH-511	+	511.00	*	1.448E-01	8.162E-02	5.258E-02	2.969E-03	2.753

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	3.198E-01	3.606E-01	6.186E-01	4.122E-02	0.517
NA-22		1274.54	*	1.637E-02	4.844E-02	8.074E-02	5.541E-03	0.203
NA-24		1368.53	*	-3.588E+00	4.844E-02	Half-Life too short		
AL-26		1129.67		-1.020E+00	2.063E+00	2.701E+00	1.702E-01	-0.378
		1808.65	*	2.558E-03	2.588E-02	4.339E-02	2.596E-03	0.059
TI-44		67.85		7.035E-03	8.383E-02	1.141E-01	1.301E-02	0.062
		78.38	*	2.371E-01	6.089E-02	9.122E-02	1.014E-02	2.599
SC-46		889.25	*	3.751E-03	4.119E-02	6.865E-02	5.758E-03	0.055
	+	1120.51		2.328E-01	1.342E-01	1.393E-01	8.945E-03	1.671
V-48		944.10		-1.427E-01	9.786E-01	1.594E+00	1.310E-01	-0.090
		983.50	*	-3.884E-02	7.719E-02	1.213E-01	9.580E-03	-0.320
		1312.09		1.664E-02	8.985E-02	1.480E-01	1.081E-02	0.112
CR-51		320.08	*	2.937E-01	4.468E-01	7.638E-01	5.508E-02	0.385
MN-52		744.21		1.482E-01	3.271E-01	5.627E-01	3.452E-02	0.263
		848.13		1.084E+00	8.637E+00	1.447E+01	1.115E+00	0.075
		935.52		1.941E-01	3.307E-01	5.704E-01	4.725E-02	0.340
		1246.25		4.732E+00	9.669E+00	1.632E+01	1.064E+00	0.290
		1333.61		-3.863E+00	7.162E+00	1.088E+01	8.210E-01	-0.355
		1434.06	*	-3.835E-01	3.313E-01	4.567E-01	3.386E-02	-0.840
MN-54		834.83	*	7.090E-03	4.112E-02	6.906E-02	5.176E-03	0.103
CO-56		846.75	*	7.713E-03	3.979E-02	6.701E-02	5.150E-03	0.115
		977.42		-9.121E-02	3.109E+00	4.865E+00	3.869E-01	-0.019
		1037.82		-2.705E-02	3.163E-01	5.149E-01	4.074E-02	-0.053
		1175.09		-1.555E+00	2.376E+00	3.648E+00	2.085E-01	-0.426
		1238.25		1.528E-01	9.993E-02	1.782E-01	1.205E-02	0.858
		1360.21		-1.116E+00	1.129E+00	1.603E+00	1.206E-01	-0.696
		1771.40		-9.518E-02	3.241E-01	4.269E-01	2.641E-02	-0.223
CO-57		122.06	*	-1.574E-03	2.896E-02	4.711E-02	3.387E-03	-0.033
		136.48		-2.869E-02	2.387E-01	3.860E-01	2.962E-02	-0.074
CO-58		810.76	*	-2.630E-02	4.178E-02	6.622E-02	4.730E-03	-0.397

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
FE-59		142.65		4.690E-01	3.401E+00	5.331E+00	3.630E-01	0.088
		192.34		7.027E-01	1.166E+00	1.845E+00	2.274E-01	0.381
		1099.22	*	-1.435E-01	9.951E-02	1.406E-01	1.064E-02	-1.020
		1291.56		-1.107E-01	1.316E-01	1.937E-01	1.635E-02	-0.571
CO-60		1173.22		1.463E-02	4.524E-02	7.564E-02	4.308E-03	0.193
		1332.49	*	-9.009E-03	4.305E-02	6.794E-02	5.128E-03	-0.133
ZN-65		1115.52	*	2.495E-02	1.080E-01	1.552E-01	1.008E-02	0.161
GE-68		1077.35	*	-9.852E-01	1.263E+00	1.917E+00	1.332E-01	-0.514
AS-73		53.44	*	-9.297E-01	1.949E+00	3.184E+00	4.352E-01	-0.292
AS-74		595.88	*	4.843E-02	1.147E-01	1.902E-01	1.023E-02	0.255
		634.78		-3.760E-01	4.090E-01	6.122E-01	3.175E-02	-0.614
SE-75		66.05		-5.928E+00	8.818E+00	1.228E+01	1.592E+00	-0.483
		96.73		-2.082E-01	1.054E+00	1.470E+00	2.109E-01	-0.142
		121.11		-1.245E-01	1.575E-01	2.488E-01	2.537E-02	-0.500
		136.00		-3.940E-03	4.524E-02	7.325E-02	5.101E-03	-0.054
		198.60		4.621E-01	2.218E+00	3.444E+00	2.748E-01	0.134
		264.65	*	-1.939E-02	5.593E-02	7.992E-02	5.590E-03	-0.243
		279.53		-8.315E-02	1.308E-01	2.133E-01	1.556E-02	-0.390
		303.91		2.471E+00	2.624E+00	4.009E+00	4.070E-01	0.616
		400.65		7.535E-03	2.962E-01	4.852E-01	4.382E-02	0.016
BR-77	+	87.88		1.137E+03	4.766E+02	7.660E+02	8.857E+01	1.485
		200.40		-4.869E+01	3.708E+02	5.699E+02	3.895E+01	-0.085
	+	239.00		5.631E+02	5.392E+01	7.870E+01	5.476E+00	7.155
		249.79		2.747E+01	1.360E+02	2.303E+02	1.604E+01	0.119
		281.68		-1.605E+02	1.965E+02	3.177E+02	2.188E+01	-0.505
		297.23		5.157E+02	1.296E+02	2.361E+02	1.607E+01	2.184
		303.76		3.670E+02	4.037E+02	6.171E+02	4.171E+01	0.595
		439.47		2.690E+01	2.918E+02	4.812E+02	2.750E+01	0.056
		484.57		-2.375E+02	4.452E+02	7.023E+02	3.996E+01	-0.338
		520.65	*	1.562E+01	2.118E+01	3.598E+01	2.025E+00	0.434
		574.64		-2.238E+02	4.834E+02	6.450E+02	3.523E+01	-0.347
		578.91		1.605E+02	2.009E+02	3.001E+02	1.634E+01	0.535
		585.48		2.557E+03	5.117E+02	9.061E+02	4.911E+01	2.822
		755.35		-2.877E+01	3.095E+02	5.135E+02	3.232E+01	-0.056
		817.79		5.464E+00	2.515E+02	4.189E+02	3.027E+01	0.013
SR-82		698.33		9.450E+00	3.926E+01	6.676E+01	3.675E+00	0.142
		776.49	*	-2.853E-01	4.250E-01	6.751E-01	4.456E-02	-0.423
		1395.20		-8.165E+00	1.158E+01	1.778E+01	1.329E+00	-0.459
RB-83		520.41	*	4.854E-02	7.793E-02	1.315E-01	7.402E-03	0.369
		529.64		3.381E-02	1.134E-01	1.879E-01	1.053E-02	0.180
		552.65		-4.849E-02	2.224E-01	3.557E-01	1.970E-02	-0.136
RB-84		881.50	*	5.803E-03	7.020E-02	1.170E-01	9.665E-03	0.050
KR-85		513.99	*	1.902E+01	9.209E+00	1.487E+01	8.385E-01	1.279
SR-85		513.99	*	9.968E-02	4.826E-02	7.791E-02	4.395E-03	1.279
RB-86		1076.63	*	-1.196E-01	8.546E-01	1.381E+00	9.608E-02	-0.087
Y-88		898.02		-2.535E-02	4.335E-02	6.825E-02	5.855E-03	-0.372
		1836.01	*	1.112E-02	3.510E-02	6.064E-02	3.542E-03	0.183
ZR-88		392.90	*	9.323E-03	3.571E-02	5.965E-02	3.383E-03	0.156
Y-91		1204.90	*	9.208E+00	1.850E+01	3.134E+01	1.895E+00	0.294

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-94		702.63	*	-6.314E-03	3.492E-02	5.788E-02	3.220E-03	-0.109
		871.10		-1.202E-02	3.480E-02	5.605E-02	4.531E-03	-0.214
NB-95		765.79	*	7.989E-02	5.472E-02	8.792E-02	5.666E-03	0.909
NB-95M		235.69	*	1.792E+00	2.575E-01	3.911E-01	3.304E-02	4.583
ZR-95		724.18		1.537E-01	1.212E-01	1.927E-01	1.331E-02	0.798
		756.15	*	7.385E-03	7.274E-02	1.223E-01	9.119E-03	0.060
NB-97		657.90	*	4.542E-01	7.274E-02	Half-Life too short		
		1024.50		7.020E+01	7.274E-02	Half-Life too short		
ZR-97		254.15		8.527E+00	7.274E-02	Half-Life too short		
		355.39		-2.710E+00	7.274E-02	Half-Life too short		
		507.63	*	5.932E+01	7.274E-02	Half-Life too short		
		602.52		-1.933E+01	7.274E-02	Half-Life too short		
		1021.30		3.887E+01	7.274E-02	Half-Life too short		
		1147.95		4.079E+01	7.274E-02	Half-Life too short		
		1362.66		7.894E+01	7.274E-02	Half-Life too short		
		1750.46		-2.113E+01	7.274E-02	Half-Life too short		
MO-99		140.51		-1.762E+01	5.133E+01	8.196E+01	2.228E+01	-0.215
		181.06		5.170E+00	3.899E+01	5.507E+01	9.624E+00	0.094
		366.43		1.949E+01	1.606E+02	2.673E+02	1.624E+01	0.073
		739.58	*	-1.651E+01	2.036E+01	3.161E+01	4.393E+00	-0.522
		778.00		-3.609E+01	5.842E+01	9.298E+01	6.159E+00	-0.388
TC-99M		140.51	*	-4.764E+12	5.842E+01	Half-Life too short		
RH-101		127.23		4.057E-02	3.793E-02	6.364E-02	4.484E-03	0.638
		198.01	*	1.324E-02	4.005E-02	6.245E-02	4.260E-03	0.212
		325.23		-2.890E-02	2.683E-01	4.442E-01	2.921E-02	-0.065
RH-102		418.52		-3.008E-01	3.192E-01	4.970E-01	2.835E-02	-0.605
		475.06	*	1.640E-02	3.330E-02	5.592E-02	3.188E-03	0.293
		631.29		1.190E-03	5.897E-02	9.513E-02	4.952E-03	0.013
		697.49		5.528E-02	8.369E-02	1.456E-01	8.001E-03	0.380
	+	766.84		2.601E-01	1.167E-01	2.205E-01	1.424E-02	1.179
		1046.59		6.517E-02	1.226E-01	2.094E-01	1.526E-02	0.311
		1112.84		4.027E-04	2.790E-01	3.904E-01	2.545E-02	0.001
RU-103		497.08	*	2.151E-02	4.441E-02	7.450E-02	9.377E-03	0.289
	+	610.33		1.656E+01	3.194E+00	3.394E+00	5.172E-01	4.879
RH-106	+	511.85		7.260E-01	4.093E-01	4.848E-01	2.736E-02	1.498
		621.84	*	-1.217E-01	3.556E-01	5.593E-01	6.420E-02	-0.218
		1050.47		1.196E+00	2.444E+00	4.163E+00	3.018E-01	0.287
RU-106	+	511.85		7.260E-01	4.093E-01	4.848E-01	2.736E-02	1.498
		621.84	*	-1.217E-01	3.554E-01	5.593E-01	2.939E-02	-0.218
		1050.47		1.196E+00	2.444E+00	4.163E+00	3.018E-01	0.287
AG-108M		433.93	*	-1.335E-02	3.683E-02	5.924E-02	3.683E-03	-0.225
		614.37		3.396E-02	4.710E-02	6.887E-02	4.013E-03	0.493
		722.95		3.583E-03	4.995E-02	7.260E-02	4.593E-03	0.049
AG-110M		657.75	*	1.334E-02	4.409E-02	6.288E-02	3.446E-03	0.212
		677.61		-1.568E-01	3.429E-01	5.317E-01	2.990E-02	-0.295
		706.67		-8.357E-02	2.107E-01	3.438E-01	2.054E-02	-0.243
		763.93		3.721E-02	1.967E-01	2.881E-01	1.942E-02	0.129
		884.67		-2.092E-02	4.956E-02	7.914E-02	6.804E-03	-0.264
		937.48		-8.758E-02	1.120E-01	1.721E-01	1.479E-02	-0.509

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1384.27		-9.362E-02	2.102E-01	2.813E-01	2.186E-02	-0.333
IN-111		171.28		1.060E+00	1.933E+00	3.175E+00	2.119E-01	0.334
		245.39	*	-3.865E-01	2.230E+00	3.236E+00	2.253E-01	-0.119
IN-113M		391.69	*	-2.462E-02	5.149E-02	8.286E-02	5.027E-03	-0.297
SN-113		391.69	*	-2.462E-02	5.149E-02	8.286E-02	5.027E-03	-0.297
IN-114M		190.27	*	-1.479E-01	2.506E-01	3.399E-01	2.305E-02	-0.435
CD-115		260.90		2.041E+02	2.763E+02	4.763E+02	3.311E+01	0.429
		492.35		-1.707E+01	7.680E+01	1.236E+02	7.021E+00	-0.138
		527.90	*	-1.508E+01	2.294E+01	3.571E+01	2.003E+00	-0.422
SN-117M		156.02		3.648E-01	2.892E+00	4.696E+00	3.147E-01	0.078
		158.56	*	-6.002E-02	7.019E-02	1.097E-01	7.337E-03	-0.547
SB-122		563.90	*	3.456E+00	3.674E+00	6.312E+00	3.473E-01	0.548
		692.80		-4.132E+01	8.093E+01	1.315E+02	7.144E+00	-0.314
I-123		159.00	*	-6.838E+01	8.093E+01	Half-Life too short		
		528.96		2.371E+03	8.093E+01	Half-Life too short		
TE-123M		159.00	*	-2.447E-02	3.314E-02	5.206E-02	3.514E-03	-0.470
I-124		602.71	*	-3.609E-01	1.288E+00	1.750E+00	9.358E-02	-0.206
		722.78		5.281E-01	7.368E+00	1.071E+01	6.250E-01	0.049
		1325.50		-8.384E+00	5.213E+01	8.272E+01	6.173E+00	-0.101
	+	1376.25		1.348E+02	8.115E+01	1.011E+02	7.588E+00	1.333
	+	1509.49		5.020E+01	4.894E+01	4.400E+01	3.187E+00	1.141
		1691.02		5.353E-01	4.902E+00	8.250E+00	5.431E-01	0.065
SB-124		602.71		-1.521E-02	5.430E-02	7.378E-02	3.946E-03	-0.206
		645.85		1.379E-01	5.524E-01	9.046E-01	5.386E-02	0.152
		709.31		-1.310E+00	2.864E+00	4.651E+00	2.629E-01	-0.282
		713.82		-5.356E-01	1.730E+00	2.837E+00	2.883E-01	-0.189
		722.78		3.227E-02	4.502E-01	6.544E-01	3.997E-02	0.049
	+	968.20		1.970E+01	4.551E+00	7.336E+00	5.890E-01	2.685
		1045.16		-6.287E-01	2.728E+00	4.387E+00	3.205E-01	-0.143
		1325.50		-5.471E-01	3.402E+00	5.399E+00	4.029E-01	-0.101
		1368.21		-8.002E-01	2.194E+00	2.965E+00	3.794E-01	-0.270
		1436.60		-3.954E+00	4.137E+00	5.872E+00	4.351E-01	-0.673
		1691.02	*	7.715E-03	7.066E-02	1.189E-01	8.351E-03	0.065
SB-125		427.89	*	1.199E-02	1.053E-01	1.740E-01	1.037E-02	0.069
	+	463.38		8.253E-01	4.304E-01	5.946E-01	3.975E-02	1.388
		600.56		2.112E-02	2.266E-01	3.336E-01	2.111E-02	0.063
		635.90		-1.306E-01	2.819E-01	4.379E-01	2.746E-02	-0.298
TE-125M		109.28	*	-9.992E-01	1.200E+01	1.712E+01	1.702E+00	-0.058
I-126		388.63		9.093E-03	2.515E-01	4.157E-01	2.379E-02	0.022
		666.33	*	2.054E-01	2.572E-01	3.828E-01	1.948E-02	0.537
		753.82		-2.262E-01	1.681E+00	2.781E+00	1.744E-01	-0.081
SB-126		223.80		3.473E-01	5.333E+00	8.531E+00	5.910E-01	0.041
		278.60		2.520E+00	3.292E+00	5.655E+00	3.902E-01	0.446
		296.50		1.584E+01	2.487E+00	4.474E+00	3.046E-01	3.540
		414.70		-8.107E-03	9.304E-02	1.524E-01	8.686E-03	-0.053
		415.30		-3.152E+00	7.606E+00	1.223E+01	6.970E-01	-0.258
		555.20		2.522E+00	4.723E+00	7.929E+00	4.385E-01	0.318
		573.80		-3.991E-01	1.329E+00	1.977E+00	1.081E-01	-0.202
		593.00		-1.143E+00	1.222E+00	1.854E+00	9.988E-02	-0.617

---- Non-Identified Nuclides ----

Nuclide	Ided	Line Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		656.30		-1.285E+00	4.584E+00	6.156E+00	3.117E-01	-0.209
		666.33		8.623E-02	1.080E-01	1.607E-01	8.179E-03	0.537
		675.00		2.119E-01	2.367E+00	3.825E+00	1.989E-01	0.055
		695.00		1.000E-01	9.272E-02	1.652E-01	9.019E-03	0.606
		697.00		3.368E-01	3.297E-01	5.844E-01	3.207E-02	0.576
		720.50	*	-9.036E-03	1.948E-01	2.801E-01	1.626E-02	-0.032
		856.80		7.254E-01	5.916E-01	9.532E-01	7.481E-02	0.761
		989.30		4.910E-01	1.361E+00	2.310E+00	1.813E-01	0.213
		1034.80		-4.440E+00	9.410E+00	1.473E+01	1.092E+00	-0.301
		1213.00		-8.051E-01	4.909E+00	7.854E+00	4.822E-01	-0.103
SB-127	+	61.10		1.059E+02	1.697E+02	2.505E+02	3.641E+01	0.423
		252.40		-2.392E+00	7.155E+00	1.175E+01	4.922E+00	-0.204
		290.80		-2.725E+01	4.083E+01	5.684E+01	6.010E+00	-0.479
		411.60		8.592E+00	2.009E+01	3.370E+01	5.001E+00	0.255
		444.90		-5.214E+00	1.508E+01	2.420E+01	2.761E+00	-0.215
		473.00		-3.756E+00	2.948E+00	4.420E+00	5.202E-01	-0.850
		543.00		-2.179E+01	2.673E+01	4.083E+01	5.457E+00	-0.534
		603.60		-3.656E+00	2.223E+01	3.050E+01	3.416E+00	-0.120
		685.20	*	-8.980E-01	2.041E+00	3.324E+00	3.298E-01	-0.270
		698.50		3.288E+00	2.411E+01	4.075E+01	6.058E+00	0.081
		722.20		1.764E+01	5.075E+01	7.564E+01	7.524E+00	0.233
		783.80		4.770E+00	5.457E+00	9.571E+00	1.131E+00	0.498
XE-127		57.60		2.387E+00	1.401E+01	2.047E+01	2.607E+00	0.117
		145.22		5.596E-01	8.247E-01	1.366E+00	9.262E-02	0.410
		172.10		-3.086E-03	1.457E-01	2.346E-01	1.567E-02	-0.013
		202.84	*	-1.563E-02	6.696E-02	9.236E-02	6.323E-03	-0.169
		374.96		1.146E-01	2.252E-01	3.816E-01	2.268E-02	0.300
I-131		80.18		-1.179E+01	9.632E+00	1.081E+01	1.213E+00	-1.090
		284.30		1.121E+00	2.063E+00	3.521E+00	2.623E-01	0.319
		364.48	*	1.087E-02	1.521E-01	2.526E-01	1.709E-02	0.043
		636.97		2.180E-01	1.907E+00	3.096E+00	1.847E-01	0.070
		722.89		7.218E-01	1.007E+01	1.463E+01	8.693E-01	0.049
TE-132		49.72		-1.708E+01	8.491E+01	1.405E+02	2.167E+01	-0.122
		111.76		1.161E+01	5.087E+01	8.374E+01	9.141E+00	0.139
		116.30		6.922E-02	4.731E+01	7.721E+01	8.229E+00	0.001
		228.16	*	4.420E-01	1.234E+00	2.102E+00	3.212E-01	0.210
BA-133		53.15		-4.714E+00	8.346E+00	1.358E+01	1.862E+00	-0.347
		79.62		-2.700E+00	2.096E+00	2.588E+00	4.343E-01	-1.043
		81.00		-5.030E-02	1.920E-01	1.965E-01	3.419E-02	-0.256
		276.40		8.535E-01	4.730E-01	7.612E-01	1.027E-01	1.121
		302.84		1.182E-01	1.809E-01	2.719E-01	3.309E-02	0.435
		356.01	*	-2.643E-03	5.284E-02	7.567E-02	8.911E-03	-0.035
		383.85		-2.062E-01	3.339E-01	5.324E-01	5.789E-02	-0.387
I-133	+	510.53		7.785E+00	3.339E-01	Half-Life too short		
		529.87	*	5.507E-03	3.339E-01	Half-Life too short		
		706.58		-8.678E-01	3.339E-01	Half-Life too short		
		856.28		2.374E+00	3.339E-01	Half-Life too short		
		875.33		-5.846E-02	3.339E-01	Half-Life too short		
		1236.41		4.616E+00	3.339E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1298.22		-6.855E-01	3.339E-01	Half-Life too short		
CS-134		475.35		1.813E+00	2.158E+00	3.690E+00	2.103E-01	0.491
		563.23		5.345E-01	3.781E-01	6.664E-01	3.753E-02	0.802
		569.32		4.113E-03	2.028E-01	3.290E-01	1.864E-02	0.013
		604.70		1.140E-03	4.328E-02	6.040E-02	3.245E-03	0.019
	+	795.84	*	1.225E-01	6.460E-02	9.285E-02	6.470E-03	1.319
		801.93		-2.325E-01	4.875E-01	6.606E-01	4.652E-02	-0.352
		1038.57		-4.541E-01	3.984E+00	6.470E+00	4.771E-01	-0.070
		1167.94		2.293E+00	2.409E+00	4.240E+00	2.447E-01	0.541
		1365.15		1.001E+00	1.358E+00	2.362E+00	1.881E-01	0.424
I-135		288.45		-5.043E+12	1.358E+00	Half-Life too short		
		417.63		-6.121E+12	1.358E+00	Half-Life too short		
		546.56		6.896E+11	1.358E+00	Half-Life too short		
		836.80		4.793E+12	1.358E+00	Half-Life too short		
		1038.76		-2.269E+11	1.358E+00	Half-Life too short		
		1124.00		1.272E+13	1.358E+00	Half-Life too short		
		1131.51		-1.248E+11	1.358E+00	Half-Life too short		
		1260.41	*	-3.941E+11	1.358E+00	Half-Life too short		
		1457.56		9.514E+13	1.358E+00	Half-Life too short		
		1678.03		2.251E+11	1.358E+00	Half-Life too short		
		1706.46		2.595E+11	1.358E+00	Half-Life too short		
		1791.20		9.881E+10	1.358E+00	Half-Life too short		
CS-136		66.91		-2.447E-01	1.522E+00	2.172E+00	3.735E-01	-0.113
	+	86.29		4.105E+00	1.764E+00	2.721E+00	4.054E-01	1.509
		153.22		1.105E+00	8.493E-01	1.427E+00	1.139E-01	0.775
		163.89		6.305E-01	1.367E+00	2.241E+00	1.783E-01	0.281
		176.55		-1.944E-01	4.970E-01	7.887E-01	5.785E-02	-0.246
		273.65		-1.351E+00	6.961E-01	8.954E-01	6.821E-02	-1.508
		340.57		4.745E-01	1.880E-01	3.056E-01	2.062E-02	1.552
		818.51		-2.443E-02	8.806E-02	1.434E-01	1.040E-02	-0.170
		1048.07	*	-3.255E-02	1.306E-01	2.097E-01	1.616E-02	-0.155
		1235.34		5.192E-01	7.094E-01	1.208E+00	1.249E-01	0.430
CE-139		165.85	*	-1.189E-02	3.483E-02	5.549E-02	3.690E-03	-0.214
BA-140		162.64		7.054E-02	9.707E-01	1.571E+00	1.147E-01	0.045
		304.84		1.122E+00	1.815E+00	2.693E+00	7.408E-01	0.416
		423.70		1.066E+00	2.472E+00	4.115E+00	1.307E+00	0.259
		537.32	*	6.961E-02	3.131E-01	5.146E-01	1.672E-01	0.135
LA-140		328.77		5.897E-01	3.986E-01	6.971E-01	4.995E-02	0.846
		432.53		-1.150E+00	2.581E+00	4.132E+00	2.615E-01	-0.278
		487.03		4.952E-02	1.653E-01	2.747E-01	1.776E-02	0.180
		751.79		9.867E-04	1.972E+00	3.295E+00	2.459E-01	0.000
		815.85		-1.053E-01	3.657E-01	5.947E-01	4.972E-02	-0.177
		867.82		3.387E-01	1.602E+00	2.582E+00	2.199E-01	0.131
		919.63		6.707E-01	3.488E+00	5.588E+00	5.848E-01	0.120
		925.24		-3.735E-01	1.355E+00	2.141E+00	1.908E-01	-0.174
		1596.49	*	1.004E-01	1.042E-01	1.746E-01	1.217E-02	0.575
CE-141		145.44	*	2.837E-02	7.493E-02	1.229E-01	8.581E-03	0.231
CE-143		57.37		9.592E-04	7.493E-02	Half-Life too short		
		231.56		1.486E-03	7.493E-02	Half-Life too short		

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	293.26	*	4.486E-03	7.493E-02	Half-Life too short		
	+	350.59		1.044E-01	7.493E-02	Half-Life too short		
		490.36		4.979E-03	7.493E-02	Half-Life too short		
		664.57		9.044E-03	7.493E-02	Half-Life too short		
		721.93		3.581E-04	7.493E-02	Half-Life too short		
CE-144		80.11		-4.682E+00	3.726E+00	4.173E+00	4.655E-01	-1.122
		133.54	*	-1.359E-01	2.351E-01	3.731E-01	5.483E-02	-0.364
PM-144		476.78		2.453E-02	7.595E-02	1.264E-01	8.670E-03	0.194
		618.01		-1.534E-02	3.540E-02	5.537E-02	3.132E-03	-0.277
		696.49	*	4.331E-02	3.776E-02	6.736E-02	3.696E-03	0.643
		778.57		-1.249E+00	2.387E+00	3.831E+00	2.543E-01	-0.326
PR-144		696.49	*	2.938E+00	2.562E+00	4.570E+00	2.505E-01	0.643
		1489.15		5.074E+00	1.025E+01	1.827E+01	1.333E+00	0.278
PM-146		453.90	*	-5.682E-03	4.784E-02	7.784E-02	6.666E-03	-0.073
		633.02		-8.445E-02	1.460E+00	2.341E+00	8.599E-01	-0.036
		735.90		7.806E-02	1.520E-01	2.504E-01	6.994E-02	0.312
		747.13		7.791E-02	9.868E-02	1.724E-01	2.187E-02	0.452
ND-147	+	91.11		1.379E+00	5.341E-01	7.468E-01	8.494E-02	1.847
		319.41		-5.270E-01	4.334E+00	7.174E+00	4.759E-01	-0.073
		439.89		1.067E-02	7.325E+00	1.202E+01	6.873E-01	0.001
		531.02	*	6.559E-01	7.019E-01	1.198E+00	1.610E-01	0.547
PM-149		285.90	*	4.748E+01	1.998E+02	3.370E+02	4.938E+01	0.141
EU-152		121.78		-3.362E-02	8.437E-02	1.355E-01	1.182E-02	-0.248
		244.69		-6.896E-02	4.182E-01	6.073E-01	4.228E-02	-0.114
		344.27	*	-1.130E-01	1.692E-01	1.782E-01	1.256E-02	-0.634
		443.98		-3.591E-01	1.024E+00	1.644E+00	9.395E-02	-0.218
		778.89		-9.932E-02	2.654E-01	4.303E-01	2.856E-02	-0.231
		867.32		4.668E-01	8.623E-01	1.394E+00	1.118E-01	0.335
	+	964.01		7.565E-01	2.885E-01	5.768E-01	4.651E-02	1.311
		1085.78		1.180E-01	3.936E-01	6.607E-01	4.526E-02	0.179
		1112.02		1.425E-01	3.867E-01	5.648E-01	3.687E-02	0.252
		1407.95		1.116E-01	1.844E-01	3.275E-01	2.443E-02	0.341
GD-153		69.67		-2.031E-02	2.703E+00	3.928E+00	4.434E-01	-0.005
		83.37		2.776E+00	2.174E+01	3.057E+01	3.449E+00	0.091
		97.43	*	7.897E-02	1.074E-01	1.558E-01	1.495E-02	0.507
	+	103.18		1.860E-01	1.585E-01	2.016E-01	1.773E-02	0.923
EU-154		123.07		-3.531E-03	5.899E-02	9.591E-02	9.873E-03	-0.037
		247.94		-1.117E-01	4.189E-01	6.785E-01	6.981E-02	-0.165
		591.81		6.709E-02	7.284E-01	1.152E+00	1.099E-01	0.058
		723.30		2.363E-02	2.124E-01	3.097E-01	2.204E-02	0.076
		756.87		8.548E-02	7.749E-01	1.304E+00	1.361E-01	0.066
		873.19		-4.004E-02	2.962E-01	4.853E-01	5.773E-02	-0.083
		996.32		3.165E-02	3.658E-01	6.058E-01	1.053E-01	0.052
		1004.76		-2.329E-01	2.275E-01	3.395E-01	3.728E-02	-0.686
		1274.45	*	4.057E-02	1.347E-01	2.239E-01	2.245E-02	0.181
TB-160	+	86.79		9.252E-01	3.877E-01	6.114E-01	7.021E-02	1.513
		197.04		1.424E-01	6.690E-01	1.081E+00	7.368E-02	0.132
		215.65		7.121E-02	8.964E-01	1.437E+00	9.914E-02	0.050
	+	298.57		2.441E-01	1.841E-01	2.369E-01	1.610E-02	1.031

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		879.36	*	-2.318E-02	1.403E-01	2.291E-01	1.884E-02	-0.101
		962.29		1.125E+00	6.215E-01	1.033E+00	8.346E-02	1.089
		966.15		1.410E+00	2.931E-01	5.596E-01	4.502E-02	2.520
		1177.93		1.619E-01	3.599E-01	6.084E-01	3.496E-02	0.266
		1271.85		8.578E-02	7.942E-01	1.298E+00	8.855E-02	0.066
HO-166M		80.57		-4.693E-01	5.518E-01	5.382E-01	6.012E-02	-0.872
	+	184.41		1.310E-01	6.674E-02	8.010E-02	5.405E-03	1.635
		280.46		-1.056E-01	1.016E-01	1.627E-01	1.121E-02	-0.649
		410.95		2.864E-01	2.785E-01	4.806E-01	2.738E-02	0.596
		711.68	*	7.416E-03	6.131E-02	1.035E-01	5.885E-03	0.072
		752.31		6.643E-02	2.814E-01	4.775E-01	2.984E-02	0.139
		810.29		-2.496E-02	6.099E-02	9.836E-02	6.994E-03	-0.254
TM-171		51.35		-2.697E+01	7.907E+01	1.301E+02	1.797E+01	-0.207
		52.39		-4.069E+00	3.801E+01	6.307E+01	8.700E+00	-0.065
		59.40		3.178E+01	5.351E+01	8.002E+01	9.848E+00	0.397
		66.72	*	-9.274E+00	4.987E+01	7.111E+01	8.177E+00	-0.130
LU-176	+	88.36		4.218E-01	2.470E-01	4.353E-01	4.994E-02	0.969
		201.83		-3.159E-02	4.014E-02	5.370E-02	3.674E-03	-0.588
		306.84	*	-1.083E-02	2.851E-02	4.543E-02	3.061E-03	-0.238
		401.10		1.612E+00	7.643E+00	1.264E+01	7.183E-01	0.128
LU-177		112.95		2.646E+00	2.195E+00	3.716E+00	2.909E-01	0.712
	+	208.36	*	5.135E+00	2.470E+00	2.851E+00	1.959E-01	1.801
LU-177M		52.97		-1.861E+00	3.826E+00	6.249E+00	8.583E-01	-0.298
		54.07		-9.919E-01	1.927E+00	3.142E+00	4.259E-01	-0.316
	+	61.30		1.913E+00	3.062E+00	4.504E+00	5.437E-01	0.425
		121.62		-1.716E-01	4.365E-01	7.016E-01	5.055E-02	-0.245
		147.16		-1.905E-01	7.558E-01	1.214E+00	8.211E-02	-0.157
		171.86		2.000E-01	5.652E-01	9.221E-01	6.158E-02	0.217
		218.09		2.633E-01	1.019E+00	1.644E+00	1.136E-01	0.160
	+	268.79		3.744E+00	1.390E+00	1.746E+00	1.210E-01	2.145
		319.02		-6.142E-02	2.937E-01	4.841E-01	3.212E-02	-0.127
		367.43		6.437E-01	9.885E-01	1.688E+00	1.022E-01	0.381
		413.65	*	-1.288E-01	1.994E-01	3.168E-01	1.806E-02	-0.407
HF-181		56.28		-7.230E-01	2.038E+00	3.300E+00	4.309E-01	-0.219
		57.53		-9.764E-02	1.126E+00	1.713E+00	2.184E-01	-0.057
		65.20		-1.181E+00	1.771E+00	2.466E+00	2.870E-01	-0.479
		133.02		-2.910E-02	7.749E-02	1.243E-01	8.619E-03	-0.234
		136.25		6.842E-02	5.357E-01	8.738E-01	6.017E-02	0.078
		345.85		-1.090E-01	3.019E-01	3.680E-01	2.336E-02	-0.296
		482.03	*	-3.713E-02	4.752E-02	7.377E-02	4.200E-03	-0.503
W-181		56.28		-2.762E-01	7.802E-01	1.263E+00	1.650E-01	-0.219
		57.53		-3.787E-02	4.316E-01	6.562E-01	8.369E-02	-0.058
		65.20	*	-4.489E-01	6.731E-01	9.375E-01	1.091E-01	-0.479
TA-182		67.75		1.703E-02	2.031E-01	2.763E-01	3.155E-02	0.062
		100.10		4.576E-02	2.405E-01	3.485E-01	3.205E-02	0.131
		152.43		2.734E-01	3.998E-01	6.609E-01	4.445E-02	0.414
		222.10		1.917E-01	4.140E-01	6.726E-01	4.656E-02	0.285
		1001.68		2.706E-01	2.176E+00	3.515E+00	2.719E-01	0.077
	+	1121.28		6.399E-01	3.689E-01	3.799E-01	2.435E-02	1.685

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		1189.05		1.471E-01	3.190E-01	5.383E-01	3.160E-02	0.273
		1221.42	*	1.382E-01	2.068E-01	3.530E-01	2.201E-02	0.392
		1230.97		-4.878E-01	4.916E-01	7.295E-01	4.628E-02	-0.669
RE-183		57.98		3.259E-01	4.407E-01	6.575E-01	8.313E-02	0.496
		59.32		1.368E-01	2.250E-01	3.367E-01	4.149E-02	0.406
		67.20		-2.353E-02	3.748E-01	5.065E-01	5.804E-02	-0.046
		162.32	*	2.016E-02	1.289E-01	2.093E-01	1.395E-02	0.096
	+	208.81		3.801E+00	1.828E+00	2.097E+00	1.442E-01	1.812
		291.72		1.426E+00	1.287E+00	1.977E+00	1.352E-01	0.721
RE-184		57.98		1.186E+00	1.604E+00	2.394E+00	3.027E-01	0.496
		59.32		4.975E-01	8.185E-01	1.225E+00	1.509E-01	0.406
		67.20		-8.564E-02	1.364E+00	1.843E+00	2.112E-01	-0.046
		161.27		1.348E-01	4.075E-01	6.657E-01	4.441E-02	0.203
		216.55		2.858E-01	3.124E-01	5.161E-01	3.563E-02	0.554
		252.85	*	2.068E-02	2.632E-01	4.433E-01	3.086E-02	0.047
		318.01		-7.184E-01	5.159E-01	8.006E-01	5.319E-02	-0.897
		792.07		2.761E-01	1.228E+00	1.801E+00	1.230E-01	0.153
		903.28		3.568E-01	1.151E+00	1.695E+00	1.441E-01	0.211
		920.93		-7.548E-02	4.850E-01	7.913E-01	6.637E-02	-0.095
OS-185		59.72		3.266E-01	5.956E-01	8.890E-01	1.090E-01	0.367
	+	61.14		2.106E-01	3.371E-01	4.977E-01	6.017E-02	0.423
		69.30		1.487E-01	4.881E-01	7.180E-01	8.120E-02	0.207
		592.07		-1.388E+00	3.029E+00	4.753E+00	2.563E-01	-0.292
		646.12	*	5.923E-03	4.693E-02	7.618E-02	3.903E-03	0.078
		717.42		6.175E-01	9.584E-01	1.639E+00	9.446E-02	0.377
		874.81		-3.862E-02	5.941E-01	9.790E-01	7.974E-02	-0.039
		880.27		-1.152E-01	7.584E-01	1.240E+00	1.021E-01	-0.093
RE-188		155.03	*	1.928E-01	2.045E-01	3.404E-01	2.284E-02	0.566
		477.96		1.291E+00	3.530E+00	5.888E+00	3.354E-01	0.219
		633.10		-2.229E-01	3.007E+00	4.816E+00	2.502E-01	-0.046
W-188	+	63.58		7.285E+01	1.166E+02	1.485E+02	1.753E+01	0.491
		227.08		-7.886E+00	1.490E+01	2.466E+01	1.711E+00	-0.320
		290.67	*	-7.003E+00	9.898E+00	1.376E+01	9.416E-01	-0.509
IR-192	+	295.96		1.283E+00	2.080E-01	3.258E-01	2.245E-02	3.937
		308.46		-4.740E-02	1.092E-01	1.783E-01	1.209E-02	-0.266
		316.51	*	-4.395E-02	3.968E-02	6.254E-02	4.180E-03	-0.703
		468.07		9.848E-02	8.523E-02	1.314E-01	8.682E-03	0.749
		604.41		-1.174E-02	5.943E-01	8.259E-01	9.185E-02	-0.014
		612.46		2.307E+00	9.839E-01	1.600E+00	1.151E-01	1.442
AU-195		65.12		-2.057E-01	3.113E-01	4.337E-01	5.051E-02	-0.474
		66.83		-2.833E-02	1.654E-01	2.360E-01	2.712E-02	-0.120
	+	75.70		1.971E+00	4.094E-01	6.112E-01	6.786E-02	3.225
		98.88	*	3.757E-01	2.839E-01	4.500E-01	4.218E-02	0.835
		129.76		5.020E+00	3.307E+00	5.611E+00	3.924E-01	0.895
TL-200		367.94	*	7.577E-04	3.307E+00	Half-Life too short		
		579.30		3.282E-02	3.307E+00	Half-Life too short		
		828.27		-4.417E-04	3.307E+00	Half-Life too short		
		1205.75		2.558E-03	3.307E+00	Half-Life too short		
TL-201		68.90		4.972E+00	1.263E+01	1.863E+01	2.112E+00	0.267

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		70.82		2.162E+00	6.850E+00	1.007E+01	1.131E+00	0.215
		80.30		-1.645E+01	1.407E+01	1.587E+01	1.771E+00	-1.037
		135.34		-2.433E+01	4.614E+01	7.352E+01	5.072E+00	-0.331
		167.43	*	9.644E-01	1.294E+01	2.092E+01	1.392E+00	0.046
TL-202		68.90		3.132E-01	7.954E-01	1.174E+00	1.331E-01	0.267
		70.82		1.358E-01	4.304E-01	6.328E-01	7.105E-02	0.215
		80.30		-1.034E+00	8.843E-01	9.974E-01	1.113E-01	-1.037
		439.56	*	9.699E-03	8.669E-02	1.431E-01	8.179E-03	0.068
HG-203		70.83		5.425E-01	1.710E+00	2.514E+00	3.868E-01	0.216
	+	72.87		4.760E+00	1.500E+00	1.684E+00	2.522E-01	2.827
		82.60		1.324E-01	1.798E+00	2.367E+00	3.674E-01	0.056
		279.20	*	-4.563E-03	4.955E-02	8.262E-02	5.950E-03	-0.055
BI-207	+	72.80		1.353E+00	4.042E-01	4.765E-01	5.315E-02	2.839
	+	74.97		8.015E-01	2.394E-01	3.375E-01	3.750E-02	2.375
		84.90		5.674E-01	2.897E-01	4.257E-01	4.837E-02	1.333
		569.67		1.125E-02	3.096E-02	5.140E-02	2.817E-03	0.219
		1063.62	*	-1.846E-03	5.534E-02	9.038E-02	6.421E-03	-0.020
		1770.23		3.079E-02	6.362E-01	9.029E-01	5.591E-02	0.034
TL-207		81.07		-2.297E-01	4.324E-01	4.334E-01	4.848E-02	-0.530
		83.78		1.540E-01	1.817E-01	2.615E-01	2.955E-02	0.589
		94.90		9.913E-02	2.994E-01	4.369E-01	4.381E-02	0.227
		122.32		-1.165E-01	2.002E+00	3.257E+00	2.578E-01	-0.036
		144.24		2.643E-01	8.225E-01	1.296E+00	1.043E-01	0.204
		154.21		6.174E-01	4.595E-01	7.727E-01	6.016E-02	0.799
	+	269.46		8.686E-01	3.228E-01	4.114E-01	2.943E-02	2.111
		323.87	*	-7.462E-01	8.017E-01	1.265E+00	2.126E-01	-0.590
	+	338.28		8.963E+00	2.226E+00	2.794E+00	3.044E-01	3.208
		445.03		-8.166E-01	2.415E+00	3.879E+00	3.965E-01	-0.211
PO-209		260.50		5.066E+00	1.070E+01	1.828E+01	1.271E+00	0.277
		262.80		-5.479E+00	3.229E+01	4.888E+01	3.396E+00	-0.112
		896.60	*	4.986E-01	7.652E+00	1.272E+01	1.083E+00	0.039
BI-210		46.50	*	7.160E-01	1.262E+01	2.033E+01	2.111E+00	0.035
PB-210		46.50	*	7.160E-01	1.262E+01	2.033E+01	2.111E+00	0.035
PO-210		46.50	*	7.160E-01	1.262E+01	2.033E+01	1.953E+00	0.035
PB-211		404.84	*	-1.927E+00	1.671E+00	1.669E+00	1.040E+00	-1.155
		427.08		-9.508E-01	2.449E+00	3.823E+00	2.363E+00	-0.249
		831.96		-7.430E-01	1.413E+00	2.132E+00	1.333E+00	-0.349
BI-212	+	727.18	*	9.775E-01	6.038E-01	6.940E-01	5.404E-02	1.408
		785.46		1.435E+00	1.812E+00	3.175E+00	2.138E-01	0.452
		1620.62		1.957E+00	1.402E+00	2.681E+00	1.844E-01	0.730
PO-215		81.07		-2.297E-01	4.324E-01	4.334E-01	4.848E-02	-0.530
		83.78		1.540E-01	1.817E-01	2.615E-01	2.955E-02	0.589
		94.90		9.913E-02	2.994E-01	4.369E-01	4.381E-02	0.227
		122.32		-1.165E-01	2.002E+00	3.257E+00	2.578E-01	-0.036
		144.24		2.643E-01	8.225E-01	1.296E+00	1.043E-01	0.204
		154.21		6.174E-01	4.595E-01	7.727E-01	6.016E-02	0.799
	+	269.46		8.686E-01	3.228E-01	4.114E-01	2.943E-02	2.111
		323.87	*	-7.462E-01	8.017E-01	1.265E+00	2.126E-01	-0.590
	+	338.28		8.963E+00	2.226E+00	2.794E+00	3.044E-01	3.208

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		445.03		-8.166E-01	2.415E+00	3.879E+00	3.965E-01	-0.211
RN-219		271.23		4.435E-01	3.236E-01	5.013E-01	4.485E-02	0.885
		401.81	*	6.702E-02	4.645E-01	7.708E-01	1.045E-01	0.087
RN-220		549.76	*	1.572E+01	2.893E+01	4.853E+01	2.692E+00	0.324
RA-223		81.07		-2.297E-01	4.324E-01	4.334E-01	4.848E-02	-0.530
		83.78		1.540E-01	1.817E-01	2.615E-01	2.955E-02	0.589
		94.90		9.913E-02	2.994E-01	4.369E-01	4.381E-02	0.227
		122.32		-1.165E-01	2.002E+00	3.257E+00	2.578E-01	-0.036
		144.24		2.643E-01	8.225E-01	1.296E+00	1.043E-01	0.204
		154.21		6.174E-01	4.595E-01	7.727E-01	6.016E-02	0.799
	+	269.46		8.686E-01	3.228E-01	4.114E-01	2.943E-02	2.111
		323.87	*	-7.462E-01	8.017E-01	1.265E+00	2.126E-01	-0.590
	+	338.28		8.963E+00	2.226E+00	2.794E+00	3.044E-01	3.208
		445.03		-8.166E-01	2.415E+00	3.879E+00	3.965E-01	-0.211
AC-227		79.80		-3.695E+00	2.715E+00	3.246E+00	7.346E-01	-1.138
		236.00		4.947E+00	6.721E-01	8.094E-01	9.012E-02	6.112
		256.20	*	-1.389E-01	4.267E-01	7.066E-01	1.023E-01	-0.197
		286.10		-2.424E-02	1.756E+00	2.934E+00	3.559E-01	-0.008
	+	299.80		3.048E+00	2.345E+00	2.939E+00	4.897E-01	1.037
		304.40		1.513E+00	2.394E+00	3.582E+00	6.319E-01	0.422
		334.20		-1.336E+00	3.103E+00	4.342E+00	8.060E-01	-0.308
TH-227		79.80		-3.695E+00	2.718E+00	3.246E+00	7.431E-01	-1.138
		94.00		8.171E+00	3.139E+00	4.123E+00	9.255E-01	1.982
		236.00		4.947E+00	6.205E-01	8.094E-01	7.961E-02	6.112
		256.20	*	-1.389E-01	4.269E-01	7.066E-01	1.225E-01	-0.197
		286.10		-2.424E-02	1.756E+00	2.934E+00	2.941E+00	-0.008
	+	299.80		3.048E+00	2.345E+00	2.939E+00	4.897E-01	1.037
		304.40		1.513E+00	2.394E+00	3.582E+00	6.319E-01	0.422
		334.20		-1.336E+00	3.103E+00	4.342E+00	8.060E-01	-0.308
TH-229	+	85.43		6.321E-01	2.649E-01	4.305E-01	4.906E-02	1.468
	+	88.47		2.428E-01	1.422E-01	2.479E-01	2.837E-02	0.979
		100.00		1.496E-01	2.437E-01	3.593E-01	3.310E-02	0.416
		193.63	*	-3.920E-01	5.899E-01	9.214E-01	6.264E-02	-0.425
		210.97		1.480E+00	9.942E-01	1.486E+00	1.023E-01	0.996
PA-231		283.67	*	9.259E-01	1.775E+00	3.021E+00	4.310E-01	0.306
		301.29		8.079E-01	7.597E-01	1.159E+00	1.278E-01	0.697
TH-231		81.07		-2.297E-01	4.324E-01	4.334E-01	4.848E-02	-0.530
		83.78		1.540E-01	1.817E-01	2.615E-01	2.955E-02	0.589
		94.90		9.913E-02	2.994E-01	4.369E-01	4.381E-02	0.227
		122.32		-1.165E-01	2.002E+00	3.257E+00	2.578E-01	-0.036
		144.24		2.643E-01	8.225E-01	1.296E+00	1.043E-01	0.204
		154.21		6.174E-01	4.595E-01	7.727E-01	6.016E-02	0.799
	+	269.46		8.686E-01	3.228E-01	4.114E-01	2.943E-02	2.111
		323.87	*	-7.462E-01	8.017E-01	1.265E+00	2.126E-01	-0.590
	+	338.28		8.963E+00	2.226E+00	2.794E+00	3.044E-01	3.208
		445.03		-8.166E-01	2.415E+00	3.879E+00	3.965E-01	-0.211
U-231		84.21		1.377E+01	1.115E+01	1.621E+01	1.835E+00	0.849
	+	92.29		1.293E+01	4.988E+00	6.694E+00	7.055E-01	1.932
		95.87	*	-2.304E+00	2.069E+00	2.751E+00	2.711E-01	-0.837

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		108.00		-2.164E+00	3.789E+00	5.278E+00	4.367E-01	-0.410
PA-233	+	75.28		2.339E+01	7.591E+00	9.942E+00	1.677E+00	2.352
	+	86.59		5.519E+00	2.704E+00	3.639E+00	1.014E+00	1.516
	+	300.12		8.497E-01	6.491E-01	8.250E-01	1.146E-01	1.030
		311.98	*	6.017E-02	7.082E-02	1.222E-01	8.564E-03	0.492
		340.50		2.254E+00	9.651E-01	1.352E+00	3.127E-01	1.667
		398.62		-1.278E+00	2.465E+00	3.892E+00	1.005E+00	-0.328
		415.76		-1.077E+00	1.809E+00	2.856E+00	5.871E-01	-0.377
PA-234	+	63.00		2.069E+00	3.324E+00	4.346E+00	7.614E-01	0.476
		94.67		1.861E-01	2.185E-01	3.237E-01	4.354E-02	0.575
		98.44		1.830E-01	1.549E-01	1.829E-01	1.023E-01	1.001
		99.86		5.305E-01	6.151E-01	9.156E-01	8.452E-02	0.579
		111.00		-5.837E-02	2.160E-01	3.373E-01	3.929E-02	-0.173
		131.20		-1.544E-01	1.246E-01	1.935E-01	1.348E-02	-0.798
		152.70		4.441E-01	3.831E-01	6.329E-01	1.023E-01	0.702
	+	186.00		4.715E+00	2.788E+00	2.905E+00	8.933E-01	1.623
		226.40		-2.366E-01	4.609E-01	7.622E-01	9.275E-02	-0.310
		227.20		-2.718E-01	4.927E-01	8.147E-01	5.651E-02	-0.334
		248.90		-1.197E-01	9.201E-01	1.538E+00	3.358E-01	-0.078
	+	293.70		7.918E+00	1.747E+00	2.021E+00	3.330E-01	3.919
		369.80		-6.446E-01	9.588E-01	1.516E+00	3.166E-01	-0.425
		568.70		-5.469E-01	1.031E+00	1.609E+00	8.823E-02	-0.340
		569.50		1.214E-01	2.736E-01	4.566E-01	2.503E-02	0.266
		574.00		-3.666E-01	1.689E+00	2.530E+00	1.383E-01	-0.145
		699.00		-5.924E-02	7.759E-01	1.295E+00	2.317E-01	-0.046
		706.10		-3.332E-01	1.048E+00	1.702E+00	7.508E-01	-0.196
		733.00		1.492E-01	4.204E-01	6.269E-01	1.336E-01	0.238
		742.81		7.013E-01	1.509E+00	2.474E+00	1.656E+00	0.284
	+	796.30		2.376E+00	1.393E+00	1.780E+00	4.727E-01	1.335
		805.60		6.746E-01	1.046E+00	1.786E+00	5.401E-01	0.378
		819.60		-1.915E-01	1.286E+00	2.111E+00	7.967E-01	-0.091
		826.30		-2.643E-01	8.966E-01	1.446E+00	6.436E-01	-0.183
		831.60		-2.864E-01	6.802E-01	1.088E+00	3.213E-01	-0.263
		876.40		1.287E-01	8.339E-01	1.381E+00	1.419E+00	0.093
		880.51		7.792E-03	2.684E-01	4.456E-01	3.672E-02	0.017
		883.24		8.359E-03	2.728E-01	4.528E-01	3.042E-01	0.018
		899.00		-8.748E-01	9.594E-01	1.340E+00	5.855E-01	-0.653
		925.00		-3.707E-01	1.255E+00	1.980E+00	1.655E-01	-0.187
		926.50		5.852E-02	1.806E-01	3.050E-01	7.681E-02	0.192
		946.00	*	-3.568E-02	3.029E-01	4.946E-01	9.188E-02	-0.072
		949.00		4.310E-01	4.203E-01	7.507E-01	6.142E-02	0.574
		980.50		3.776E-01	7.165E-01	1.231E+00	9.759E-02	0.307
		1394.10		-2.830E-01	1.199E+00	1.929E+00	1.253E+00	-0.147
PA-234M	+	766.42		2.732E+01	1.835E+01	2.334E+01	1.177E+01	1.171
		1001.03	*	-7.590E-01	5.006E+00	7.918E+00	7.298E-01	-0.096
NP-236		94.67		1.430E-01	1.653E-01	2.457E-01	2.475E-02	0.582
		98.44		1.384E-01	8.885E-02	1.382E-01	1.305E-02	1.001
		111.00		-4.415E-02	1.633E-01	2.551E-01	2.039E-02	-0.173
		160.31	*	-2.980E-02	9.096E-02	1.452E-01	9.691E-03	-0.205

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NP-239		99.55		2.154E-01	2.069E-01	3.099E-01	2.874E-02	0.695
		117.00	*	-3.803E-02	2.117E-01	3.433E-01	2.580E-02	-0.111
	+	209.75		2.937E+00	1.413E+00	1.606E+00	1.105E-01	1.829
		228.18		9.418E-02	2.588E-01	4.416E-01	3.064E-02	0.213
		277.60		3.793E-01	2.134E-01	3.773E-01	2.605E-02	1.005
		334.30		-5.988E-01	1.759E+00	2.484E+00	1.610E-01	-0.241
AM-241		59.54	*	1.464E-01	3.104E-01	4.620E-01	5.879E-02	0.317
CM-243		99.55		2.217E-01	2.130E-01	3.189E-01	2.958E-02	0.695
	+	103.76	*	1.710E-01	1.458E-01	1.870E-01	1.632E-02	0.915
		117.00		-3.913E-02	2.178E-01	3.532E-01	2.655E-02	-0.111
	+	209.75		2.896E+00	1.393E+00	1.584E+00	1.089E-01	1.829
		228.18		9.518E-02	2.616E-01	4.463E-01	3.097E-02	0.213
		277.60		3.825E-01	2.152E-01	3.804E-01	2.627E-02	1.005
AM-246		798.80		-1.694E-02	1.561E-01	2.212E-01	1.534E-02	-0.077
		1036.00		-1.653E-01	2.922E-01	4.538E-01	3.359E-02	-0.364
		1062.04		1.296E-01	2.449E-01	4.179E-01	2.976E-02	0.310
		1078.86	*	-1.048E-01	1.442E-01	2.202E-01	1.526E-02	-0.476
CM-247		278.00		1.409E+00	8.894E-01	1.564E+00	1.080E-01	0.901
		287.40		-6.519E-01	1.513E+00	2.338E+00	1.604E-01	-0.279
		402.60	*	-1.283E-02	4.456E-02	6.878E-02	3.911E-03	-0.187
CF-249		252.85		7.695E-02	9.791E-01	1.649E+00	1.148E-01	0.047
		333.44		-9.325E-02	2.308E-01	3.245E-01	2.106E-02	-0.287
		387.95	*	3.718E-03	4.382E-02	7.263E-02	4.164E-03	0.051
CF-251		176.60	*	-5.659E-02	1.537E-01	2.441E-01	1.636E-02	-0.232
		227.00		-2.251E-01	4.383E-01	7.257E-01	5.034E-02	-0.310
		285.00		7.518E-01	1.995E+00	3.384E+00	2.326E-01	0.222

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004733		
Acquisition date	: 4-JAN-2010 16:16:25	Detector SN#	:
Detector ID	: GAM15	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 03:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 03:00:01.81	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004733	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.1111E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 16-FEB-2009 10:54:12	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
K-40	2.200E+01	2.175E+00	5.286E-01	0.000E+00
CD-109	2.877E+00	1.182E+00	1.535E+00	0.000E+00
SN-126	2.819E-01	1.158E-01	1.516E-01	0.000E+00
CS-135	7.384E-01	2.710E-01	2.745E-01	0.000E+00
BA-137M	2.375E-01	8.182E-02	5.669E-02	0.000E+00
CS-137	2.511E-01	8.650E-02	5.993E-02	0.000E+00
EU-155	1.911E-01	1.596E-01	1.983E-01	0.000E+00
TL-208	6.055E-01	1.003E-01	6.427E-02	0.000E+00
BI-211	4.613E+00	5.708E-01	3.686E-01	0.000E+00
PB-212	1.911E+00	1.980E-01	1.055E-01	0.000E+00
PO-212	1.911E+00	1.980E-01	1.055E-01	0.000E+00
BI-214	1.478E+00	2.022E-01	1.219E-01	0.000E+00
PB-214	1.605E+00	2.148E-01	1.235E-01	0.000E+00
PO-214	1.605E+00	2.148E-01	1.235E-01	0.000E+00
PO-216	1.911E+00	1.980E-01	1.055E-01	0.000E+00
PO-218	1.605E+00	2.148E-01	1.235E-01	0.000E+00
RA-224	4.895E+00	1.593E+00	1.201E+00	0.000E+00
RA-226	1.478E+00	2.022E-01	1.219E-01	0.000E+00
AC-228	1.837E+00	3.778E-01	2.352E-01	0.000E+00
RA-228	1.837E+00	3.778E-01	2.352E-01	0.000E+00
TH-228	1.944E+00	2.014E-01	1.074E-01	0.000E+00
TH-230	1.478E+00	2.022E-01	1.219E-01	0.000E+00
TH-232	1.837E+00	3.778E-01	2.352E-01	0.000E+00
TH-234	1.775E+00	2.799E+00	3.675E+00	0.000E+00
U-234	1.478E+00	2.022E-01	1.219E-01	0.000E+00
U-235	8.046E-02	2.491E-01	4.052E-01	0.000E+00
NP-237	8.278E-01	3.790E-01	4.536E-01	0.000E+00
U-238	1.775E+00	2.799E+00	3.675E+00	0.000E+00
AM-243	4.465E-01	1.307E-01	1.211E-01	0.000E+00
ANH-511	1.448E-01	7.999E-02	5.274E-02	0.000E+00

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L. Act error Ided	MDA (pCi/GRAM)		
BE-7	3.198E-01	3.534E-01	6.208E-01	0.000E+00	NOT IDENT.
NA-22	1.637E-02	4.747E-02	8.040E-02	0.000E+00	NOT IDENT.
NA-24	0.000E+00	8.879E+06	0.000E+00	0.000E+00	SHORT HLIF
AL-26	2.558E-03	2.536E-02	4.309E-02	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.967E-02	9.282E-02	0.000E+00	NOT IDENT.
SC-46	3.751E-03	4.036E-02	6.856E-02	0.000E+00	FAIL ABUN
V-48	-3.884E-02	7.564E-02	1.210E-01	0.000E+00	NOT IDENT.
CR-51	2.937E-01	4.378E-01	7.689E-01	0.000E+00	NOT IDENT.
MN-52	-3.835E-01	3.247E-01	4.544E-01	0.000E+00	NOT IDENT.
MN-54	7.090E-03	4.030E-02	6.901E-02	0.000E+00	NOT IDENT.
CO-56	7.713E-03	3.899E-02	6.695E-02	0.000E+00	NOT IDENT.
CO-57	-1.574E-03	2.838E-02	4.777E-02	0.000E+00	NOT IDENT.
CO-58	-2.630E-02	4.095E-02	6.618E-02	0.000E+00	NOT IDENT.
FE-59	-1.435E-01	9.752E-02	1.402E-01	0.000E+00	NOT IDENT.
CO-60	-9.009E-03	4.219E-02	6.764E-02	0.000E+00	NOT IDENT.
ZN-65	2.495E-02	1.058E-01	1.547E-01	0.000E+00	NOT IDENT.
GE-68	-9.852E-01	1.238E+00	1.912E+00	0.000E+00	NOT IDENT.
AS-73	-9.297E-01	1.910E+00	3.249E+00	0.000E+00	NOT IDENT.
AS-74	4.843E-02	1.124E-01	1.906E-01	0.000E+00	NOT IDENT.
SE-75	-1.939E-02	5.481E-02	8.057E-02	0.000E+00	NOT IDENT.
BR-77	1.562E+01	2.076E+01	3.609E+01	0.000E+00	FAIL ABUN
SR-82	-2.853E-01	4.165E-01	6.749E-01	0.000E+00	NOT IDENT.
RB-83	4.854E-02	7.637E-02	1.319E-01	0.000E+00	NOT IDENT.
RB-84	5.803E-03	6.880E-02	1.169E-01	0.000E+00	NOT IDENT.
KR-85	0.000E+00	9.025E+00	1.491E+01	0.000E+00	NOT IDENT.
SR-85	0.000E+00	4.730E-02	7.814E-02	0.000E+00	NOT IDENT.
RB-86	-1.196E-01	8.375E-01	1.377E+00	0.000E+00	NOT IDENT.
Y-88	1.112E-02	3.440E-02	6.022E-02	0.000E+00	NOT IDENT.
ZR-88	9.323E-03	3.500E-02	5.996E-02	0.000E+00	NOT IDENT.
Y-91	9.208E+00	1.813E+01	3.122E+01	0.000E+00	NOT IDENT.
NB-94	-6.314E-03	3.422E-02	5.791E-02	0.000E+00	NOT IDENT.
NB-95	7.989E-02	5.363E-02	8.791E-02	0.000E+00	NOT IDENT.
NB-95M	0.000E+00	2.523E-01	3.946E-01	0.000E+00	NOT IDENT.
ZR-95	7.385E-03	7.128E-02	1.223E-01	0.000E+00	NOT IDENT.
NB-97	0.000E+00	9.388E+05	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.893E+07	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-1.651E+01	1.995E+01	3.161E+01	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.363E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.324E-02	3.925E-02	6.310E-02	0.000E+00	NOT IDENT.
RH-102	1.640E-02	3.264E-02	5.612E-02	0.000E+00	FAIL ABUN
RU-103	2.151E-02	4.352E-02	7.474E-02	0.000E+00	FAIL ABUN
RH-106	-1.217E-01	3.485E-01	5.602E-01	0.000E+00	FAIL ABUN
RU-106	-1.217E-01	3.483E-01	5.602E-01	0.000E+00	FAIL ABUN
AG-108M	-1.335E-02	3.609E-02	5.949E-02	0.000E+00	NOT IDENT.
AG-110M	1.334E-02	4.321E-02	6.294E-02	0.000E+00	NOT IDENT.
IN-111	-3.865E-01	2.186E+00	3.264E+00	0.000E+00	NOT IDENT.
IN-113M	-2.462E-02	5.046E-02	8.328E-02	0.000E+00	NOT IDENT.
SN-113	-2.462E-02	5.046E-02	8.328E-02	0.000E+00	NOT IDENT.
IN-114M	-1.479E-01	2.456E-01	3.435E-01	0.000E+00	NOT IDENT.
CD-115	-1.508E+01	2.248E+01	3.581E+01	0.000E+00	NOT IDENT.
SN-117M	-6.002E-02	6.878E-02	1.111E-01	0.000E+00	NOT IDENT.
SB-122	3.456E+00	3.601E+00	6.327E+00	0.000E+00	NOT IDENT.
I-123	0.000E+00	9.076E+07	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-2.447E-02	3.247E-02	5.268E-02	0.000E+00	NOT IDENT.
I-124	-3.609E-01	1.263E+00	1.753E+00	0.000E+00	FAIL ABUN
SB-124	7.715E-03	6.924E-02	1.182E-01	0.000E+00	FAIL ABUN
SB-125	1.199E-02	1.032E-01	1.747E-01	0.000E+00	FAIL ABUN
TE-125M	-9.992E-01	1.176E+01	1.737E+01	0.000E+00	NOT IDENT.
I-126	2.054E-01	2.520E-01	3.831E-01	0.000E+00	NOT IDENT.
SB-126	-9.036E-03	1.909E-01	2.802E-01	0.000E+00	NOT IDENT.
SB-127	-8.980E-01	2.000E+00	3.327E+00	0.000E+00	FAIL ABUN
XE-127	-1.563E-02	6.562E-02	9.330E-02	0.000E+00	NOT IDENT.
I-131	1.087E-02	1.491E-01	2.541E-01	0.000E+00	NOT IDENT.
TE-132	4.420E-01	1.209E+00	2.121E+00	0.000E+00	NOT IDENT.
BA-133	-2.643E-03	5.178E-02	7.611E-02	0.000E+00	NOT IDENT.
I-133	0.000E+00	3.349E+04	0.000E+00	0.000E+00	SHORT HLIF
CS-134	0.000E+00	6.330E-02	9.281E-02	0.000E+00	FAIL ABUN
I-135	0.000E+00	1.051E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.255E-02	1.280E-01	2.092E-01	0.000E+00	FAIL ABUN
CE-139	-1.189E-02	3.413E-02	5.614E-02	0.000E+00	NOT IDENT.
BA-140	6.961E-02	3.068E-01	5.160E-01	0.000E+00	NOT IDENT.
LA-140	1.004E-01	1.022E-01	1.736E-01	0.000E+00	NOT IDENT.
CE-141	2.837E-02	7.343E-02	1.245E-01	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.192E+03	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-1.359E-01	2.304E-01	3.781E-01	0.000E+00	NOT IDENT.

PM-144	4.331E-02	3.701E-02	6.740E-02	0.000E+00	NOT IDENT.
PR-144	2.938E+00	2.510E+00	4.573E+00	0.000E+00	NOT IDENT.
PM-146	-5.682E-03	4.688E-02	7.814E-02	0.000E+00	NOT IDENT.
ND-147	6.559E-01	6.879E-01	1.202E+00	0.000E+00	FAIL ABUN
PM-149	4.748E+01	1.958E+02	3.395E+02	0.000E+00	NOT IDENT.
EU-152	-1.130E-01	1.658E-01	1.793E-01	0.000E+00	FAIL ABUN
GD-153	7.897E-02	1.052E-01	1.583E-01	0.000E+00	FAIL ABUN
EU-154	4.057E-02	1.321E-01	2.229E-01	0.000E+00	NOT IDENT.
TB-160	-2.318E-02	1.374E-01	2.288E-01	0.000E+00	FAIL ABUN
HO-166M	7.416E-03	6.008E-02	1.036E-01	0.000E+00	FAIL ABUN
TM-171	-9.274E+00	4.888E+01	7.244E+01	0.000E+00	NOT IDENT.
LU-176	-1.083E-02	2.794E-02	4.575E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	2.420E+00	2.879E+00	0.000E+00	FAIL ABUN
LU-177M	-1.288E-01	1.955E-01	3.183E-01	0.000E+00	FAIL ABUN
HF-181	-3.713E-02	4.657E-02	7.403E-02	0.000E+00	NOT IDENT.
W-181	-4.489E-01	6.597E-01	9.553E-01	0.000E+00	NOT IDENT.
TA-182	1.382E-01	2.026E-01	3.516E-01	0.000E+00	FAIL ABUN
RE-183	2.016E-02	1.264E-01	2.118E-01	0.000E+00	FAIL ABUN
RE-184	2.068E-02	2.579E-01	4.471E-01	0.000E+00	NOT IDENT.
OS-185	5.923E-03	4.599E-02	7.627E-02	0.000E+00	FAIL ABUN
RE-188	1.928E-01	2.004E-01	3.446E-01	0.000E+00	NOT IDENT.
W-188	-7.003E+00	9.700E+00	1.386E+01	0.000E+00	FAIL ABUN
IR-192	-4.395E-02	3.889E-02	6.297E-02	0.000E+00	FAIL ABUN
AU-195	3.757E-01	2.782E-01	4.571E-01	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.860E+03	0.000E+00	0.000E+00	SHORT HLIF
TL-201	9.644E-01	1.268E+01	2.116E+01	0.000E+00	NOT IDENT.
TL-202	9.699E-03	8.496E-02	1.437E-01	0.000E+00	NOT IDENT.
HG-203	-4.563E-03	4.856E-02	8.326E-02	0.000E+00	FAIL ABUN
BI-207	-1.846E-03	5.423E-02	9.013E-02	0.000E+00	FAIL ABUN
TL-207	-7.462E-01	7.856E-01	1.273E+00	0.000E+00	FAIL ABUN
PO-209	4.986E-01	7.499E+00	1.271E+01	0.000E+00	NOT IDENT.
BI-210	7.160E-01	1.236E+01	2.077E+01	0.000E+00	NOT IDENT.
PB-210	7.160E-01	1.236E+01	2.077E+01	0.000E+00	NOT IDENT.
PO-210	7.160E-01	1.236E+01	2.077E+01	0.000E+00	NOT IDENT.
PB-211	-1.927E+00	1.638E+00	1.677E+00	0.000E+00	NOT IDENT.
BI-212	0.000E+00	5.917E-01	6.942E-01	0.000E+00	FAIL ABUN
PO-215	-7.462E-01	7.856E-01	1.273E+00	0.000E+00	FAIL ABUN
RN-219	6.702E-02	4.552E-01	7.745E-01	0.000E+00	NOT IDENT.
RN-220	1.572E+01	2.835E+01	4.864E+01	0.000E+00	NOT IDENT.
RA-223	-7.462E-01	7.856E-01	1.273E+00	0.000E+00	FAIL ABUN
AC-227	-1.389E-01	4.182E-01	7.125E-01	0.000E+00	FAIL ABUN
TH-227	-1.389E-01	4.184E-01	7.125E-01	0.000E+00	FAIL ABUN
TH-229	-3.920E-01	5.781E-01	9.311E-01	0.000E+00	FAIL ABUN
PA-231	9.259E-01	1.739E+00	3.044E+00	0.000E+00	NOT IDENT.
TH-231	-7.462E-01	7.856E-01	1.273E+00	0.000E+00	FAIL ABUN
U-231	-2.304E+00	2.028E+00	2.795E+00	0.000E+00	FAIL ABUN
PA-233	6.017E-02	6.941E-02	1.230E-01	0.000E+00	FAIL ABUN
PA-234	-3.568E-02	2.969E-01	4.937E-01	0.000E+00	FAIL ABUN
PA-234M	-7.590E-01	4.906E+00	7.900E+00	0.000E+00	FAIL ABUN
NP-236	-2.980E-02	8.914E-02	1.469E-01	0.000E+00	NOT IDENT.
NP-239	-3.803E-02	2.075E-01	3.482E-01	0.000E+00	FAIL ABUN
AM-241	1.464E-01	3.042E-01	4.711E-01	0.000E+00	NOT IDENT.
CM-243	1.710E-01	1.429E-01	1.899E-01	0.000E+00	FAIL ABUN
AM-246	-1.048E-01	1.413E-01	2.195E-01	0.000E+00	NOT IDENT.
CM-247	-1.283E-02	4.367E-02	6.911E-02	0.000E+00	NOT IDENT.
CF-249	3.718E-03	4.294E-02	7.300E-02	0.000E+00	NOT IDENT.
CF-251	-5.659E-02	1.506E-01	2.469E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 14:05:31.81

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004733.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 16:16:25.
Sample ID : G1202004733 Sample quantity : 1.11113E+02 GRAM
Detector name : GAM15 Detector geometry: CAN
Elapsed live time: 0 03:00:00.00 Elapsed real time: 0 03:00:01.81 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
K-40	1460.81	1041	10.67*	9.987E-01	2.200E+01	2.200E+01	10.09
CD-109	88.03	204	3.72*	4.410E+00	2.804E+00	2.877E+00	41.91
SN-126	64.28	------	9.60	1.930E+00	------ Line Not Found		------
	86.94	204	8.90	4.410E+00	1.172E+00	1.172E+00	58.24
	87.57	204	37.00*	4.410E+00	2.819E-01	2.819E-01	41.91
CS-135	268.24	203	16.00*	3.865E+00	7.384E-01	7.384E-01	37.46
BA-137M	661.65	191	89.98*	2.018E+00	2.373E-01	2.375E-01	35.15
CS-137	661.65	191	85.12*	2.018E+00	2.508E-01	2.511E-01	35.15
EU-155	48.70	------	4.60	3.809E-01	------ Line Not Found		------
	60.01	------	1.11	1.416E+00	------ Line Not Found		------
	86.54	204	30.90	4.410E+00	3.376E-01	3.398E-01	41.93
	105.31	95	20.70*	5.420E+00	1.898E-01	1.911E-01	85.25
TL-208	277.35	------	6.80	3.788E+00	------ Line Not Found		------
	510.84	158	21.60	2.461E+00	6.703E-01	6.703E-01	56.99
	583.14	505	84.20*	2.229E+00	6.055E-01	6.055E-01	16.90
	860.37	82	12.46	1.613E+00	9.242E-01	9.242E-01	46.12
BI-211	72.87	412	1.27	3.152E+00	2.320E+01	2.320E+01	29.87
	351.07	850	12.94*	3.205E+00	4.613E+00	4.613E+00	12.62
PB-212	74.81	412	10.70	3.152E+00	2.754E+00	2.754E+00	31.30
	77.11	605	18.00	3.416E+00	2.216E+00	2.216E+00	20.77
	87.30	204	8.00	4.410E+00	1.304E+00	1.304E+00	43.08
	238.63	1597	44.60*	4.220E+00	1.911E+00	1.911E+00	10.57
	300.09	89	3.41	3.586E+00	1.644E+00	1.644E+00	75.65
PO-212	74.81	412	10.70	3.152E+00	2.754E+00	2.754E+00	31.30
	77.11	605	18.00	3.416E+00	2.216E+00	2.216E+00	20.77
	87.30	204	8.00	4.410E+00	1.304E+00	1.304E+00	43.08
	115.19	------	0.60	5.666E+00	------ Line Not Found		------
	238.63	1597	44.60*	4.220E+00	1.911E+00	1.911E+00	10.57
	300.09	89	3.41	3.586E+00	1.644E+00	1.644E+00	75.65
BI-214	609.31	655	46.30*	2.155E+00	1.478E+00	1.478E+00	13.96
	1120.29	113	15.10	1.262E+00	1.337E+00	1.337E+00	58.02
	1764.49	89	15.80	8.815E-01	1.443E+00	1.443E+00	40.71

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
PB-214	74.81	412	6.21	3.152E+00	4.745E+00	4.745E+00	30.78
	77.11	605	10.50	3.416E+00	3.799E+00	3.799E+00	22.12
	87.30	204	4.67	4.410E+00	2.233E+00	2.234E+00	42.61
	241.98	359	7.49	4.185E+00	2.581E+00	2.582E+00	33.68
	295.21	510	19.20	3.629E+00	1.650E+00	1.650E+00	17.35
	351.92	850	37.20*	3.205E+00	1.605E+00	1.605E+00	13.66
PO-214	74.81	412	6.21	3.152E+00	4.745E+00	4.745E+00	30.78
	77.11	605	10.50	3.416E+00	3.799E+00	3.799E+00	22.12
	87.30	204	4.67	4.410E+00	2.233E+00	2.234E+00	42.61
	241.98	359	7.49	4.185E+00	2.581E+00	2.582E+00	33.68
	295.21	510	19.20	3.629E+00	1.650E+00	1.650E+00	17.35
	351.92	850	37.20*	3.205E+00	1.605E+00	1.605E+00	13.66
PO-216	74.81	412	10.70	3.152E+00	2.754E+00	2.754E+00	31.30
	77.11	605	18.00	3.416E+00	2.216E+00	2.216E+00	20.77
	87.30	204	8.00	4.410E+00	1.304E+00	1.304E+00	43.08
	238.63	1597	44.60*	4.220E+00	1.911E+00	1.911E+00	10.57
	300.09	89	3.41	3.586E+00	1.644E+00	1.644E+00	75.65
PO-218	74.81	412	6.21	3.152E+00	4.745E+00	4.745E+00	30.78
	77.11	605	10.50	3.416E+00	3.799E+00	3.799E+00	22.12
	87.30	204	4.67	4.410E+00	2.233E+00	2.234E+00	42.61
	241.98	359	7.49	4.185E+00	2.581E+00	2.582E+00	33.68
	295.21	510	19.20	3.629E+00	1.650E+00	1.650E+00	17.35
	351.92	850	37.20*	3.205E+00	1.605E+00	1.605E+00	13.66
RA-224	240.98	359	3.95*	4.185E+00	4.895E+00	4.895E+00	33.21
RA-226	609.31	655	46.30*	2.155E+00	1.478E+00	1.478E+00	13.96
	1120.29	113	15.10	1.262E+00	1.337E+00	1.337E+00	58.02
	1764.49	89	15.80	8.815E-01	1.443E+00	1.443E+00	40.71
AC-228	338.32	358	11.40	3.295E+00	2.146E+00	2.146E+00	46.56
	911.07	346	27.70*	1.532E+00	1.837E+00	1.837E+00	20.99
	969.11	199	16.60	1.447E+00	1.868E+00	1.868E+00	31.69
RA-228	338.32	358	11.40	3.295E+00	2.146E+00	2.146E+00	46.56
	911.07	346	27.70*	1.532E+00	1.837E+00	1.837E+00	20.99
	969.11	199	16.60	1.447E+00	1.868E+00	1.868E+00	31.69
TH-228	74.81	412	10.70	3.152E+00	2.754E+00	2.802E+00	29.89
	77.11	605	18.00	3.416E+00	2.216E+00	2.254E+00	20.77
	87.30	204	8.00	4.410E+00	1.304E+00	1.326E+00	41.91
	238.63	1597	44.60*	4.220E+00	1.911E+00	1.944E+00	10.57
	300.09	89	3.41	3.586E+00	1.644E+00	1.673E+00	95.54
TH-230	609.31	655	46.30*	2.155E+00	1.478E+00	1.478E+00	13.96
	1120.29	113	15.10	1.262E+00	1.337E+00	1.337E+00	58.02
	1764.49	89	15.80	8.815E-01	1.443E+00	1.443E+00	40.71
TH-232	338.32	358	11.40	3.295E+00	2.146E+00	2.146E+00	23.22
	911.07	346	27.70*	1.532E+00	1.837E+00	1.837E+00	20.99
	969.11	199	16.60	1.447E+00	1.868E+00	1.868E+00	31.69
TH-234	63.29	51	3.80*	1.693E+00	1.775E+00	1.775E+00	160.88
	92.38	278	5.41	4.817E+00	2.404E+00	2.404E+00	41.71
U-234	609.31	655	46.30*	2.155E+00	1.478E+00	1.478E+00	13.96
	1120.29	113	15.10	1.262E+00	1.337E+00	1.337E+00	58.02
	1764.49	89	15.80	8.815E-01	1.443E+00	1.443E+00	40.71

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
U-235	89.95	135	2.70	4.623E+00	2.437E+00	2.437E+00	65.63
	93.35	278	4.50	4.817E+00	2.890E+00	2.890E+00	46.89
	105.00	95	2.10	5.420E+00	1.871E+00	1.871E+00	89.90
	143.76	------	10.50*	5.619E+00	------ Line Not Found		------
	163.35	------	4.70	5.342E+00	------ Line Not Found		------
	185.71	209	54.00	4.984E+00	1.746E-01	1.746E-01	50.95
	205.31	------	4.70	4.671E+00	------ Line Not Found		------
NP-237	86.50	204	12.60*	4.410E+00	8.278E-01	8.278E-01	46.71
	95.87	------	2.60	5.041E+00	------ Line Not Found		------
U-238	63.29	51	3.80*	1.693E+00	1.775E+00	1.775E+00	160.88
	92.38	278	5.41	4.817E+00	2.404E+00	2.404E+00	38.56
AM-243	74.67	412	66.00*	3.152E+00	4.465E-01	4.465E-01	29.87
	86.72	204	0.34	4.410E+00	3.104E+01	3.104E+01	41.91
	117.66	------	0.55	5.694E+00	------ Line Not Found		------
	142.18	------	0.13	5.637E+00	------ Line Not Found		------
ANH-511	511.00	158	100.00*	2.461E+00	1.448E-01	1.448E-01	56.38

Flag: "*" = Keyline

Sample ID : G1202004733 Acquisition date : 4-JAN-2010 16:16:25

Total number of lines in spectrum 35
Number of unidentified lines 2
Number of lines tentatively identified by NID 33 94.29%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.200E+01	2.200E+01	0.222E+01	10.09	
CD-109	464.00D	1.03	2.804E+00	2.877E+00	1.206E+00	41.91	
SN-126	1.00E+05Y	1.00	2.819E-01	2.819E-01	1.181E-01	41.91	
CS-135	2.30E+06Y	1.00	7.384E-01	7.384E-01	2.766E-01	37.46	
BA-137M	30.17Y	1.00	2.373E-01	2.375E-01	0.835E-01	35.15	
CS-137	30.17Y	1.00	2.508E-01	2.511E-01	0.883E-01	35.15	
EU-155	4.96Y	1.01	1.898E-01	1.911E-01	1.629E-01	85.25	
TL-208	1.41E+10Y	1.00	6.055E-01	6.055E-01	1.023E-01	16.90	
BI-211	7.04E+08Y	1.00	4.613E+00	4.613E+00	0.582E+00	12.62	
PB-212	1.41E+10Y	1.00	1.911E+00	1.911E+00	0.202E+00	10.57	
PO-212	1.41E+10Y	1.00	1.911E+00	1.911E+00	0.202E+00	10.57	
BI-214	1600.00Y	1.00	1.478E+00	1.478E+00	0.206E+00	13.96	
PB-214	1600.00Y	1.00	1.605E+00	1.605E+00	0.219E+00	13.66	
PO-214	1600.00Y	1.00	1.605E+00	1.605E+00	0.219E+00	13.66	
PO-216	1.41E+10Y	1.00	1.911E+00	1.911E+00	0.202E+00	10.57	
PO-218	1600.00Y	1.00	1.605E+00	1.605E+00	0.219E+00	13.66	
RA-224	1.41E+10Y	1.00	4.895E+00	4.895E+00	1.626E+00	33.21	
RA-226	1600.00Y	1.00	1.478E+00	1.478E+00	0.206E+00	13.96	
AC-228	1.41E+10Y	1.00	1.837E+00	1.837E+00	0.386E+00	20.99	
RA-228	1.41E+10Y	1.00	1.837E+00	1.837E+00	0.386E+00	20.99	
TH-228	1.91Y	1.02	1.911E+00	1.944E+00	0.206E+00	10.57	
TH-230	4.47E+09Y	1.00	1.478E+00	1.478E+00	0.206E+00	13.96	
TH-232	1.41E+10Y	1.00	1.837E+00	1.837E+00	0.386E+00	20.99	
TH-234	4.47E+09Y	1.00	1.775E+00	1.775E+00	2.856E+00	160.88	
U-234	4.47E+09Y	1.00	1.478E+00	1.478E+00	0.206E+00	13.96	
U-235	7.04E+08Y	1.00	1.746E-01	1.746E-01	0.890E-01	50.95	K
NP-237	2.14E+06Y	1.00	8.278E-01	8.278E-01	3.867E-01	46.71	
U-238	4.47E+09Y	1.00	1.775E+00	1.775E+00	2.856E+00	160.88	
AM-243	7380.00Y	1.00	4.465E-01	4.465E-01	1.334E-01	29.87	
ANH-511	1.00E+09Y	1.00	1.448E-01	1.448E-01	0.816E-01	56.38	
	Total Activity :		6.563E+01	6.574E+01			
	Grand Total Activity :		6.563E+01	6.574E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

Sample ID : G1202004733 Acquisition date : 4-JAN-2010 16:16:25

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	208.48	195	491	1.60	417.33	410	12	1.81E-02	47.6	4.62E+00	T
0	462.44	99	149	1.44	925.04	920	11	9.17E-03	51.7	2.64E+00	T
0	727.14	96	139	1.35	1454.27	1446	16	8.86E-03	61.3	1.87E+00	T
0	767.86	69	55	2.34	1535.69	1532	8	6.41E-03	44.4	1.78E+00	T
0	795.14	71	68	1.13	1590.25	1585	12	6.59E-03	52.3	1.73E+00	T
3	964.33	70	33	1.90	1928.54	1924	21	6.49E-03	37.3	1.45E+00	T
0	1377.65	58	46	1.54	2755.05	2746	17	5.39E-03	59.8	1.05E+00	T
0	1510.65	36	39	3.62	3021.01	3010	25	3.35E-03	97.2	9.73E-01	T
0	1590.70	48	36	1.31	3181.10	3172	21	4.45E-03	69.2	9.38E-01	
0	1848.42	16	16	1.41	3696.53	3689	11	1.49E-03	****	8.64E-01	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 14:05:36.79

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004733.CNF;1		
Acquisition date	: 4-JAN-2010 16:16:25.	Detector SN#	:
Detector ID	: GAM15	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 03:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 03:00:01.81	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004733	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.11113E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 16-FEB-2009 10:54:12.9	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
K-40	2.200E+01	2.219E+00	5.313E-01	4.062E-02	41.396
CD-109	2.877E+00	1.206E+00	1.510E+00	1.746E-01	1.906
SN-126	2.819E-01	1.181E-01	1.491E-01	1.720E-02	1.891
CS-135	7.384E-01	2.766E-01	2.723E-01	2.328E-02	2.711
BA-137M	2.375E-01	8.349E-02	5.664E-02	2.850E-03	4.194
CS-137	2.511E-01	8.826E-02	5.987E-02	3.029E-03	4.194
EU-155	1.911E-01	1.629E-01	1.953E-01	1.691E-02	0.978
TL-208	6.055E-01	1.023E-01	6.415E-02	4.084E-03	9.440
BI-211	4.613E+00	5.824E-01	3.664E-01	2.517E-02	12.592
PB-212	1.911E+00	2.020E-01	1.046E-01	8.658E-03	18.266
PO-212	1.911E+00	2.020E-01	1.046E-01	8.658E-03	18.266
BI-214	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
PB-214	1.605E+00	2.192E-01	1.228E-01	1.059E-02	13.067
PO-214	1.605E+00	2.192E-01	1.228E-01	1.059E-02	13.067
PO-216	1.911E+00	2.020E-01	1.046E-01	8.658E-03	18.266
PO-218	1.605E+00	2.192E-01	1.228E-01	1.059E-02	13.067
RA-224	4.895E+00	1.626E+00	1.190E+00	8.283E-02	4.113
RA-226	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
AC-228	1.837E+00	3.856E-01	2.356E-01	2.619E-02	7.796
RA-228	1.837E+00	3.856E-01	2.356E-01	2.619E-02	7.796
TH-228	1.944E+00	2.055E-01	1.064E-01	8.808E-03	18.266
TH-230	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
TH-232	1.837E+00	3.856E-01	2.356E-01	2.619E-02	7.796
TH-234	1.775E+00	2.856E+00	3.605E+00	7.116E-01	0.492
U-234	1.478E+00	2.063E-01	1.217E-01	9.036E-03	12.145
U-235	1.746E-01	8.898E-02	4.000E-01	6.675E-02	0.437
NP-237	8.278E-01	3.867E-01	4.462E-01	1.053E-01	1.855
U-238	1.775E+00	2.856E+00	3.605E+00	7.116E-01	0.492
AM-243	4.465E-01	1.334E-01	1.190E-01	1.323E-02	3.752
ANH-511	1.448E-01	8.162E-02	5.258E-02	2.969E-03	2.753

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	3.198E-01		3.606E-01	6.186E-01	4.122E-02	0.517
NA-22	1.637E-02		4.844E-02	8.074E-02	5.541E-03	0.203
NA-24	-3.588E+00		4.530E+00	Half-Life too short		
AL-26	2.558E-03		2.588E-02	4.339E-02	2.596E-03	0.059
TI-44	2.371E-01		6.089E-02	9.122E-02	1.014E-02	2.599
SC-46	3.751E-03		4.119E-02	6.865E-02	5.758E-03	0.055
V-48	-3.884E-02		7.719E-02	1.213E-01	9.580E-03	-0.320
CR-51	2.937E-01		4.468E-01	7.638E-01	5.508E-02	0.385
MN-52	-3.835E-01		3.313E-01	4.567E-01	3.386E-02	-0.840
MN-54	7.090E-03		4.112E-02	6.906E-02	5.176E-03	0.103
CO-56	7.713E-03		3.979E-02	6.701E-02	5.150E-03	0.115
CO-57	-1.574E-03		2.896E-02	4.711E-02	3.387E-03	-0.033
CO-58	-2.630E-02		4.178E-02	6.622E-02	4.730E-03	-0.397
FE-59	-1.435E-01		9.951E-02	1.406E-01	1.064E-02	-1.020
CO-60	-9.009E-03		4.305E-02	6.794E-02	5.128E-03	-0.133
ZN-65	2.495E-02		1.080E-01	1.552E-01	1.008E-02	0.161
GE-68	-9.852E-01		1.263E+00	1.917E+00	1.332E-01	-0.514
AS-73	-9.297E-01		1.949E+00	3.184E+00	4.352E-01	-0.292
AS-74	4.843E-02		1.147E-01	1.902E-01	1.023E-02	0.255
SE-75	-1.939E-02		5.593E-02	7.992E-02	5.590E-03	-0.243
BR-77	1.562E+01		2.118E+01	3.598E+01	2.025E+00	0.434
SR-82	-2.853E-01		4.250E-01	6.751E-01	4.456E-02	-0.423
RB-83	4.854E-02		7.793E-02	1.315E-01	7.402E-03	0.369
RB-84	5.803E-03		7.020E-02	1.170E-01	9.665E-03	0.050
KR-85	1.902E+01		9.209E+00	1.487E+01	8.385E-01	1.279
SR-85	9.968E-02		4.826E-02	7.791E-02	4.395E-03	1.279
RB-86	-1.196E-01		8.546E-01	1.381E+00	9.608E-02	-0.087
Y-88	1.112E-02		3.510E-02	6.064E-02	3.542E-03	0.183
ZR-88	9.323E-03		3.571E-02	5.965E-02	3.383E-03	0.156
Y-91	9.208E+00		1.850E+01	3.134E+01	1.895E+00	0.294
NB-94	-6.314E-03		3.492E-02	5.788E-02	3.220E-03	-0.109

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NB-95	7.989E-02		5.472E-02	8.792E-02	5.666E-03	0.909
NB-95M	1.792E+00		2.575E-01	3.911E-01	3.304E-02	4.583
ZR-95	7.385E-03		7.274E-02	1.223E-01	9.119E-03	0.060
NB-97	4.542E-01		4.790E-01	Half-Life too short		
ZR-97	5.932E+01		9.659E+00	Half-Life too short		
MO-99	-1.651E+01		2.036E+01	3.161E+01	4.393E+00	-0.522
TC-99M	-4.764E+12		6.953E+12	Half-Life too short		
RH-101	1.324E-02		4.005E-02	6.245E-02	4.260E-03	0.212
RH-102	1.640E-02		3.330E-02	5.592E-02	3.188E-03	0.293
RU-103	2.151E-02		4.441E-02	7.450E-02	9.377E-03	0.289
RH-106	-1.217E-01		3.556E-01	5.593E-01	6.420E-02	-0.218
RU-106	-1.217E-01		3.554E-01	5.593E-01	2.939E-02	-0.218
AG-108M	-1.335E-02		3.683E-02	5.924E-02	3.683E-03	-0.225
AG-110M	1.334E-02		4.409E-02	6.288E-02	3.446E-03	0.212
IN-111	-3.865E-01		2.230E+00	3.236E+00	2.253E-01	-0.119
IN-113M	-2.462E-02		5.149E-02	8.286E-02	5.027E-03	-0.297
SN-113	-2.462E-02		5.149E-02	8.286E-02	5.027E-03	-0.297
IN-114M	-1.479E-01		2.506E-01	3.399E-01	2.305E-02	-0.435
CD-115	-1.508E+01		2.294E+01	3.571E+01	2.003E+00	-0.422
SN-117M	-6.002E-02		7.019E-02	1.097E-01	7.337E-03	-0.547
SB-122	3.456E+00		3.674E+00	6.312E+00	3.473E-01	0.548
I-123	-6.838E+01		4.631E+01	Half-Life too short		
TE-123M	-2.447E-02		3.314E-02	5.206E-02	3.514E-03	-0.470
I-124	-3.609E-01		1.288E+00	1.750E+00	9.358E-02	-0.206
SB-124	7.715E-03		7.066E-02	1.189E-01	8.351E-03	0.065
SB-125	1.199E-02		1.053E-01	1.740E-01	1.037E-02	0.069
TE-125M	-9.992E-01		1.200E+01	1.712E+01	1.702E+00	-0.058
I-126	2.054E-01		2.572E-01	3.828E-01	1.948E-02	0.537
SB-126	-9.036E-03		1.948E-01	2.801E-01	1.626E-02	-0.032
SB-127	-8.980E-01		2.041E+00	3.324E+00	3.298E-01	-0.270
XE-127	-1.563E-02		6.696E-02	9.236E-02	6.323E-03	-0.169
I-131	1.087E-02		1.521E-01	2.526E-01	1.709E-02	0.043
TE-132	4.420E-01		1.234E+00	2.102E+00	3.212E-01	0.210
BA-133	-2.643E-03		5.284E-02	7.567E-02	8.911E-03	-0.035
I-133	5.507E-03		1.709E-02	Half-Life too short		
CS-134	1.225E-01	+	6.460E-02	9.285E-02	6.470E-03	1.319
I-135	-3.941E+11		5.361E+11	Half-Life too short		
CS-136	-3.255E-02		1.306E-01	2.097E-01	1.616E-02	-0.155
CE-139	-1.189E-02		3.483E-02	5.549E-02	3.690E-03	-0.214
BA-140	6.961E-02		3.131E-01	5.146E-01	1.672E-01	0.135
LA-140	1.004E-01		1.042E-01	1.746E-01	1.217E-02	0.575
CE-141	2.837E-02		7.493E-02	1.229E-01	8.581E-03	0.231
CE-143	4.486E-03	+	6.084E-04	Half-Life too short		
CE-144	-1.359E-01		2.351E-01	3.731E-01	5.483E-02	-0.364
PM-144	4.331E-02		3.776E-02	6.736E-02	3.696E-03	0.643
PR-144	2.938E+00		2.562E+00	4.570E+00	2.505E-01	0.643
PM-146	-5.682E-03		4.784E-02	7.784E-02	6.666E-03	-0.073
ND-147	6.559E-01		7.019E-01	1.198E+00	1.610E-01	0.547

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
PM-149	4.748E+01		1.998E+02	3.370E+02	4.938E+01	0.141
EU-152	-1.130E-01		1.692E-01	1.782E-01	1.256E-02	-0.634
GD-153	7.897E-02		1.074E-01	1.558E-01	1.495E-02	0.507
EU-154	4.057E-02		1.347E-01	2.239E-01	2.245E-02	0.181
TB-160	-2.318E-02		1.403E-01	2.291E-01	1.884E-02	-0.101
HO-166M	7.416E-03		6.131E-02	1.035E-01	5.885E-03	0.072
TM-171	-9.274E+00		4.987E+01	7.111E+01	8.177E+00	-0.130
LU-176	-1.083E-02		2.851E-02	4.543E-02	3.061E-03	-0.238
LU-177	5.135E+00	+	2.470E+00	2.851E+00	1.959E-01	1.801
LU-177M	-1.288E-01		1.994E-01	3.168E-01	1.806E-02	-0.407
HF-181	-3.713E-02		4.752E-02	7.377E-02	4.200E-03	-0.503
W-181	-4.489E-01		6.731E-01	9.375E-01	1.091E-01	-0.479
TA-182	1.382E-01		2.068E-01	3.530E-01	2.201E-02	0.392
RE-183	2.016E-02		1.289E-01	2.093E-01	1.395E-02	0.096
RE-184	2.068E-02		2.632E-01	4.433E-01	3.086E-02	0.047
OS-185	5.923E-03		4.693E-02	7.618E-02	3.903E-03	0.078
RE-188	1.928E-01		2.045E-01	3.404E-01	2.284E-02	0.566
W-188	-7.003E+00		9.898E+00	1.376E+01	9.416E-01	-0.509
IR-192	-4.395E-02		3.968E-02	6.254E-02	4.180E-03	-0.703
AU-195	3.757E-01		2.839E-01	4.500E-01	4.218E-02	0.835
TL-200	7.577E-04		9.489E-04	Half-Life too short		
TL-201	9.644E-01		1.294E+01	2.092E+01	1.392E+00	0.046
TL-202	9.699E-03		8.669E-02	1.431E-01	8.179E-03	0.068
HG-203	-4.563E-03		4.955E-02	8.262E-02	5.950E-03	-0.055
BI-207	-1.846E-03		5.534E-02	9.038E-02	6.421E-03	-0.020
TL-207	-7.462E-01		8.017E-01	1.265E+00	2.126E-01	-0.590
PO-209	4.986E-01		7.652E+00	1.272E+01	1.083E+00	0.039
BI-210	7.160E-01		1.262E+01	2.033E+01	2.111E+00	0.035
PB-210	7.160E-01		1.262E+01	2.033E+01	2.111E+00	0.035
PO-210	7.160E-01		1.262E+01	2.033E+01	1.953E+00	0.035
PB-211	-1.927E+00		1.671E+00	1.669E+00	1.040E+00	-1.155
BI-212	9.775E-01	+	6.038E-01	6.940E-01	5.404E-02	1.408
PO-215	-7.462E-01		8.017E-01	1.265E+00	2.126E-01	-0.590
RN-219	6.702E-02		4.645E-01	7.708E-01	1.045E-01	0.087
RN-220	1.572E+01		2.893E+01	4.853E+01	2.692E+00	0.324
RA-223	-7.462E-01		8.017E-01	1.265E+00	2.126E-01	-0.590
AC-227	-1.389E-01		4.267E-01	7.066E-01	1.023E-01	-0.197
TH-227	-1.389E-01		4.269E-01	7.066E-01	1.225E-01	-0.197
TH-229	-3.920E-01		5.899E-01	9.214E-01	6.264E-02	-0.425
PA-231	9.259E-01		1.775E+00	3.021E+00	4.310E-01	0.306
TH-231	-7.462E-01		8.017E-01	1.265E+00	2.126E-01	-0.590
U-231	-2.304E+00		2.069E+00	2.751E+00	2.711E-01	-0.837
PA-233	6.017E-02		7.082E-02	1.222E-01	8.564E-03	0.492
PA-234	-3.568E-02		3.029E-01	4.946E-01	9.188E-02	-0.072
PA-234M	-7.590E-01		5.006E+00	7.918E+00	7.298E-01	-0.096
NP-236	-2.980E-02		9.096E-02	1.452E-01	9.691E-03	-0.205
NP-239	-3.803E-02		2.117E-01	3.433E-01	2.580E-02	-0.111
AM-241	1.464E-01		3.104E-01	4.620E-01	5.879E-02	0.317

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	1.710E-01	+	1.458E-01	1.870E-01	1.632E-02	0.915
AM-246	-1.048E-01		1.442E-01	2.202E-01	1.526E-02	-0.476
CM-247	-1.283E-02		4.456E-02	6.878E-02	3.911E-03	-0.187
CF-249	3.718E-03		4.382E-02	7.263E-02	4.164E-03	0.051
CF-251	-5.659E-02		1.537E-01	2.441E-01	1.636E-02	-0.232

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202004733		
Acquisition date	: 4-JAN-2010 16:16:25	Detector SN#	:
Detector ID	: GAM15	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 03:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 03:00:01.81	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004733	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.1111E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 16-FEB-2009 10:54:12	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
K-40	2.200E+01	2.175E+00	2.644E-01	1.110E+00
CD-109	2.877E+00	1.182E+00	7.678E-01	6.029E-01
SN-126	2.819E-01	1.158E-01	7.583E-02	5.907E-02
CS-135	7.384E-01	2.710E-01	1.373E-01	1.383E-01
BA-137M	2.375E-01	8.182E-02	2.836E-02	4.174E-02
CS-137	2.511E-01	8.650E-02	2.998E-02	4.413E-02
EU-155	1.911E-01	1.596E-01	9.920E-02	8.144E-02
TL-208	6.055E-01	1.003E-01	3.216E-02	5.116E-02
BI-211	4.613E+00	5.708E-01	1.844E-01	2.912E-01
PB-212	1.911E+00	1.980E-01	5.280E-02	1.010E-01
PO-212	1.911E+00	1.980E-01	5.280E-02	1.010E-01
BI-214	1.478E+00	2.022E-01	6.099E-02	1.032E-01
PB-214	1.605E+00	2.148E-01	6.181E-02	1.096E-01
PO-214	1.605E+00	2.148E-01	6.181E-02	1.096E-01
PO-216	1.911E+00	1.980E-01	5.280E-02	1.010E-01
PO-218	1.605E+00	2.148E-01	6.181E-02	1.096E-01
RA-224	4.895E+00	1.593E+00	6.007E-01	8.129E-01
RA-226	1.478E+00	2.022E-01	6.099E-02	1.032E-01
AC-228	1.837E+00	3.778E-01	1.177E-01	1.928E-01
RA-228	1.837E+00	3.778E-01	1.177E-01	1.928E-01
TH-228	1.944E+00	2.014E-01	5.371E-02	1.028E-01
TH-230	1.478E+00	2.022E-01	6.099E-02	1.032E-01
TH-232	1.837E+00	3.778E-01	1.177E-01	1.928E-01
TH-234	1.775E+00	2.799E+00	1.838E+00	1.428E+00
U-234	1.478E+00	2.022E-01	6.099E-02	1.032E-01
U-235	8.046E-02	2.491E-01	2.027E-01	1.271E-01
NP-237	8.278E-01	3.790E-01	2.270E-01	1.933E-01
U-238	1.775E+00	2.799E+00	1.838E+00	1.428E+00
AM-243	4.465E-01	1.307E-01	6.061E-02	6.669E-02
ANH-511	1.448E-01	7.999E-02	2.639E-02	4.081E-02

---- Non-Identified Nuclides ----

Key-Line

Nuclide	Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	3.198E-01	3.534E-01	3.106E-01	1.803E-01	NOT IDENT.
NA-22	1.637E-02	4.747E-02	4.022E-02	2.422E-02	NOT IDENT.
NA-24	-3.588E+06	8.879E+06	0.000E+00	4.530E+06	SHORT HLIF
AL-26	2.558E-03	2.536E-02	2.156E-02	1.294E-02	NOT IDENT.
TI-44	2.371E-01	5.967E-02	4.644E-02	3.045E-02	NOT IDENT.
SC-46	3.751E-03	4.036E-02	3.430E-02	2.059E-02	FAIL ABUN
V-48	-3.884E-02	7.564E-02	6.054E-02	3.859E-02	NOT IDENT.
CR-51	2.937E-01	4.378E-01	3.847E-01	2.234E-01	NOT IDENT.
MN-52	-3.835E-01	3.247E-01	2.273E-01	1.657E-01	NOT IDENT.
MN-54	7.090E-03	4.030E-02	3.452E-02	2.056E-02	NOT IDENT.
CO-56	7.713E-03	3.899E-02	3.349E-02	1.989E-02	NOT IDENT.
CO-57	-1.574E-03	2.838E-02	2.390E-02	1.448E-02	NOT IDENT.
CO-58	-2.630E-02	4.095E-02	3.311E-02	2.089E-02	NOT IDENT.
FE-59	-1.435E-01	9.752E-02	7.015E-02	4.976E-02	NOT IDENT.
CO-60	-9.009E-03	4.219E-02	3.384E-02	2.152E-02	NOT IDENT.
ZN-65	2.495E-02	1.058E-01	7.742E-02	5.400E-02	NOT IDENT.
GE-68	-9.852E-01	1.238E+00	9.563E-01	6.316E-01	NOT IDENT.
AS-73	-9.297E-01	1.910E+00	1.626E+00	9.743E-01	NOT IDENT.
AS-74	4.843E-02	1.124E-01	9.534E-02	5.737E-02	NOT IDENT.
SE-75	-1.939E-02	5.481E-02	4.031E-02	2.796E-02	NOT IDENT.
BR-77	1.562E+01	2.076E+01	1.805E+01	1.059E+01	FAIL ABUN
SR-82	-2.853E-01	4.165E-01	3.377E-01	2.125E-01	NOT IDENT.
RB-83	4.854E-02	7.637E-02	6.600E-02	3.897E-02	NOT IDENT.
RB-84	5.803E-03	6.880E-02	5.848E-02	3.510E-02	NOT IDENT.
KR-85	1.902E+01	9.025E+00	7.459E+00	4.605E+00	NOT IDENT.
SR-85	9.968E-02	4.730E-02	3.909E-02	2.413E-02	NOT IDENT.
RB-86	-1.196E-01	8.375E-01	6.890E-01	4.273E-01	NOT IDENT.
Y-88	1.112E-02	3.440E-02	3.013E-02	1.755E-02	NOT IDENT.
ZR-88	9.323E-03	3.500E-02	3.000E-02	1.786E-02	NOT IDENT.
Y-91	9.208E+00	1.813E+01	1.562E+01	9.248E+00	NOT IDENT.
NB-94	-6.314E-03	3.422E-02	2.897E-02	1.746E-02	NOT IDENT.
NB-95	7.989E-02	5.363E-02	4.398E-02	2.736E-02	NOT IDENT.
NB-95M	1.792E+00	2.523E-01	1.974E-01	1.287E-01	NOT IDENT.
ZR-95	7.385E-03	7.128E-02	6.120E-02	3.637E-02	NOT IDENT.
NB-97	4.542E+05	9.388E+05	0.000E+00	4.790E+05	SHORT HLIF
ZR-97	5.932E+07	1.893E+07	0.000E+00	9.659E+06	SHORT HLIF
MO-99	-1.651E+01	1.995E+01	1.582E+01	1.018E+01	NOT IDENT.
TC-99M	-4.764E+18	1.363E+19	0.000E+00	0.000E+00	SHORT HLIF
RH-101	1.324E-02	3.925E-02	3.157E-02	2.003E-02	NOT IDENT.
RH-102	1.640E-02	3.264E-02	2.808E-02	1.665E-02	FAIL ABUN
RU-103	2.151E-02	4.352E-02	3.739E-02	2.220E-02	FAIL ABUN
RH-106	-1.217E-01	3.485E-01	2.803E-01	1.778E-01	FAIL ABUN
RU-106	-1.217E-01	3.483E-01	2.803E-01	1.777E-01	FAIL ABUN
AG-108M	-1.335E-02	3.609E-02	2.976E-02	1.841E-02	NOT IDENT.
AG-110M	1.334E-02	4.321E-02	3.149E-02	2.204E-02	NOT IDENT.
IN-111	-3.865E-01	2.186E+00	1.633E+00	1.115E+00	NOT IDENT.
IN-113M	-2.462E-02	5.046E-02	4.167E-02	2.575E-02	NOT IDENT.
SN-113	-2.462E-02	5.046E-02	4.167E-02	2.575E-02	NOT IDENT.
IN-114M	-1.479E-01	2.456E-01	1.719E-01	1.253E-01	NOT IDENT.
CD-115	-1.508E+01	2.248E+01	1.792E+01	1.147E+01	NOT IDENT.
SN-117M	-6.002E-02	6.878E-02	5.557E-02	3.509E-02	NOT IDENT.
SB-122	3.456E+00	3.601E+00	3.165E+00	1.837E+00	NOT IDENT.
I-123	-6.838E+07	9.076E+07	0.000E+00	4.631E+07	SHORT HLIF
TE-123M	-2.447E-02	3.247E-02	2.636E-02	1.657E-02	NOT IDENT.
I-124	-3.609E-01	1.263E+00	8.773E-01	6.441E-01	FAIL ABUN
SB-124	7.715E-03	6.924E-02	5.911E-02	3.533E-02	FAIL ABUN
SB-125	1.199E-02	1.032E-01	8.742E-02	5.263E-02	FAIL ABUN
TE-125M	-9.992E-01	1.176E+01	8.691E+00	5.999E+00	NOT IDENT.
I-126	2.054E-01	2.520E-01	1.917E-01	1.286E-01	NOT IDENT.
SB-126	-9.036E-03	1.909E-01	1.402E-01	9.739E-02	NOT IDENT.
SB-127	-8.980E-01	2.000E+00	1.664E+00	1.021E+00	FAIL ABUN
XE-127	-1.563E-02	6.562E-02	4.668E-02	3.348E-02	NOT IDENT.
I-131	1.087E-02	1.491E-01	1.271E-01	7.606E-02	NOT IDENT.
TE-132	4.420E-01	1.209E+00	1.061E+00	6.168E-01	NOT IDENT.
BA-133	-2.643E-03	5.178E-02	3.808E-02	2.642E-02	NOT IDENT.
I-133	5.507E+03	3.349E+04	0.000E+00	1.709E+04	SHORT HLIF
CS-134	1.225E-01	6.330E-02	4.643E-02	3.230E-02	FAIL ABUN
I-135	-3.941E+17	1.051E+18	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-3.255E-02	1.280E-01	1.047E-01	6.532E-02	FAIL ABUN
CE-139	-1.189E-02	3.413E-02	2.809E-02	1.742E-02	NOT IDENT.
BA-140	6.961E-02	3.068E-01	2.581E-01	1.565E-01	NOT IDENT.
LA-140	1.004E-01	1.022E-01	8.686E-02	5.212E-02	NOT IDENT.
CE-141	2.837E-02	7.343E-02	6.229E-02	3.746E-02	NOT IDENT.
CE-143	4.486E+03	1.192E+03	0.000E+00	6.084E+02	SHORT HLIF
CE-144	-1.359E-01	2.304E-01	1.891E-01	1.175E-01	NOT IDENT.

PM-144	4.331E-02	3.701E-02	3.372E-02	1.888E-02 NOT IDENT.
PR-144	2.938E+00	2.510E+00	2.288E+00	1.281E+00 NOT IDENT.
PM-146	-5.682E-03	4.688E-02	3.910E-02	2.392E-02 NOT IDENT.
ND-147	6.559E-01	6.879E-01	6.012E-01	3.510E-01 FAIL ABUN
PM-149	4.748E+01	1.958E+02	1.699E+02	9.989E+01 NOT IDENT.
EU-152	-1.130E-01	1.658E-01	8.968E-02	8.458E-02 FAIL ABUN
GD-153	7.897E-02	1.052E-01	7.918E-02	5.368E-02 FAIL ABUN
EU-154	4.057E-02	1.321E-01	1.115E-01	6.737E-02 NOT IDENT.
TB-160	-2.318E-02	1.374E-01	1.145E-01	7.013E-02 FAIL ABUN
HO-166M	7.416E-03	6.008E-02	5.182E-02	3.065E-02 FAIL ABUN
TM-171	-9.274E+00	4.888E+01	3.624E+01	2.494E+01 NOT IDENT.
LU-176	-1.083E-02	2.794E-02	2.289E-02	1.425E-02 FAIL ABUN
LU-177	5.135E+00	2.420E+00	1.440E+00	1.235E+00 FAIL ABUN
LU-177M	-1.288E-01	1.955E-01	1.592E-01	9.972E-02 FAIL ABUN
HF-181	-3.713E-02	4.657E-02	3.704E-02	2.376E-02 NOT IDENT.
W-181	-4.489E-01	6.597E-01	4.779E-01	3.366E-01 NOT IDENT.
TA-182	1.382E-01	2.026E-01	1.759E-01	1.034E-01 FAIL ABUN
RE-183	2.016E-02	1.264E-01	1.060E-01	6.447E-02 FAIL ABUN
RE-184	2.068E-02	2.579E-01	2.237E-01	1.316E-01 NOT IDENT.
OS-185	5.923E-03	4.599E-02	3.816E-02	2.346E-02 FAIL ABUN
RE-188	1.928E-01	2.004E-01	1.724E-01	1.022E-01 NOT IDENT.
W-188	-7.003E+00	9.700E+00	6.935E+00	4.949E+00 FAIL ABUN
IR-192	-4.395E-02	3.889E-02	3.150E-02	1.984E-02 FAIL ABUN
AU-195	3.757E-01	2.782E-01	2.287E-01	1.419E-01 FAIL ABUN
TL-200	7.577E+02	1.860E+03	0.000E+00	9.489E+02 SHORT HLIF
TL-201	9.644E-01	1.268E+01	1.059E+01	6.468E+00 NOT IDENT.
TL-202	9.699E-03	8.496E-02	7.190E-02	4.335E-02 NOT IDENT.
HG-203	-4.563E-03	4.856E-02	4.165E-02	2.477E-02 FAIL ABUN
BI-207	-1.846E-03	5.423E-02	4.509E-02	2.767E-02 FAIL ABUN
TL-207	-7.462E-01	7.856E-01	6.369E-01	4.008E-01 FAIL ABUN
PO-209	4.986E-01	7.499E+00	6.356E+00	3.826E+00 NOT IDENT.
BI-210	7.160E-01	1.236E+01	1.039E+01	6.308E+00 NOT IDENT.
PB-210	7.160E-01	1.236E+01	1.039E+01	6.308E+00 NOT IDENT.
PO-210	7.160E-01	1.236E+01	1.039E+01	6.308E+00 NOT IDENT.
PB-211	-1.927E+00	1.638E+00	8.389E-01	8.355E-01 NOT IDENT.
BI-212	9.775E-01	5.917E-01	3.473E-01	3.019E-01 FAIL ABUN
PO-215	-7.462E-01	7.856E-01	6.369E-01	4.008E-01 FAIL ABUN
RN-219	6.702E-02	4.552E-01	3.875E-01	2.322E-01 NOT IDENT.
RN-220	1.572E+01	2.835E+01	2.434E+01	1.446E+01 NOT IDENT.
RA-223	-7.462E-01	7.856E-01	6.369E-01	4.008E-01 FAIL ABUN
AC-227	-1.389E-01	4.182E-01	3.565E-01	2.134E-01 FAIL ABUN
TH-227	-1.389E-01	4.184E-01	3.565E-01	2.135E-01 FAIL ABUN
TH-229	-3.920E-01	5.781E-01	4.658E-01	2.950E-01 FAIL ABUN
PA-231	9.259E-01	1.739E+00	1.523E+00	8.875E-01 NOT IDENT.
TH-231	-7.462E-01	7.856E-01	6.369E-01	4.008E-01 FAIL ABUN
U-231	-2.304E+00	2.028E+00	1.398E+00	1.035E+00 FAIL ABUN
PA-233	6.017E-02	6.941E-02	6.155E-02	3.541E-02 FAIL ABUN
PA-234	-3.568E-02	2.969E-01	2.470E-01	1.515E-01 FAIL ABUN
PA-234M	-7.590E-01	4.906E+00	3.952E+00	2.503E+00 FAIL ABUN
NP-236	-2.980E-02	8.914E-02	7.349E-02	4.548E-02 NOT IDENT.
NP-239	-3.803E-02	2.075E-01	1.742E-01	1.059E-01 FAIL ABUN
AM-241	1.464E-01	3.042E-01	2.357E-01	1.552E-01 NOT IDENT.
CM-243	1.710E-01	1.429E-01	9.499E-02	7.289E-02 FAIL ABUN
AM-246	-1.048E-01	1.413E-01	1.098E-01	7.211E-02 NOT IDENT.
CM-247	-1.283E-02	4.367E-02	3.458E-02	2.228E-02 NOT IDENT.
CF-249	3.718E-03	4.294E-02	3.652E-02	2.191E-02 NOT IDENT.
CF-251	-5.659E-02	1.506E-01	1.235E-01	7.685E-02 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	402.1961
46.50	402.1961
46.50	402.1961
48.70	405.6273
49.72	412.9490
51.35	417.8728
52.39	402.4566
52.97	413.2910
53.15	419.1152
53.44	422.1653
54.07	424.5008
56.28	435.5513
56.28	435.5530
57.37	0.0000
57.53	440.2361
57.53	440.2379
57.60	425.7358
57.98	403.0021
57.98	403.0021
59.32	423.7966
59.32	423.7966
59.40	423.8488
59.54	433.1550
59.72	433.2747
60.01	450.3739
61.10	463.4342
61.14	463.4617
61.30	463.5729
63.00	537.3168
63.29	559.1711
63.29	559.1711
63.58	540.8663
64.28	550.7027
65.12	557.5710
65.20	557.6353
65.20	557.6353
66.05	576.9293
66.72	552.6431
66.83	552.7321
66.91	552.7952
67.20	565.0624
67.20	565.0624
67.75	557.7288
67.85	557.8076
68.90	551.2366
68.90	551.2366
69.30	548.4295
69.67	570.5369
70.82	562.0759
70.82	562.0759
70.83	562.0847
72.80	588.6475
72.87	588.7025
72.87	588.7025
74.67	577.7702
74.81	577.8781
74.81	577.8781
74.81	577.8781
74.81	577.8781
74.81	577.8781
74.81	577.8781
74.81	577.8781
74.97	578.0016
75.28	578.2398
75.70	578.5611
77.11	541.6489
77.11	541.6489

77.11	541.6489
77.11	541.6489
77.11	541.6489
77.11	541.6489
77.11	541.6489
78.38	574.0887
79.62	669.3951
79.80	669.5504
79.80	669.5504
80.11	661.2546
80.18	661.3134
80.30	661.4155
80.30	661.4155
80.57	656.3707
81.00	605.2997
81.07	637.0059
81.07	637.0059
81.07	637.0059
81.07	637.0059
82.60	596.6125
83.37	595.2026
83.78	558.9848
83.78	558.9848
83.78	558.9848
83.78	558.9848
84.21	565.6389
84.90	591.5672
85.43	609.4572
86.29	556.5370
86.50	556.6799
86.54	556.7076
86.59	556.7418
86.72	556.8292
86.79	556.8761
86.94	556.9785
87.30	557.2237
87.30	557.2237
87.30	557.2237
87.30	557.2237
87.30	557.2237
87.30	557.2237
87.30	557.2237
87.57	557.4050
87.88	557.6140
88.03	557.7163
88.36	557.9380
88.47	558.0127
89.95	559.0021
91.11	559.7740
92.29	560.5524
92.38	560.6121
92.38	560.6121
93.35	464.2592
94.00	488.7267
94.67	518.0635
94.67	518.0655
94.90	518.2031
94.90	518.2031
94.90	518.2031
94.90	518.2031
95.87	536.5052
95.87	536.5052
96.73	488.6531
97.43	450.3047
98.44	408.0008
98.44	408.0008
98.88	431.1051
99.55	443.2950
99.55	443.2950
99.86	443.4489
100.00	454.8482
100.10	479.1843
103.18	467.8242
103.76	443.7400
105.00	405.8873
105.31	436.3473
108.00	489.8639
109.28	443.1125

111.00	469.1894
111.00	469.1894
111.76	435.4586
112.95	392.9102
115.19	453.4573
116.30	430.2955
117.00	438.8437
117.00	438.8437
117.66	453.5687
121.11	469.6215
121.62	464.6858
121.78	464.7595
122.06	447.2864
122.32	452.5783
122.32	452.5783
122.32	452.5783
122.32	452.5783
123.07	451.8770
127.23	480.7677
129.76	445.4250
131.20	545.2661
133.02	478.1883
133.54	479.4688
135.34	469.7861
136.00	460.6298
136.25	448.1428
136.48	459.7844
140.51	498.3584
140.51	0.0000
142.18	480.1154
142.65	484.5410
143.76	470.2289
144.24	468.3149
144.24	468.3149
144.24	468.3149
144.24	468.3149
145.22	454.9690
145.44	461.4072
147.16	482.2468
152.43	461.0370
152.70	437.7160
153.22	426.1902
154.21	425.4839
154.21	425.4839
154.21	425.4839
154.21	425.4839
155.03	444.9905
156.02	451.7740
158.56	466.6596
159.00	0.0000
159.00	463.6171
160.31	444.8319
161.27	421.5863
162.32	436.9835
162.64	442.4713
163.35	431.9832
163.89	422.5008
165.85	449.0214
167.43	428.0353
171.28	404.4885
171.86	413.3330
172.10	430.7274
176.55	470.2572
176.60	470.2737
181.06	448.1500
184.41	440.5601
185.71	416.7159
186.00	416.8060
190.27	435.4894
192.34	380.6364
193.63	422.4946
197.04	410.3177
198.01	395.1569
198.60	401.9491
200.40	427.1181
201.83	462.2173
202.84	430.6516
205.31	440.2908

208.36	389.6446
208.81	389.7676
209.75	349.0652
209.75	349.0652
210.97	352.9268
215.65	375.5365
216.55	343.3349
218.09	369.4473
222.10	353.6180
223.80	358.5197
226.40	391.7947
227.00	390.1493
227.08	390.1704
227.20	390.1995
228.16	365.2020
228.18	365.2070
228.18	365.2070
231.56	0.0000
235.69	382.1174
236.00	351.6795
236.00	351.6795
238.63	352.2786
238.63	352.2786
238.63	352.2786
238.63	352.2786
239.00	352.3615
240.98	352.8114
241.98	318.4607
241.98	318.4607
241.98	318.4607
244.69	331.1647
245.39	319.1528
247.94	318.6529
248.90	309.8072
249.79	297.1794
252.40	308.6541
252.85	298.6629
252.85	298.6629
254.15	0.0000
256.20	305.7080
256.20	305.7080
260.50	276.1395
260.90	266.0797
262.80	281.7930
264.65	279.9094
268.24	260.4763
268.79	243.6026
269.46	263.7537
269.46	263.7537
269.46	263.7537
269.46	263.7537
271.23	301.0852
273.65	395.8386
276.40	261.5169
277.35	289.2589
277.60	279.8984
277.60	279.8984
278.00	288.3356
278.60	309.8380
279.20	321.1170
279.53	337.9330
280.46	345.5662
281.68	330.8971
283.67	271.5550
284.30	267.9204
285.00	265.2273
285.90	266.2969
286.10	276.6075
286.10	276.6075
287.40	293.4129
288.45	0.0000
290.67	299.8125
290.80	299.8359
291.72	278.1177
293.26	0.0000
293.70	256.5303
295.21	265.8272
295.21	265.8272

295.21	265.8272
295.96	265.9378
296.50	266.0207
297.23	266.1278
298.57	266.3282
299.80	268.3912
299.80	268.3912
300.09	268.4365
300.09	268.4365
300.09	268.4365
300.09	268.4365
300.12	268.4399
301.29	271.7556
302.84	235.8276
303.76	217.0709
303.91	217.0906
304.40	236.0291
304.40	236.0291
304.84	228.2175
306.84	251.0524
308.46	246.9623
311.98	210.4610
316.51	258.4930
318.01	269.1609
319.02	238.8544
319.41	245.5661
320.08	225.6592
323.87	296.7142
323.87	296.7142
323.87	296.7142
323.87	296.7142
325.23	286.4246
328.77	253.4774
333.44	276.4649
334.20	273.3766
334.20	273.3766
334.30	273.3906
338.28	238.3851
338.28	238.3851
338.28	238.3851
338.28	238.3851
338.32	238.3912
338.32	238.3912
338.32	238.3912
340.50	214.9174
340.57	214.9256
344.27	257.1094
345.85	238.8200
350.59	0.0000
351.07	210.9081
351.92	195.1873
351.92	195.1873
351.92	195.1873
355.39	0.0000
356.01	190.7345
364.48	188.9321
366.43	194.9609
367.43	169.6989
367.94	0.0000
369.80	206.9950
374.96	176.1855
383.85	200.5211
387.95	184.1626
388.63	186.1922
391.69	208.1616
391.69	208.1616
392.90	192.4839
398.62	208.8261
400.65	190.1977
401.10	186.2742
401.81	189.3073
402.60	189.3772
404.84	236.2162
410.95	177.1548
411.60	185.1690
413.65	198.2931
414.70	177.4503
415.30	176.5009

415.76	180.5272
417.63	0.0000
418.52	191.7328
423.70	176.1568
427.08	191.4547
427.89	176.4812
432.53	175.8331
433.93	175.9378
439.47	162.2500
439.56	162.2558
439.89	161.2715
443.98	155.4945
444.90	152.5244
445.03	152.5336
445.03	152.5336
445.03	152.5336
445.03	152.5336
453.90	158.1747
463.38	174.7471
468.07	134.2881
473.00	200.3066
475.06	151.3784
475.35	142.1899
476.78	149.4379
477.59	131.0563
477.96	148.4852
482.03	153.8562
484.57	143.7461
487.03	132.5825
490.36	0.0000
492.35	148.3119
497.08	121.7610
507.63	0.0000
510.53	0.0000
510.84	152.4999
511.00	152.5098
511.85	152.5600
511.85	152.5600
513.99	136.7585
513.99	136.7585
520.41	128.0719
520.65	124.9600
527.90	146.1865
528.96	0.0000
529.64	119.1155
529.87	0.0000
531.02	114.9951
537.32	123.6494
543.00	144.9135
546.56	0.0000
549.76	123.1671
552.65	133.8368
555.20	110.7550
563.23	99.4413
563.90	105.8130
568.70	126.1353
569.32	116.6226
569.50	104.9651
569.67	107.0930
573.80	128.7541
574.00	126.1081
574.64	134.5462
578.91	124.1121
579.30	0.0000
583.14	132.1102
585.48	131.5084
591.81	132.9879
592.07	150.6903
593.00	156.0874
595.88	133.7677
600.56	145.4688
602.52	0.0000
602.71	162.6899
602.71	162.6899
603.60	152.0081
604.41	143.1071
604.70	143.1217
609.31	134.3872

609.31	134.3872
609.31	134.3872
609.31	134.3872
610.33	123.6812
612.46	121.9744
614.37	104.1055
618.01	129.3926
621.84	126.3206
621.84	126.3206
631.29	110.4743
633.02	106.2042
633.10	106.2065
634.78	119.2786
635.90	108.4741
636.97	98.7470
645.85	104.4773
646.12	107.7519
656.30	109.2017
657.75	109.2529
657.90	0.0000
661.65	96.2629
661.65	96.2629
664.57	0.0000
666.33	107.7273
666.33	107.7273
675.00	102.1660
677.61	118.7446
685.20	112.0468
692.80	132.5684
695.00	102.2581
696.49	107.8356
696.49	107.8356
697.00	110.6177
697.49	116.1665
698.33	123.5721
698.50	126.3470
699.00	128.2113
702.63	118.1979
706.10	108.1545
706.58	0.0000
706.67	110.9473
709.31	110.1123
711.68	100.0063
713.82	109.3358
717.42	94.1084
720.50	108.2327
721.93	0.0000
722.20	101.9174
722.78	111.4917
722.78	111.4917
722.89	111.4966
722.95	111.4990
723.30	114.6973
724.18	109.9471
727.18	105.1283
733.00	84.6758
735.90	79.4711
739.58	101.7839
742.81	94.4039
744.21	96.3131
747.13	93.5872
751.79	97.4640
752.31	93.7297
753.82	98.4610
755.35	96.6275
756.15	91.0204
756.87	91.0401
763.93	103.1853
765.79	93.5622
766.42	96.8052
766.84	104.4825
776.49	109.4934
778.00	100.0975
778.57	102.9459
778.89	94.4560
783.80	87.0212
785.46	87.0623
792.07	102.3948

795.84	71.5890
796.30	76.4799
798.80	84.6759
801.93	92.8993
805.60	80.8946
810.29	93.3883
810.76	98.1677
815.85	85.8984
817.79	84.0343
818.51	93.6016
819.60	87.8971
826.30	97.6317
828.27	0.0000
831.60	105.4413
831.96	112.1631
834.83	105.5353
836.80	0.0000
846.75	76.0378
848.13	75.1039
856.28	0.0000
856.80	62.8699
860.37	79.4900
867.32	64.5196
867.82	70.8529
871.10	81.3767
873.19	74.6360
874.81	74.6674
875.33	0.0000
876.40	69.8481
879.36	73.7858
880.27	69.9199
880.51	67.0108
881.50	67.0276
883.24	66.0867
884.67	77.7783
889.25	76.8977
896.60	77.0440
898.02	85.8516
899.00	94.6575
903.28	70.3374
911.07	91.0341
911.07	91.0341
911.07	91.0341
919.63	78.8722
920.93	82.4312
925.00	78.5872
925.24	78.5921
926.50	70.7549
935.52	67.9612
937.48	82.7747
944.10	72.0539
946.00	73.0756
949.00	51.3885
962.29	64.5889
964.01	68.0162
966.15	66.4929
968.20	66.5256
969.11	66.5406
969.11	66.5406
969.11	66.5406
977.42	66.8746
980.50	58.7575
983.50	72.7535
989.30	57.8844
996.32	67.9792
1001.03	77.0627
1001.68	69.0674
1004.76	91.1555
1021.30	0.0000
1024.50	0.0000
1034.80	63.5537
1036.00	68.6170
1037.82	66.6284
1038.57	70.6779
1038.76	0.0000
1045.16	79.8872
1046.59	68.7858
1048.07	80.9505

1050.47	67.8342
1050.47	67.8342
1062.04	69.0293
1063.62	74.1317
1076.63	67.2219
1077.35	75.3821
1078.86	75.4062
1085.78	60.2148
1099.22	91.1077
1112.02	72.1533
1112.84	79.2083
1115.52	75.7299
1120.29	76.1047
1120.29	76.1047
1120.29	76.1047
1120.29	76.1047
1120.51	76.1077
1121.28	76.1198
1124.00	0.0000
1129.67	79.5002
1131.51	0.0000
1147.95	0.0000
1167.94	54.0313
1173.22	67.6158
1175.09	84.2926
1177.93	62.4756
1189.05	69.9280
1204.90	62.8296
1205.75	0.0000
1213.00	68.1791
1221.42	74.6026
1230.97	95.8025
1235.34	90.6191
1236.41	0.0000
1238.25	82.2402
1246.25	66.5325
1260.41	0.0000
1271.85	65.8145
1274.45	64.7852
1274.54	64.7852
1291.56	63.9404
1298.22	0.0000
1312.09	47.0776
1325.50	50.4175
1325.50	50.4175
1332.49	52.6347
1333.61	55.8700
1360.21	55.0736
1362.66	0.0000
1365.15	36.7503
1368.21	45.4231
1368.53	0.0000
1376.25	36.8264
1384.27	52.0684
1394.10	39.1230
1395.20	42.8587
1407.95	33.6207
1434.06	44.1035
1436.60	41.3083
1457.56	0.0000
1460.81	29.2301
1489.15	18.0060
1509.49	29.4842
1596.49	18.5833
1620.62	20.3540
1678.03	0.0000
1691.02	15.6869
1691.02	15.6869
1706.46	0.0000
1750.46	0.0000
1764.49	23.8050
1764.49	23.8050
1764.49	23.8050
1764.49	23.8050
1770.23	26.0596
1771.40	27.8018
1791.20	0.0000
1808.65	11.9833

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202004733

Total Uranium Activity	5.3184E+00	ug/g
Total Uranium Counting Unc.	8.3269E+00	ug/g
Total Uranium Tpu	4.2484E-06	ug/g
Total Uranium Mda	5.4699E+00	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G1202004733
ANALYST	: MXR1	DETECTOR	: GAM15
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 03:00:00.00
ANALYSIS DATE:	4-JAN-2010 16:16:25.96	SAMPLE ALQT:	111.113 GRAM

GROSS GAMMA ACTIVITY (pCi/GRAM)	: 9.786E+00
GROSS GAMMA ERROR (pCi/GRAM)	: 1.549E+00
GROSS GAMMA MDA (pCi/GRAM)	: 4.167E+00
GROSS GAMMA DLC (pCi/GRAM)	: 2.030E+00

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 08:39:42.22

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004734.CNF;1
Sample date : 28-JAN-2009 00:00:00 Acquisition date : 5-JAN-2010 07:39:15.
Sample ID : G1202004734 Sample quantity : 1.55440E+02 GRAM
Detector name : GAM05 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.72 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	10	50.27	628	1298	3.30	101.53	96	29	1.75E-01	11.2	1.71E+01
2	10	53.50*	242	930	1.55	107.98	96	29	6.73E-02	23.2	
3	10	59.31	8308	512	1.22	119.61	96	29	2.31E+00	1.2	
4	2	74.74*	280	413	1.20	150.46	146	12	7.79E-02	13.5	2.17E+00
5	2	76.95*	405	397	1.13	154.87	146	12	1.12E-01	10.1	
6	0	87.91*	2003	554	1.25	176.79	172	11	5.56E-01	3.2	
7	0	92.90*	79	328	1.48	186.77	183	8	2.21E-02	42.2	
8	0	121.87	295	342	1.24	244.72	240	12	8.18E-02	13.8	
9	0	185.95*	35	280	1.57	372.84	369	9	9.84E-03	88.1	
10	0	238.63*	409	312	1.47	478.18	471	11	1.13E-01	9.8	
11	0	295.15*	121	232	1.39	591.21	585	13	3.35E-02	27.6	
12	0	338.15	152	186	1.41	677.18	672	13	4.23E-02	20.1	
13	0	351.98*	200	155	1.60	704.82	700	9	5.56E-02	13.4	
14	0	510.55*	71	161	2.28	1021.84	1015	14	1.98E-02	42.1	
15	0	583.33*	149	97	1.58	1167.34	1162	12	4.13E-02	15.8	
16	0	610.05*	190	82	1.67	1220.75	1214	16	5.29E-02	13.2	
17	0	661.68	2025	144	1.81	1323.96	1315	19	5.62E-01	2.6	
18	0	911.08*	76	111	1.71	1822.42	1816	13	2.10E-02	31.1	
19	0	1173.48	1523	147	2.17	2346.74	2337	22	4.23E-01	3.3	
20	0	1257.58	7	20	1.02	2514.77	2504	13	1.81E-03	145.4	
21	0	1332.66	1395	37	2.16	2664.77	2654	19	3.88E-01	2.9	
22	0	1764.89*	19	6	2.30	3528.10	3522	12	5.21E-03	36.6	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 08:39:44

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004734.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 28-JAN-2009 00:00:00 Acquisition date : 5-JAN-2010 07:39:15
Sample ID : G1202004734 Sample quantity : 155.44 GRAM
Sample type : SOLID Sample geometry :
Detector name : GAMMA5 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.72 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	+	122.06	*	5.644E-01	1.751E-01	1.454E-01	2.064E-02	3.880
		136.48		3.572E-01	7.873E-01	1.299E+00	1.740E-01	0.275
CO-60	+	1173.22		6.888E+00	6.046E-01	1.690E-01	9.801E-03	40.766
	+	1332.49	*	7.036E+00	5.743E-01	1.263E-01	7.310E-03	55.693
AS-73	+	53.44	*	2.758E+01	1.297E+01	1.440E+01	1.084E+00	1.915
CD-109	+	88.03	*	5.526E+01	5.500E+00	2.877E+00	2.191E-01	19.205
SN-126		64.28		-4.658E-01	4.596E-01	6.407E-01	9.548E-02	-0.727
	+	86.94		1.385E+01	5.769E+00	7.382E-01	3.038E-01	18.762
	+	87.57	*	3.331E+00	3.316E-01	1.732E-01	1.319E-02	19.231
BA-137M	+	661.65	*	5.510E+00	4.650E-01	1.258E-01	8.270E-03	43.810
CS-137	+	661.65	*	5.824E+00	4.926E-01	1.329E-01	8.771E-03	43.810
TM-171	+	51.35		1.882E+02	4.410E+01	3.761E+01	2.737E+00	5.003
	+	52.39		3.991E+01	1.876E+01	2.090E+01	1.547E+00	1.909
	+	59.40		3.292E+03	2.836E+02	5.033E+01	4.171E+00	65.415
		66.72	*	2.211E+01	3.369E+01	5.671E+01	4.557E+00	0.390
TL-208		277.35		1.646E-01	6.871E-01	1.160E+00	1.488E-01	0.142
	+	510.84		6.262E-01	5.308E-01	4.683E-01	4.920E-02	1.337
	+	583.14	*	3.779E-01	1.227E-01	1.209E-01	8.894E-03	3.126
		860.37		6.533E-01	7.588E-01	1.319E+00	1.338E-01	0.495
BI-211		72.87		9.270E+00	3.506E+00	5.516E+00	4.343E-01	1.680
	+	351.07	*	2.124E+00	5.925E-01	6.501E-01	5.152E-02	3.268
PB-212	+	74.81		1.575E+00	4.658E-01	5.671E-01	6.914E-02	2.778
	+	77.11		1.355E+00	2.930E-01	3.220E-01	2.506E-02	4.208
	+	87.30		1.541E+01	2.174E+00	8.006E-01	1.006E-01	19.246
	+	238.63	*	9.271E-01	2.078E-01	1.785E-01	1.925E-02	5.193
		300.09		7.085E-02	1.655E+00	2.403E+00	2.555E-01	0.029
PO-212	+	74.81		1.575E+00	4.658E-01	5.671E-01	6.914E-02	2.778
	+	77.11		1.355E+00	2.930E-01	3.220E-01	2.506E-02	4.208
	+	87.30		1.541E+01	2.174E+00	8.006E-01	1.006E-01	19.246
		115.19		-6.448E-01	5.136E+00	8.318E+00	1.058E+00	-0.078
	+	238.63	*	9.271E-01	2.078E-01	1.785E-01	1.925E-02	5.193
		300.09		7.085E-02	1.655E+00	2.403E+00	2.555E-01	0.029
BI-214	+	609.31	*	9.161E-01	2.546E-01	2.333E-01	1.956E-02	3.927
		1120.29		6.788E-01	6.550E-01	1.151E+00	1.099E-01	0.590

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	1764.49		6.662E-01	4.893E-01	4.934E-01	2.852E-02	1.350
PB-214	+	74.81		2.715E+00	7.878E-01	9.775E-01	1.054E-01	2.778
	+	77.11		2.323E+00	5.328E-01	5.522E-01	6.014E-02	4.208
	+	87.30		2.640E+01	3.324E+00	1.372E+00	1.487E-01	19.246
		241.98		1.208E+00	7.061E-01	1.115E+00	1.256E-01	1.084
	+	295.21		7.489E-01	4.217E-01	4.205E-01	4.597E-02	1.781
	+	351.92	*	7.392E-01	2.098E-01	2.286E-01	2.164E-02	3.233
PO-214	+	74.81		2.715E+00	7.878E-01	9.775E-01	1.054E-01	2.778
	+	77.11		2.323E+00	5.328E-01	5.522E-01	6.014E-02	4.208
	+	87.30		2.640E+01	3.324E+00	1.372E+00	1.487E-01	19.246
		241.98		1.208E+00	7.061E-01	1.115E+00	1.256E-01	1.084
	+	295.21		7.489E-01	4.217E-01	4.205E-01	4.597E-02	1.781
	+	351.92	*	7.392E-01	2.098E-01	2.286E-01	2.164E-02	3.233
PO-216	+	74.81		1.575E+00	4.658E-01	5.671E-01	6.914E-02	2.778
	+	77.11		1.355E+00	2.930E-01	3.220E-01	2.506E-02	4.208
	+	87.30		1.541E+01	2.174E+00	8.006E-01	1.006E-01	19.246
	+	238.63	*	9.271E-01	2.078E-01	1.785E-01	1.925E-02	5.193
		300.09		7.085E-02	1.655E+00	2.403E+00	2.555E-01	0.029
PO-218	+	74.81		2.715E+00	7.878E-01	9.775E-01	1.054E-01	2.778
	+	77.11		2.323E+00	5.328E-01	5.522E-01	6.014E-02	4.208
	+	87.30		2.640E+01	3.324E+00	1.372E+00	1.487E-01	19.246
		241.98		1.208E+00	7.061E-01	1.115E+00	1.256E-01	1.084
	+	295.21		7.489E-01	4.217E-01	4.205E-01	4.597E-02	1.781
	+	351.92	*	7.392E-01	2.098E-01	2.286E-01	2.164E-02	3.233
RA-226	+	609.31	*	9.161E-01	2.546E-01	2.333E-01	1.956E-02	3.927
		1120.29		6.788E-01	6.550E-01	1.151E+00	1.099E-01	0.590
	+	1764.49		6.662E-01	4.893E-01	4.934E-01	2.852E-02	1.350
TH-228	+	74.81		2.213E+00	6.215E-01	7.969E-01	6.309E-02	2.778
	+	77.11		1.904E+00	4.118E-01	4.524E-01	3.525E-02	4.208
	+	87.30		2.165E+01	2.156E+00	1.125E+00	8.580E-02	19.246
	+	238.63	*	1.303E+00	2.920E-01	2.509E-01	2.706E-02	5.193
		300.09		9.956E-02	2.327E+00	3.377E+00	2.003E+00	0.029
TH-230	+	609.31	*	9.157E-01	2.545E-01	2.332E-01	1.955E-02	3.927
		1120.29		6.786E-01	6.547E-01	1.151E+00	1.099E-01	0.590
	+	1764.49		6.659E-01	4.891E-01	4.932E-01	2.851E-02	1.350
U-234	+	609.31	*	9.157E-01	2.545E-01	2.332E-01	1.955E-02	3.927
		1120.29		6.786E-01	6.547E-01	1.151E+00	1.099E-01	0.590
	+	1764.49		6.659E-01	4.891E-01	4.932E-01	2.851E-02	1.350
NP-237	+	86.50	*	9.783E+00	2.241E+00	4.973E-01	1.094E-01	19.673
		95.87		-4.333E-02	1.393E+00	1.995E+00	4.940E-01	-0.022
AM-241	+	59.54	*	1.395E+01	1.289E+00	2.132E-01	1.907E-02	65.423
AM-243	+	74.67	*	2.554E-01	7.164E-02	9.192E-02	7.200E-03	2.778
	+	86.72		3.669E+02	3.652E+01	1.866E+01	1.423E+00	19.660
		117.66		7.851E-01	6.331E+00	9.090E+00	1.204E+00	0.086
		142.18		7.900E+00	2.737E+01	4.485E+01	5.574E+00	0.176
ANH-511	+	511.00	*	1.353E-01	1.141E-01	1.012E-01	6.475E-03	1.337

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7		477.59	*	-1.023E+01	5.540E+01	8.953E+01	6.551E+00	-0.114

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
NA-22		1274.54	*	-4.157E-02	7.409E-02	1.087E-01	6.331E-03	-0.382
NA-24		1368.53	*	-1.000E+35	7.409E-02	Half-Life too short		
AL-26		1129.67		1.758E+00	3.762E+00	6.372E+00	4.269E-01	0.276
		1808.65	*	1.707E-02	4.434E-02	7.982E-02	4.580E-03	0.214
K-40		1460.81	*	6.073E-01	6.769E-01	1.260E+00	7.838E-02	0.482
TI-44		67.85		4.707E-02	4.154E-02	7.072E-02	5.659E-03	0.666
	+	78.38	*	2.533E-01	5.479E-02	8.251E-02	6.402E-03	3.070
SC-46		889.25	*	2.310E-01	1.616E+00	2.698E+00	2.710E-01	0.086
		1120.51		1.672E+00	1.668E+00	2.931E+00	2.016E-01	0.570
V-48		944.10		3.037E+00	1.668E+00	Half-Life too short		
		983.50	*	-7.551E-02	1.668E+00	Half-Life too short		
		1312.09		-3.301E-02	1.668E+00	Half-Life too short		
CR-51		320.08	*	-1.009E-03	1.668E+00	Half-Life too short		
MN-52		744.21		1.670E+11	1.668E+00	Half-Life too short		
		848.13		-3.700E+12	1.668E+00	Half-Life too short		
		935.52		3.691E+11	1.668E+00	Half-Life too short		
		1246.25		-5.466E+12	1.668E+00	Half-Life too short		
	+	1333.61		3.319E+14	1.668E+00	Half-Life too short		
		1434.06	*	7.518E+10	1.668E+00	Half-Life too short		
MN-54		834.83	*	7.389E-02	1.815E-01	3.092E-01	2.833E-02	0.239
CO-56		846.75	*	-1.188E+00	1.754E+00	2.768E+00	2.601E-01	-0.429
		977.42		-3.335E+01	1.395E+02	2.256E+02	2.095E+01	-0.148
		1037.82		-1.246E+00	1.469E+01	2.394E+01	2.123E+00	-0.052
		1175.09		5.164E+03	4.153E+02	6.454E+02	3.791E+01	8.000
		1238.25		4.154E-01	2.136E+00	3.547E+00	2.216E-01	0.117
		1360.21		-2.791E+00	2.083E+01	3.255E+01	1.915E+00	-0.086
		1771.40		-1.192E+01	8.293E+00	9.511E+00	5.561E-01	-1.253
CO-58		810.76	*	-1.341E-01	2.319E+00	3.840E+00	3.389E-01	-0.035
FE-59		142.65		-5.654E+01	6.845E+02	1.104E+03	1.387E+02	-0.051
		192.34		-3.059E+02	2.821E+02	4.050E+02	5.873E+01	-0.755
		1099.22	*	-2.853E+01	3.811E+01	5.862E+01	4.911E+00	-0.487
		1291.56		-9.694E+00	2.777E+01	4.236E+01	3.274E+00	-0.229
ZN-65		1115.52	*	-4.381E-01	5.418E-01	8.270E-01	5.780E-02	-0.530
GE-68		1077.35	*	9.434E+00	7.448E+00	1.317E+01	1.012E+00	0.716
AS-74		595.88	*	1.085E-02	7.448E+00	Half-Life too short		
		634.78		-9.040E-02	7.448E+00	Half-Life too short		
SE-75		66.05		8.131E+00	2.649E+01	4.419E+01	4.410E+00	0.184
		96.73		2.760E+00	7.351E+00	1.076E+01	1.503E+00	0.256
	+	121.11		8.726E+00	2.779E+00	3.107E+00	4.883E-01	2.809
		136.00		2.247E-01	4.232E-01	7.001E-01	9.131E-02	0.321
		198.60		-7.871E+00	2.143E+01	3.384E+01	3.658E+00	-0.233
		264.65	*	-1.543E-01	5.305E-01	8.758E-01	8.363E-02	-0.176
		279.53		1.580E+00	1.327E+00	2.322E+00	2.224E-01	0.680
		303.91		4.431E+00	2.598E+01	4.362E+01	5.058E+00	0.102
		400.65		-1.914E+00	3.664E+00	5.854E+00	5.358E-01	-0.327
BR-77	+	87.88		1.000E+35	3.664E+00	Half-Life too short		
		200.40		-1.000E+35	3.664E+00	Half-Life too short		
	+	239.00		1.000E+35	3.664E+00	Half-Life too short		
		249.79		-1.000E+35	3.664E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	281.68		-1.000E+35	3.664E+00	Half-Life too short		
	297.23		1.000E+35	3.664E+00	Half-Life too short		
	303.76		1.000E+35	3.664E+00	Half-Life too short		
	439.47		1.000E+35	3.664E+00	Half-Life too short		
	484.57		-1.000E+35	3.664E+00	Half-Life too short		
	520.65	*	1.000E+35	3.664E+00	Half-Life too short		
	574.64		-1.000E+35	3.664E+00	Half-Life too short		
	578.91		1.000E+35	3.664E+00	Half-Life too short		
	585.48		1.000E+35	3.664E+00	Half-Life too short		
	755.35		-1.000E+35	3.664E+00	Half-Life too short		
	817.79		-1.000E+35	3.664E+00	Half-Life too short		
SR-82	698.33		-6.069E-01	3.664E+00	Half-Life too short		
	776.49	*	-1.282E-03	3.664E+00	Half-Life too short		
	1395.20		4.166E-02	3.664E+00	Half-Life too short		
RB-83	520.41	*	8.029E-01	2.044E+00	3.409E+00	2.192E-01	0.235
	529.64		-2.500E-01	3.271E+00	5.266E+00	3.400E-01	-0.047
	552.65		-3.401E+00	6.034E+00	9.389E+00	6.115E-01	-0.362
RB-84	881.50	*	-5.089E-05	6.034E+00	Half-Life too short		
KR-85	513.99	*	5.184E+00	1.906E+01	2.739E+01	1.756E+00	0.189
SR-85	513.99	*	8.286E-01	3.047E+00	4.378E+00	2.810E-01	0.189
RB-86	1076.63	*	2.990E-01	3.047E+00	Half-Life too short		
Y-88	898.02		-1.331E-01	9.573E-01	1.568E+00	1.604E-01	-0.085
	1836.01	*	1.666E-01	4.962E-01	8.727E-01	4.995E-02	0.191
ZR-88	392.90	*	2.686E-01	1.017E+00	1.698E+00	9.891E-02	0.158
Y-91	1204.90	*	-1.591E+02	1.265E+03	2.020E+03	1.174E+02	-0.079
NB-94	702.63	*	4.271E-02	6.883E-02	1.200E-01	8.584E-03	0.356
	871.10		-1.816E-02	9.154E-02	1.496E-01	1.458E-02	-0.121
NB-95	765.79	*	7.427E-02	2.997E+00	5.007E+00	4.083E-01	0.015
NB-95M	235.69	*	1.085E+01	8.644E+00	1.343E+01	1.470E+00	0.808
ZR-95	724.18		-9.550E+00	6.956E+00	1.028E+01	8.565E-01	-0.929
	756.15	*	-1.835E-01	5.259E+00	8.754E+00	7.787E-01	-0.021
NB-97	657.90	*	1.000E+35	5.259E+00	Half-Life too short		
	1024.50		-1.000E+35	5.259E+00	Half-Life too short		
ZR-97	254.15		-1.000E+35	5.259E+00	Half-Life too short		
	355.39		1.000E+35	5.259E+00	Half-Life too short		
	507.63	*	1.000E+35	5.259E+00	Half-Life too short		
	602.52		-1.000E+35	5.259E+00	Half-Life too short		
	1021.30		-1.000E+35	5.259E+00	Half-Life too short		
	1147.95		1.000E+35	5.259E+00	Half-Life too short		
	1362.66		1.000E+35	5.259E+00	Half-Life too short		
	1750.46		1.000E+35	5.259E+00	Half-Life too short		
MO-99	140.51		-8.414E+30	5.259E+00	Half-Life too short		
	181.06		-1.026E+31	5.259E+00	Half-Life too short		
	366.43		-2.552E+31	5.259E+00	Half-Life too short		
	739.58	*	-2.726E+30	5.259E+00	Half-Life too short		
	778.00		-4.249E+31	5.259E+00	Half-Life too short		
TC-99M	140.51	*	-1.000E+35	5.259E+00	Half-Life too short		
RH-101	127.23		3.279E-02	6.729E-02	9.824E-02	1.352E-02	0.334
	198.01	*	8.988E-03	6.967E-02	1.127E-01	1.126E-02	0.080

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		325.23		-3.333E-01	5.078E-01	8.137E-01	6.697E-02	-0.410
RH-102		418.52		-4.824E-01	7.995E-01	1.270E+00	7.592E-02	-0.380
		475.06	*	6.751E-03	9.187E-02	1.506E-01	9.434E-03	0.045
		631.29		4.179E-02	1.487E-01	2.443E-01	1.611E-02	0.171
		697.49		-1.593E-01	1.857E-01	2.910E-01	2.061E-02	-0.547
		766.84		3.156E-02	2.794E-01	4.695E-01	3.805E-02	0.067
		1046.59		-2.250E-01	3.744E-01	5.856E-01	4.805E-02	-0.384
		1112.84		-7.959E-01	7.167E-01	1.068E+00	7.507E-02	-0.745
RU-103		497.08	*	-8.381E-06	7.167E-01	Half-Life too short		
	+	610.33		3.148E-03	7.167E-01	Half-Life too short		
RH-106	+	511.85		1.251E+00	1.055E+00	1.305E+00	8.373E-02	0.959
		621.84	*	7.365E-01	1.316E+00	2.199E+00	2.673E-01	0.335
		1050.47		-2.132E-01	1.106E+01	1.809E+01	1.475E+00	-0.012
RU-106	+	511.85		1.251E+00	1.055E+00	1.305E+00	8.355E-02	0.959
		621.84	*	7.365E-01	1.314E+00	2.199E+00	1.450E-01	0.335
		1050.47		-2.132E-01	1.106E+01	1.809E+01	1.473E+00	-0.012
AG-108M		433.93	*	-1.812E-02	7.608E-02	1.231E-01	8.060E-03	-0.147
		614.37		-2.413E-02	9.583E-02	1.296E-01	9.109E-03	-0.186
		722.95		-1.536E-01	8.916E-02	1.294E-01	1.014E-02	-1.187
AG-110M		657.75	*	1.046E+00	2.782E-01	4.832E-01	3.340E-02	2.164
		677.61		-3.295E-01	1.612E+00	2.668E+00	1.895E-01	-0.124
		706.67		-5.480E-01	1.129E+00	1.830E+00	1.372E-01	-0.299
		763.93		-4.804E-01	8.784E-01	1.408E+00	1.171E-01	-0.341
		884.67		1.405E-02	3.237E-01	5.372E-01	5.484E-02	0.026
		937.48		-1.592E-01	8.156E-01	1.329E+00	1.333E-01	-0.120
		1384.27		-1.247E-01	5.191E-01	8.310E-01	5.137E-02	-0.150
IN-111		171.28		-1.739E+28	5.191E-01	Half-Life too short		
		245.39	*	-1.863E+29	5.191E-01	Half-Life too short		
IN-113M		391.69	*	4.912E-01	6.982E-01	1.190E+00	7.494E-02	0.413
SN-113		391.69	*	4.912E-01	6.982E-01	1.190E+00	7.494E-02	0.413
IN-114M		190.27	*	2.170E+01	3.333E+01	4.854E+01	4.847E+00	0.447
CD-115		260.90		-1.000E+35	3.333E+01	Half-Life too short		
		492.35		1.000E+35	3.333E+01	Half-Life too short		
		527.90	*	1.000E+35	3.333E+01	Half-Life too short		
SN-117M		156.02		4.302E+00	3.333E+01	Half-Life too short		
		158.56	*	-3.280E-01	3.333E+01	Half-Life too short		
SB-122		563.90	*	9.747E+30	3.333E+01	Half-Life too short		
		692.80		7.455E+31	3.333E+01	Half-Life too short		
I-123		159.00	*	-1.000E+35	3.333E+01	Half-Life too short		
		528.96		-1.000E+35	3.333E+01	Half-Life too short		
TE-123M		159.00	*	-6.955E-02	3.091E-01	4.931E-01	5.301E-02	-0.141
I-124		602.71	*	-2.140E+16	3.091E-01	Half-Life too short		
		722.78		-5.110E+18	3.091E-01	Half-Life too short		
		1325.50		1.050E+19	3.091E-01	Half-Life too short		
		1376.25		4.306E+18	3.091E-01	Half-Life too short		
		1509.49		-5.778E+18	3.091E-01	Half-Life too short		
		1691.02		7.077E+17	3.091E-01	Half-Life too short		
SB-124		602.71		-1.473E-01	3.712E+00	5.397E+00	3.560E-01	-0.027
		645.85		-2.598E+00	4.562E+01	7.300E+01	5.301E+00	-0.036

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		709.31		5.368E+01	2.565E+02	4.355E+02	3.162E+01	0.123
		713.82		2.662E+01	1.508E+02	2.554E+02	2.847E+01	0.104
		722.78		-5.099E+01	3.312E+01	4.884E+01	3.747E+00	-1.044
		968.20		3.304E+02	2.900E+02	5.083E+02	4.765E+01	0.650
		1045.16		6.298E+01	2.831E+02	4.711E+02	3.881E+01	0.134
		1325.50		1.120E+02	2.455E+02	3.722E+02	2.160E+01	0.301
		1368.21		-9.353E+00	9.548E+01	1.506E+02	1.790E+01	-0.062
		1436.60		3.642E+01	1.825E+02	3.178E+02	1.866E+01	0.115
		1691.02	*	1.666E+00	5.390E+00	9.457E+00	5.997E-01	0.176
SB-125		427.89	*	-2.609E-01	2.665E-01	4.132E-01	2.606E-02	-0.631
		463.38		6.651E-01	8.732E-01	1.479E+00	1.058E-01	0.450
		600.56		-5.850E-02	4.454E-01	7.116E-01	5.284E-02	-0.082
		635.90		-3.980E-02	7.482E-01	1.199E+00	9.003E-02	-0.033
TE-125M		109.28	*	-2.537E+02	6.460E+02	1.033E+03	1.969E+02	-0.246
I-126		388.63		-5.854E+00	6.460E+02	Half-Life too short		
		666.33	*	1.744E+01	6.460E+02	Half-Life too short		
		753.82		-4.747E+01	6.460E+02	Half-Life too short		
SB-126		223.80		7.054E+01	6.460E+02	Half-Life too short		
		278.60		2.651E+02	6.460E+02	Half-Life too short		
	+	296.50		6.534E+02	6.460E+02	Half-Life too short		
		414.70		-1.115E+01	6.460E+02	Half-Life too short		
		415.30		-7.627E+02	6.460E+02	Half-Life too short		
		555.20		1.828E+02	6.460E+02	Half-Life too short		
		573.80		-2.072E+00	6.460E+02	Half-Life too short		
		593.00		3.503E+01	6.460E+02	Half-Life too short		
		656.30		3.722E+02	6.460E+02	Half-Life too short		
		666.33		1.542E+01	6.460E+02	Half-Life too short		
		675.00		-1.104E+02	6.460E+02	Half-Life too short		
		695.00		2.674E+00	6.460E+02	Half-Life too short		
		697.00		-3.680E+01	6.460E+02	Half-Life too short		
		720.50	*	-8.883E+00	6.460E+02	Half-Life too short		
		856.80		1.827E+01	6.460E+02	Half-Life too short		
		989.30		8.283E+01	6.460E+02	Half-Life too short		
		1034.80		-8.697E+02	6.460E+02	Half-Life too short		
		1213.00		5.927E+01	6.460E+02	Half-Life too short		
SB-127		61.10		1.254E+23	6.460E+02	Half-Life too short		
		252.40		1.223E+20	6.460E+02	Half-Life too short		
		290.80		-4.693E+20	6.460E+02	Half-Life too short		
		411.60		9.481E+20	6.460E+02	Half-Life too short		
		444.90		2.280E+20	6.460E+02	Half-Life too short		
		473.00		3.337E+19	6.460E+02	Half-Life too short		
		543.00		-5.130E+20	6.460E+02	Half-Life too short		
		603.60		7.387E+20	6.460E+02	Half-Life too short		
		685.20	*	5.044E+19	6.460E+02	Half-Life too short		
		698.50		-1.231E+21	6.460E+02	Half-Life too short		
		722.20		-2.347E+21	6.460E+02	Half-Life too short		
		783.80		3.109E+20	6.460E+02	Half-Life too short		
XE-127		57.60		1.810E-01	6.460E+02	Half-Life too short		
		145.22		6.688E-05	6.460E+02	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		172.10		-1.151E-04	6.460E+02	Half-Life too short		
		202.84	*	-2.802E-05	6.460E+02	Half-Life too short		
		374.96		-6.517E-07	6.460E+02	Half-Life too short		
I-131		80.18		-3.108E+06	6.460E+02	Half-Life too short		
		284.30		1.403E+06	6.460E+02	Half-Life too short		
		364.48	*	2.305E+05	6.460E+02	Half-Life too short		
		636.97		7.097E+05	6.460E+02	Half-Life too short		
		722.89		-4.603E+07	6.460E+02	Half-Life too short		
TE-132	+	49.72		1.261E+26	6.460E+02	Half-Life too short		
		111.76		3.578E+25	6.460E+02	Half-Life too short		
		116.30		2.751E+24	6.460E+02	Half-Life too short		
		228.16	*	-5.271E+23	6.460E+02	Half-Life too short		
BA-133	+	53.15		7.354E+00	3.457E+00	5.080E+00	3.806E-01	1.448
		79.62		1.085E+00	1.727E+00	2.555E+00	3.766E-01	0.425
		81.00		-1.915E-01	1.432E-01	1.894E-01	2.918E-02	-1.011
		276.40		4.771E-01	7.147E-01	1.225E+00	1.822E-01	0.390
		302.84		-1.373E-02	2.915E-01	4.717E-01	6.325E-02	-0.029
		356.01	*	4.679E-02	9.680E-02	1.441E-01	1.780E-02	0.325
		383.85		-1.430E-01	6.743E-01	1.099E+00	1.216E-01	-0.130
I-133	+	510.53		1.000E+35	6.743E-01	Half-Life too short		
		529.87	*	1.000E+35	6.743E-01	Half-Life too short		
		706.58		-1.000E+35	6.743E-01	Half-Life too short		
		856.28		-1.000E+35	6.743E-01	Half-Life too short		
		875.33		1.000E+35	6.743E-01	Half-Life too short		
		1236.41		-1.000E+35	6.743E-01	Half-Life too short		
		1298.22		1.000E+35	6.743E-01	Half-Life too short		
CS-134		475.35		-1.128E+00	6.471E+00	1.047E+01	6.561E-01	-0.108
		563.23		1.094E+00	1.004E+00	1.745E+00	1.159E-01	0.627
		569.32		-1.590E-01	5.431E-01	8.597E-01	5.759E-02	-0.185
		604.70		-1.053E-01	1.072E-01	1.327E-01	8.777E-03	-0.793
		795.84	*	1.102E-01	1.406E-01	2.456E-01	2.116E-02	0.449
		801.93		-8.157E-01	1.226E+00	1.951E+00	1.696E-01	-0.418
		1038.57		-9.611E-01	1.412E+01	2.304E+01	1.921E+00	-0.042
		1167.94		1.409E+01	8.730E+00	1.435E+01	8.486E-01	0.982
		1365.15		6.490E-01	2.080E+00	3.567E+00	2.277E-01	0.182
CS-135		268.24	*	9.420E-02	2.908E-01	4.913E-01	5.256E-02	0.192
I-135		288.45		1.000E+35	2.908E-01	Half-Life too short		
		417.63		1.000E+35	2.908E-01	Half-Life too short		
		546.56		1.000E+35	2.908E-01	Half-Life too short		
		836.80		-1.000E+35	2.908E-01	Half-Life too short		
		1038.76		-1.000E+35	2.908E-01	Half-Life too short		
		1124.00		-1.000E+35	2.908E-01	Half-Life too short		
		1131.51		1.000E+35	2.908E-01	Half-Life too short		
		1260.41	*	1.000E+35	2.908E-01	Half-Life too short		
		1457.56		1.000E+35	2.908E-01	Half-Life too short		
		1678.03		-1.000E+35	2.908E-01	Half-Life too short		
		1706.46		-1.000E+35	2.908E-01	Half-Life too short		
		1791.20		1.000E+35	2.908E-01	Half-Life too short		
CS-136		66.91		2.001E+01	2.908E-01	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		86.29		1.042E+03	2.908E-01	Half-Life too short		
		153.22		8.368E+00	2.908E-01	Half-Life too short		
		163.89		3.616E+01	2.908E-01	Half-Life too short		
		176.55		9.614E+00	2.908E-01	Half-Life too short		
		273.65		-3.634E+01	2.908E-01	Half-Life too short		
		340.57		1.063E+01	2.908E-01	Half-Life too short		
		818.51		2.241E+00	2.908E-01	Half-Life too short		
		1048.07	*	-5.056E+00	2.908E-01	Half-Life too short		
		1235.34		4.746E+00	2.908E-01	Half-Life too short		
CE-139		165.85	*	-4.529E-02	2.645E-01	4.224E-01	4.196E-02	-0.107
BA-140		162.64		-1.233E+01	2.645E-01	Half-Life too short		
		304.84		4.708E-02	2.645E-01	Half-Life too short		
		423.70		-1.484E+01	2.645E-01	Half-Life too short		
		537.32	*	-1.555E+01	2.645E-01	Half-Life too short		
LA-140		328.77		1.226E+01	2.645E-01	Half-Life too short		
		432.53		-8.160E+01	2.645E-01	Half-Life too short		
		487.03		-1.233E+01	2.645E-01	Half-Life too short		
		751.79		-3.780E+01	2.645E-01	Half-Life too short		
		815.85		-2.470E+01	2.645E-01	Half-Life too short		
		867.82		1.039E+01	2.645E-01	Half-Life too short		
		919.63		-1.148E+01	2.645E-01	Half-Life too short		
		925.24		-2.901E+00	2.645E-01	Half-Life too short		
		1596.49	*	2.123E+00	2.645E-01	Half-Life too short		
CE-141		145.44	*	-2.336E-05	2.645E-01	Half-Life too short		
CE-143		57.37		1.000E+35	2.645E-01	Half-Life too short		
		231.56		1.000E+35	2.645E-01	Half-Life too short		
		293.26	*	1.000E+35	2.645E-01	Half-Life too short		
	+	350.59		1.000E+35	2.645E-01	Half-Life too short		
		490.36		1.000E+35	2.645E-01	Half-Life too short		
		664.57		1.000E+35	2.645E-01	Half-Life too short		
		721.93		-1.000E+35	2.645E-01	Half-Life too short		
CE-144		80.11		-1.710E+00	6.007E+00	8.552E+00	6.611E-01	-0.200
		133.54	*	-3.533E-01	7.314E-01	1.156E+00	2.141E-01	-0.306
PM-144		476.78		-4.909E-02	3.168E-01	5.129E-01	4.567E-02	-0.096
		618.01		6.913E-02	1.533E-01	2.224E-01	1.900E-02	0.311
		696.49	*	-8.653E-02	1.257E-01	1.996E-01	1.733E-02	-0.433
		778.57		-8.221E+00	9.982E+00	1.563E+01	1.516E+00	-0.526
PR-144		696.49	*	-6.970E+00	1.012E+01	1.608E+01	1.137E+00	-0.433
		1489.15		-1.971E+01	4.699E+01	7.310E+01	4.295E+00	-0.270
PM-146		453.90	*	-5.219E-02	1.190E-01	1.900E-01	1.687E-02	-0.275
		633.02		5.402E-01	3.463E+00	5.628E+00	2.080E+00	0.096
		735.90		-2.512E-02	3.808E-01	6.334E-01	1.794E-01	-0.040
		747.13		-1.077E-01	2.285E-01	3.683E-01	4.993E-02	-0.292
ND-147		91.11		7.834E+02	2.285E-01	Half-Life too short		
		319.41		-2.138E+03	2.285E-01	Half-Life too short		
		439.89		4.263E+02	2.285E-01	Half-Life too short		
		531.02	*	5.845E+02	2.285E-01	Half-Life too short		
PM-149		285.90	*	-1.000E+35	2.285E-01	Half-Life too short		
EU-152	+	121.78		7.423E-01	2.332E-01	2.697E-01	4.034E-02	2.752

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		244.69		-7.560E-01	6.479E-01	9.951E-01	9.702E-02	-0.760
		344.27	*	3.290E-02	2.297E-01	3.337E-01	2.744E-02	0.099
		443.98		1.282E+00	2.328E+00	3.924E+00	2.402E-01	0.327
		778.89		-3.981E-01	6.391E-01	1.017E+00	8.433E-02	-0.391
		867.32		2.198E-01	2.303E+00	3.838E+00	3.717E-01	0.057
		964.01		-1.225E+00	8.150E-01	1.200E+00	1.131E-01	-1.021
		1085.78		-3.455E-01	1.062E+00	1.692E+00	1.275E-01	-0.204
		1112.02		-4.521E-01	8.467E-01	1.326E+00	9.342E-02	-0.341
		1407.95		1.319E-01	2.553E-01	4.632E-01	2.707E-02	0.285
GD-153		69.67		-4.186E-01	4.452E+00	6.425E+00	5.109E-01	-0.065
		83.37		2.557E+01	5.157E+01	7.626E+01	5.854E+00	0.335
		97.43	*	1.764E-01	2.871E-01	4.263E-01	3.952E-02	0.414
		103.18		-9.425E-02	3.621E-01	5.847E-01	6.046E-02	-0.161
EU-154	+	123.07		5.343E-01	1.704E-01	1.921E-01	3.062E-02	2.781
		247.94		-6.093E-01	6.964E-01	1.115E+00	1.374E-01	-0.546
		591.81		5.661E-01	1.407E+00	2.337E+00	2.396E-01	0.242
		723.30		-5.015E-01	3.898E-01	5.879E-01	4.992E-02	-0.853
		756.87		-1.916E-01	1.768E+00	2.928E+00	3.369E-01	-0.065
		873.19		-8.039E-02	8.577E-01	1.411E+00	1.847E-01	-0.057
		996.32		-9.690E-01	9.915E-01	1.481E+00	2.657E-01	-0.654
		1004.76		-2.020E-01	6.139E-01	9.846E-01	1.163E-01	-0.205
		1274.45	*	-9.581E-02	1.754E-01	2.579E-01	2.412E-02	-0.371
EU-155		48.70		4.325E+00	1.607E+00	2.491E+00	1.736E-01	1.736
	+	60.01		5.134E+02	4.423E+01	2.660E+01	2.202E+00	19.304
	+	86.54		4.547E+00	4.561E-01	4.954E-01	3.828E-02	9.179
		105.31	*	8.152E-02	1.625E-01	2.709E-01	2.935E-02	0.301
TB-160	+	86.79		2.468E+02	2.456E+01	2.768E+01	2.111E+00	8.915
		197.04		-3.917E+00	2.262E+01	3.607E+01	3.603E+00	-0.109
		215.65		-1.528E+00	3.051E+01	5.135E+01	5.108E+00	-0.030
		298.57		2.196E+00	5.566E+00	8.266E+00	7.356E-01	0.266
		879.36	*	7.809E-01	8.469E+00	1.410E+01	1.394E+00	0.055
		962.29		6.925E+00	3.084E+01	5.149E+01	4.863E+00	0.134
		966.15		-2.453E+00	1.212E+01	1.971E+01	1.852E+00	-0.124
		1177.93		8.267E+01	2.281E+01	4.260E+01	2.472E+00	1.940
		1271.85		5.141E+00	1.957E+01	3.312E+01	1.925E+00	0.155
HO-166M		80.57		-3.399E-01	3.594E-01	4.945E-01	3.818E-02	-0.687
		184.41		2.344E-02	6.800E-02	9.849E-02	9.828E-03	0.238
		280.46		5.096E-02	1.551E-01	2.630E-01	2.435E-02	0.194
		410.95		3.831E-01	5.271E-01	8.985E-01	5.333E-02	0.426
		711.68	*	1.128E-03	1.312E-01	2.197E-01	1.601E-02	0.005
		752.31		-1.665E-01	5.765E-01	9.416E-01	7.425E-02	-0.177
		810.29		7.238E-02	1.390E-01	2.391E-01	2.097E-02	0.303
LU-176	+	88.36		7.901E+00	7.864E-01	8.996E-01	6.901E-02	8.784
		201.83		7.409E-03	5.151E-02	8.290E-02	8.275E-03	0.089
		306.84	*	-2.776E-02	4.613E-02	7.431E-02	6.472E-03	-0.374
		401.10		-1.466E+00	1.428E+01	2.337E+01	1.373E+00	-0.063
LU-177		112.95		-1.046E+08	1.428E+01	Half-Life too short		
		208.36	*	7.201E+08	1.428E+01	Half-Life too short		
LU-177M	+	52.97		1.277E+01	6.003E+00	8.826E+00	6.593E-01	1.447

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	54.07		7.237E+00	3.402E+00	4.977E+00	3.785E-01	1.454
		61.30		2.726E+02	2.450E+01	2.133E+01	1.755E+00	12.783
	+	121.62		1.500E+01	4.652E+00	5.425E+00	7.642E-01	2.764
		147.16		-1.127E+00	4.342E+00	6.934E+00	8.281E-01	-0.163
		171.86		-2.651E+00	3.260E+00	5.013E+00	4.985E-01	-0.529
		218.09		8.445E+00	6.303E+00	1.109E+01	1.102E+00	0.761
		268.79		7.723E+00	6.056E+00	1.058E+01	9.996E-01	0.730
		319.02		3.204E-01	2.065E+00	3.459E+00	2.906E-01	0.093
		367.43		-6.456E+00	7.917E+00	1.249E+01	8.524E-01	-0.517
		413.65	*	-6.427E-01	1.614E+00	2.596E+00	1.545E-01	-0.248
HF-181		56.28		1.460E-03	1.614E+00	Half-Life too short		
		57.53		5.852E-03	1.614E+00	Half-Life too short		
		65.20		-1.134E-04	1.614E+00	Half-Life too short		
		133.02		-1.163E-05	1.614E+00	Half-Life too short		
		136.25		7.095E-05	1.614E+00	Half-Life too short		
		345.85		-2.455E-06	1.614E+00	Half-Life too short		
		482.03	*	1.373E-05	1.614E+00	Half-Life too short		
W-181		56.28		1.772E+01	2.585E+00	4.165E+00	3.283E-01	4.255
		57.53		7.082E+01	6.098E+00	4.792E+00	3.854E-01	14.778
		65.20	*	-1.364E+00	2.111E+00	3.149E+00	2.546E-01	-0.433
TA-182		67.75		9.674E-01	7.026E-01	1.203E+00	9.628E-02	0.804
		100.10		-6.734E-01	1.688E+00	2.710E+00	2.645E-01	-0.248
		152.43		2.164E+00	4.011E+00	6.621E+00	7.552E-01	0.327
		222.10		-3.977E+00	4.472E+00	7.228E+00	7.169E-01	-0.550
		1001.68		-4.193E+00	3.675E+01	5.998E+01	5.340E+00	-0.070
		1121.28		1.625E+00	2.245E+00	3.871E+00	2.657E-01	0.420
		1189.05		4.050E+00	3.529E+00	6.446E+00	3.743E-01	0.628
		1221.42	*	1.691E-01	1.762E+00	2.899E+00	1.686E-01	0.058
		1230.97		3.698E-02	4.775E+00	7.753E+00	4.508E-01	0.005
RE-183	+	57.98		4.336E+02	3.735E+01	2.209E+01	1.790E+00	19.625
	+	59.32		2.492E+02	2.147E+01	1.314E+01	1.087E+00	18.973
		67.20		4.653E+00	4.446E+00	7.555E+00	6.060E-01	0.616
		162.32	*	-2.356E+00	4.647E+00	7.300E+00	7.542E-01	-0.323
		208.81		2.135E+01	4.601E+01	7.490E+01	7.467E+00	0.285
		291.72		1.777E+01	4.677E+01	6.965E+01	6.298E+00	0.255
RE-184	+	57.98		2.395E+02	2.063E+01	1.220E+01	9.885E-01	19.625
	+	59.32		1.375E+02	1.185E+01	7.249E+00	6.001E-01	18.973
		67.20		2.569E+00	2.455E+00	4.171E+00	3.346E-01	0.616
		161.27		-1.663E+00	2.242E+00	3.476E+00	3.633E-01	-0.478
		216.55		1.447E+00	1.819E+00	3.153E+00	3.135E-01	0.459
		252.85	*	2.475E-02	1.618E+00	2.716E+00	2.624E-01	0.009
		318.01		2.664E+00	3.334E+00	5.747E+00	4.843E-01	0.464
		792.07		-2.118E+00	8.513E+00	1.393E+01	1.182E+00	-0.152
		903.28		-5.292E+00	1.100E+01	1.553E+01	1.574E+00	-0.341
		920.93		-2.682E-01	4.707E+00	7.741E+00	7.697E-01	-0.035
OS-185	+	59.72		3.004E+02	2.588E+01	1.570E+01	1.302E+00	19.132
		61.14		1.010E+02	8.917E+00	7.035E+00	5.792E-01	14.362
		69.30		1.072E-01	3.498E+00	5.077E+00	4.042E-01	0.021
		592.07		2.752E+01	6.056E+01	1.010E+02	6.638E+00	0.273

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		646.12	*	-1.172E-01	1.008E+00	1.605E+00	1.057E-01	-0.073
		717.42		3.117E+00	2.097E+01	3.545E+01	2.612E+00	0.088
		874.81		8.223E+00	1.763E+01	3.003E+01	2.945E+00	0.274
		880.27		6.867E-01	2.303E+01	3.819E+01	3.780E+00	0.018
RE-188		155.03	*	2.774E+00	7.512E+00	1.231E+01	1.371E+00	0.225
		477.96		-5.334E+01	1.981E+02	3.185E+02	1.999E+01	-0.167
		633.10		3.097E+01	1.644E+02	2.681E+02	1.767E+01	0.116
W-188		63.58		-1.168E+03	1.192E+03	1.680E+03	1.367E+02	-0.696
		227.08		-1.205E+02	5.794E+02	9.666E+02	9.560E+01	-0.125
		290.67	*	-1.399E+02	3.917E+02	5.529E+02	5.012E+01	-0.253
IR-192	+	295.96		1.222E+01	6.842E+00	8.003E+00	7.322E-01	1.527
		308.46		-1.369E+00	3.800E+00	6.202E+00	5.491E-01	-0.221
		316.51	*	9.809E-01	1.441E+00	2.472E+00	2.133E-01	0.397
		468.07		-5.923E-01	3.724E+00	6.037E+00	4.368E-01	-0.098
		604.41		-2.449E+01	2.337E+01	2.852E+01	3.387E+00	-0.858
		612.46		4.042E+01	3.689E+01	5.644E+01	4.707E+00	0.716
AU-195		65.12		-3.302E-01	5.165E-01	7.708E-01	6.233E-02	-0.428
		66.83		2.660E-01	2.780E-01	4.714E-01	3.787E-02	0.564
	+	75.70		2.854E+00	8.005E-01	1.589E+00	1.241E-01	1.796
		98.88	*	9.168E-02	1.019E+00	1.674E+00	1.596E-01	0.055
		129.76		7.611E+00	1.506E+01	2.494E+01	3.379E+00	0.305
TL-200		367.94	*	-1.000E+35	1.506E+01	Half-Life too short		
		579.30		1.000E+35	1.506E+01	Half-Life too short		
		828.27		-1.000E+35	1.506E+01	Half-Life too short		
		1205.75		1.000E+35	1.506E+01	Half-Life too short		
TL-201		68.90		5.070E+26	1.506E+01	Half-Life too short		
		70.82		-6.405E+26	1.506E+01	Half-Life too short		
		80.30		-1.368E+27	1.506E+01	Half-Life too short		
		135.34		7.475E+27	1.506E+01	Half-Life too short		
		167.43	*	2.366E+27	1.506E+01	Half-Life too short		
TL-202		68.90		2.281E+01	1.506E+01	Half-Life too short		
		70.82		-2.874E+01	1.506E+01	Half-Life too short		
		80.30		-6.138E+01	1.506E+01	Half-Life too short		
		439.56	*	1.072E+00	1.506E+01	Half-Life too short		
HG-203		70.83		-1.434E+02	1.498E+02	2.059E+02	2.722E+01	-0.697
		72.87		2.395E+02	9.371E+01	1.425E+02	1.820E+01	1.680
		82.60		-6.056E+01	1.962E+02	2.798E+02	3.700E+01	-0.216
		279.20	*	1.363E+01	9.804E+00	1.726E+01	1.651E+00	0.790
BI-207		72.80		5.139E-01	2.066E-01	3.242E-01	2.553E-02	1.585
	+	74.97		4.670E-01	1.310E-01	2.378E-01	1.861E-02	1.964
		84.90		5.168E-01	2.791E-01	4.313E-01	3.301E-02	1.198
		569.67		-1.856E-03	6.299E-02	1.017E-01	6.656E-03	-0.018
		1063.62	*	5.654E-02	1.355E-01	2.285E-01	1.809E-02	0.247
		1770.23		7.958E-02	7.492E-01	1.095E+00	6.327E-02	0.073
TL-207		81.07		-4.050E-01	2.933E-01	3.937E-01	3.037E-02	-1.029
		83.78		5.561E-02	1.722E-01	2.528E-01	1.939E-02	0.220
		94.90		4.063E-01	3.253E-01	4.958E-01	4.370E-02	0.819
	+	122.32		1.689E+01	5.270E+00	6.184E+00	9.007E-01	2.731
		144.24		-2.844E-01	1.092E+00	1.737E+00	2.253E-01	-0.164

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		154.21		9.019E-02	6.621E-01	1.075E+00	1.279E-01	0.084
		269.46		2.366E-01	3.457E-01	5.922E-01	5.687E-02	0.400
		323.87	*	-6.013E-01	1.268E+00	2.048E+00	3.591E-01	-0.294
	+	338.28		7.416E+00	3.110E+00	3.879E+00	4.569E-01	1.912
		445.03		1.278E+00	5.395E+00	8.946E+00	9.354E-01	0.143
PO-209		260.50		-7.296E+00	1.773E+01	2.912E+01	2.785E+00	-0.251
		262.80		-2.978E+01	4.889E+01	7.939E+01	7.571E+00	-0.375
		896.60	*	-2.130E+00	2.110E+01	3.467E+01	3.524E+00	-0.061
BI-210		46.50	*	2.929E+00	1.403E+00	2.254E+00	1.807E-01	1.299
PB-210		46.50	*	2.929E+00	1.403E+00	2.254E+00	1.807E-01	1.299
PO-210		46.50	*	2.929E+00	1.397E+00	2.254E+00	1.516E-01	1.299
PB-211		404.84	*	-2.152E-01	2.075E+00	3.389E+00	2.113E+00	-0.063
		427.08		-1.570E+00	4.747E+00	7.486E+00	4.629E+00	-0.210
		831.96		6.508E-01	2.894E+00	4.830E+00	3.030E+00	0.135
BI-212		727.18	*	7.619E-01	6.273E-01	1.124E+00	1.019E-01	0.678
		785.46		1.208E+00	3.934E+00	6.687E+00	5.609E-01	0.181
		1620.62		-2.610E-01	1.769E+00	2.839E+00	1.666E-01	-0.092
PO-215		81.07		-4.050E-01	2.933E-01	3.937E-01	3.037E-02	-1.029
		83.78		5.561E-02	1.722E-01	2.528E-01	1.939E-02	0.220
		94.90		4.063E-01	3.253E-01	4.958E-01	4.370E-02	0.819
	+	122.32		1.689E+01	5.270E+00	6.184E+00	9.007E-01	2.731
		144.24		-2.844E-01	1.092E+00	1.737E+00	2.253E-01	-0.164
		154.21		9.019E-02	6.621E-01	1.075E+00	1.279E-01	0.084
		269.46		2.366E-01	3.457E-01	5.922E-01	5.687E-02	0.400
		323.87	*	-6.013E-01	1.268E+00	2.048E+00	3.591E-01	-0.294
	+	338.28		7.416E+00	3.110E+00	3.879E+00	4.569E-01	1.912
		445.03		1.278E+00	5.395E+00	8.946E+00	9.354E-01	0.143
RN-219		271.23		1.996E-01	4.461E-01	7.598E-01	8.345E-02	0.263
		401.81	*	1.141E-01	8.962E-01	1.484E+00	2.025E-01	0.077
RN-220		549.76	*	-7.758E-01	5.824E+01	9.432E+01	6.137E+00	-0.008
RA-223		81.07		-4.050E-01	2.933E-01	3.937E-01	3.037E-02	-1.029
		83.78		5.561E-02	1.722E-01	2.528E-01	1.939E-02	0.220
		94.90		4.063E-01	3.253E-01	4.958E-01	4.370E-02	0.819
	+	122.32		1.689E+01	5.270E+00	6.184E+00	9.007E-01	2.731
		144.24		-2.844E-01	1.092E+00	1.737E+00	2.253E-01	-0.164
		154.21		9.019E-02	6.621E-01	1.075E+00	1.279E-01	0.084
		269.46		2.366E-01	3.457E-01	5.922E-01	5.687E-02	0.400
		323.87	*	-6.013E-01	1.268E+00	2.048E+00	3.591E-01	-0.294
	+	338.28		7.416E+00	3.110E+00	3.879E+00	4.569E-01	1.912
		445.03		1.278E+00	5.395E+00	8.946E+00	9.354E-01	0.143
RA-224		240.98	*	6.226E+00	1.636E+00	2.652E+00	2.594E-01	2.348
AC-227		79.80		-4.803E-01	2.089E+00	2.980E+00	6.306E-01	-0.161
		236.00		1.144E+00	5.017E-01	7.885E-01	1.035E-01	1.450
		256.20	*	-7.691E-02	6.898E-01	1.150E+00	1.833E-01	-0.067
		286.10		-5.711E-01	2.819E+00	4.658E+00	6.314E-01	-0.123
		299.80		1.770E+00	3.037E+00	4.545E+00	8.006E-01	0.389
		304.40		-2.326E-01	3.500E+00	5.809E+00	1.075E+00	-0.040
		334.20		5.295E+00	5.170E+00	7.833E+00	1.498E+00	0.676
TH-227		79.80		-4.803E-01	2.089E+00	2.980E+00	6.390E-01	-0.161

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	+	94.00		3.536E+00	3.084E+00	4.340E+00	9.458E-01	0.815
		236.00		1.144E+00	4.981E-01	7.885E-01	9.493E-02	1.450
		256.20	*	-7.691E-02	6.899E-01	1.150E+00	2.135E-01	-0.067
		286.10		-5.711E-01	2.876E+00	4.658E+00	4.677E+00	-0.123
		299.80		1.770E+00	3.037E+00	4.545E+00	8.006E-01	0.389
		304.40		-2.326E-01	3.500E+00	5.809E+00	1.075E+00	-0.040
		334.20		5.295E+00	5.170E+00	7.833E+00	1.498E+00	0.676
AC-228	+	338.32		1.776E+00	1.022E+00	9.290E-01	3.819E-01	1.911
	+	911.07	*	8.740E-01	5.545E-01	7.246E-01	8.968E-02	1.206
		969.11		7.298E-01	6.747E-01	1.148E+00	2.711E-01	0.636
RA-228	+	338.32		1.776E+00	1.022E+00	9.290E-01	3.819E-01	1.911
	+	911.07	*	8.740E-01	5.545E-01	7.246E-01	8.968E-02	1.206
		969.11		7.298E-01	6.747E-01	1.148E+00	2.711E-01	0.636
TH-229		85.43		1.843E+00	3.346E-01	5.312E-01	4.061E-02	3.470
	+	88.47		4.549E+00	4.528E-01	5.170E-01	3.976E-02	8.798
		100.00		-9.998E-02	2.424E-01	3.890E-01	3.790E-02	-0.257
		193.63	*	3.826E-01	8.594E-01	1.405E+00	1.403E-01	0.272
		210.97		1.959E+00	1.383E+00	2.327E+00	2.319E-01	0.842
PA-231		283.67	*	-7.503E-01	2.796E+00	4.604E+00	7.145E-01	-0.163
		301.29		3.241E-01	1.212E+00	1.785E+00	2.213E-01	0.182
TH-231		81.07		-4.050E-01	2.933E-01	3.937E-01	3.037E-02	-1.029
		83.78		5.561E-02	1.722E-01	2.528E-01	1.939E-02	0.220
		94.90		4.063E-01	3.253E-01	4.958E-01	4.370E-02	0.819
	+	122.32		1.689E+01	5.270E+00	6.184E+00	9.007E-01	2.731
		144.24		-2.844E-01	1.092E+00	1.737E+00	2.253E-01	-0.164
		154.21		9.019E-02	6.621E-01	1.075E+00	1.279E-01	0.084
		269.46		2.366E-01	3.457E-01	5.922E-01	5.687E-02	0.400
		323.87	*	-6.013E-01	1.268E+00	2.048E+00	3.591E-01	-0.294
	+	338.28		7.416E+00	3.110E+00	3.879E+00	4.569E-01	1.912
		445.03		1.278E+00	5.395E+00	8.946E+00	9.354E-01	0.143
U-231		84.21		6.749E+17	5.395E+00	Half-Life too short		
	+	92.29		9.850E+17	5.395E+00	Half-Life too short		
		95.87	*	-1.385E+16	5.395E+00	Half-Life too short		
		108.00		-7.089E+17	5.395E+00	Half-Life too short		
TH-232	+	338.32		1.776E+00	7.283E-01	9.290E-01	7.283E-02	1.911
	+	911.07	*	8.740E-01	5.545E-01	7.246E-01	8.968E-02	1.206
		969.11		7.298E-01	6.747E-01	1.148E+00	2.711E-01	0.636
PA-233	+	75.28		1.338E+01	4.119E+00	7.160E+00	1.068E+00	1.868
	+	86.59		6.522E+01	1.779E+01	7.154E+00	1.897E+00	9.116
		300.12		1.358E-02	8.543E-01	1.238E+00	1.859E-01	0.011
		311.98	*	-8.020E-02	1.214E-01	1.947E-01	1.719E-02	-0.412
		340.50		1.786E+00	1.418E+00	2.121E+00	4.994E-01	0.842
		398.62		-2.980E+00	4.490E+00	7.011E+00	1.814E+00	-0.425
		415.76		3.947E-01	3.623E+00	5.986E+00	1.235E+00	0.066
PA-234		63.00		-1.164E+00	1.310E+00	1.841E+00	2.808E-01	-0.632
		94.67		2.692E-01	2.397E-01	3.611E-01	4.517E-02	0.745
		98.44		7.916E-02	1.307E-01	2.001E-01	1.119E-01	0.396
		99.86		-2.638E-01	6.126E-01	9.824E-01	9.545E-02	-0.269
		111.00		1.727E-01	2.585E-01	4.321E-01	6.301E-02	0.400

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
		131.20		-3.963E-02	1.638E-01	2.628E-01	3.528E-02	-0.151
		152.70		2.675E-01	5.378E-01	8.839E-01	1.643E-01	0.303
	+	186.00		1.512E+00	2.708E+00	3.610E+00	1.141E+00	0.419
		226.40		-2.185E-01	6.922E-01	1.149E+00	1.616E-01	-0.190
		227.20		-1.510E-01	7.457E-01	1.244E+00	1.231E-01	-0.121
		248.90		-6.607E-01	1.485E+00	2.429E+00	5.552E-01	-0.272
	+	293.70		3.593E+00	2.082E+00	2.242E+00	3.922E-01	1.603
		369.80		-1.930E-01	1.826E+00	2.999E+00	6.328E-01	-0.064
		568.70		-1.381E+00	2.046E+00	3.141E+00	2.055E-01	-0.440
		569.50		-1.559E-01	5.564E-01	8.816E-01	5.769E-02	-0.177
		574.00		1.345E-01	3.090E+00	5.014E+00	3.285E-01	0.027
		699.00		-1.400E+00	1.442E+00	2.207E+00	4.070E-01	-0.634
		706.10		-7.169E-01	2.273E+00	3.692E+00	1.637E+00	-0.194
		733.00		-2.125E-01	8.744E-01	1.437E+00	3.135E-01	-0.148
		742.81		2.930E+00	3.646E+00	5.450E+00	3.658E+00	0.538
		796.30		1.386E+00	2.076E+00	3.551E+00	9.598E-01	0.390
		805.60		1.975E+00	2.407E+00	4.095E+00	1.256E+00	0.482
		819.60		2.013E+00	3.048E+00	5.130E+00	1.954E+00	0.392
		826.30		-1.460E+00	2.104E+00	3.151E+00	1.412E+00	-0.463
		831.60		4.159E-01	1.487E+00	2.507E+00	7.518E-01	0.166
		876.40		2.515E-01	2.242E+00	3.711E+00	3.819E+00	0.068
		880.51		-1.445E-02	7.358E-01	1.216E+00	1.204E-01	-0.012
		883.24		-3.543E-01	7.807E-01	1.190E+00	8.018E-01	-0.298
		899.00		-6.414E-01	2.278E+00	3.667E+00	1.615E+00	-0.175
		925.00		-1.524E+00	3.254E+00	5.198E+00	5.144E-01	-0.293
		926.50		2.169E-01	4.891E-01	8.249E-01	2.123E-01	0.263
		946.00	*	4.117E-01	9.367E-01	1.578E+00	3.038E-01	0.261
		949.00		-4.141E-01	1.388E+00	2.247E+00	2.160E-01	-0.184
		980.50		1.064E+00	1.871E+00	3.198E+00	2.943E-01	0.333
		1394.10		1.084E+00	1.706E+00	2.907E+00	1.883E+00	0.373
PA-234M		766.42		9.920E+00	2.386E+01	4.003E+01	2.028E+01	0.248
		1001.03	*	-5.900E+00	1.148E+01	1.815E+01	1.855E+00	-0.325
TH-234		63.29	*	-9.818E-01	1.127E+00	1.582E+00	2.810E-01	-0.621
	+	92.38		9.151E-01	7.904E-01	1.153E+00	2.071E-01	0.794
U-235		89.95		2.144E+01	6.992E+00	3.816E+00	1.170E+00	5.619
	+	93.35		1.100E+00	9.789E-01	1.382E+00	3.870E-01	0.796
		105.00		1.051E+00	1.436E+00	2.363E+00	7.207E-01	0.445
		143.76	*	-1.163E-02	3.342E-01	5.373E-01	1.051E-01	-0.022
		163.35		2.255E-01	7.728E-01	1.260E+00	2.501E-01	0.179
	+	185.71		5.601E-02	9.886E-02	1.343E-01	1.340E-02	0.417
		205.31		-4.024E-01	9.628E-01	1.504E+00	2.967E-01	-0.268
NP-236		94.67		2.056E-01	1.809E-01	2.741E-01	2.404E-02	0.750
		98.44		5.988E-02	9.312E-02	1.513E-01	1.430E-02	0.396
		111.00		1.306E-01	1.953E-01	3.268E-01	3.879E-02	0.400
		160.31	*	-9.938E-02	1.314E-01	2.035E-01	2.149E-02	-0.488
U-238		63.29	*	-9.818E-01	1.127E+00	1.582E+00	2.810E-01	-0.621
	+	92.38		9.151E-01	7.768E-01	1.153E+00	9.647E-02	0.794
NP-239		99.55		-1.015E-01	2.050E-01	3.277E-01	3.165E-02	-0.310
		117.00	*	1.327E-01	3.151E-01	4.602E-01	6.029E-02	0.288

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
	209.75		4.794E-01	1.413E+00	2.290E+00	2.282E-01	0.209
	228.18		-1.028E-01	3.936E-01	6.550E-01	6.473E-02	-0.157
	277.60		4.470E-02	3.327E-01	5.593E-01	5.205E-02	0.080
	334.30		3.492E+00	2.860E+00	4.451E+00	3.545E-01	0.785
CM-243	99.55		-1.068E-01	2.155E-01	3.446E-01	3.328E-02	-0.310
	103.76	*	8.365E-02	1.326E-01	2.222E-01	2.323E-02	0.376
	117.00		1.395E-01	3.312E-01	4.838E-01	6.339E-02	0.288
	209.75		4.830E-01	1.424E+00	2.307E+00	2.299E-01	0.209
	228.18		-1.062E-01	4.064E-01	6.764E-01	6.684E-02	-0.157
	277.60		4.606E-02	3.427E-01	5.762E-01	5.363E-02	0.080
AM-246	798.80		-2.667E-01	3.203E-01	5.003E-01	4.300E-02	-0.533
	1036.00		1.438E-01	7.991E-01	1.327E+00	1.111E-01	0.108
	1062.04		-2.135E-01	5.927E-01	9.438E-01	7.500E-02	-0.226
	1078.86	*	2.813E-01	3.906E-01	6.693E-01	5.123E-02	0.420
CM-247	278.00		2.362E-01	1.381E+00	2.325E+00	2.162E-01	0.102
	287.40		-8.980E-04	2.267E+00	3.685E+00	3.364E-01	0.000
	402.60	*	6.686E-02	7.968E-02	1.367E-01	8.043E-03	0.489
CF-249	252.85		2.431E-02	1.590E+00	2.668E+00	2.578E-01	0.009
	333.44		2.168E-01	3.749E-01	5.616E-01	4.487E-02	0.386
	387.95	*	-4.291E-02	8.866E-02	1.425E-01	8.520E-03	-0.301
CF-251	176.60	*	1.371E-01	2.059E-01	3.408E-01	3.395E-02	0.402
	227.00		-2.328E-01	6.660E-01	1.104E+00	1.092E-01	-0.211
	285.00		5.510E-02	3.186E+00	5.323E+00	4.884E-01	0.010

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004734		
Acquisition date	: 5-JAN-2010 07:39:15	Detector SN#	:
Detector ID	: GAM05	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 01:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 01:00:01.72	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 28-JAN-2009 00:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004734	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.5544E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 11-JUN-2009 16:41:00	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	
CO-57	5.644E-01	1.716E-01	1.566E-01	0.000E+00
CO-60	7.036E+00	5.628E-01	1.277E-01	0.000E+00
AS-73	2.758E+01	1.271E+01	1.583E+01	0.000E+00
CD-109	5.526E+01	5.390E+00	3.124E+00	0.000E+00
SN-126	3.331E+00	3.250E-01	1.881E-01	0.000E+00
BA-137M	5.510E+00	4.557E-01	1.296E-01	0.000E+00
CS-137	5.824E+00	4.827E-01	1.371E-01	0.000E+00
TM-171	2.211E+01	3.301E+01	6.198E+01	0.000E+00
TL-208	3.779E-01	1.203E-01	1.250E-01	0.000E+00
BI-211	2.124E+00	5.807E-01	6.816E-01	0.000E+00
PB-212	9.271E-01	2.037E-01	1.891E-01	0.000E+00
PO-212	9.271E-01	2.037E-01	1.891E-01	0.000E+00
BI-214	9.161E-01	2.495E-01	2.410E-01	0.000E+00
PB-214	7.392E-01	2.056E-01	2.397E-01	0.000E+00
PO-214	7.392E-01	2.056E-01	2.397E-01	0.000E+00
PO-216	9.271E-01	2.037E-01	1.891E-01	0.000E+00
PO-218	7.392E-01	2.056E-01	2.397E-01	0.000E+00
RA-226	9.161E-01	2.495E-01	2.410E-01	0.000E+00
TH-228	1.303E+00	2.862E-01	2.657E-01	0.000E+00
TH-230	9.157E-01	2.494E-01	2.409E-01	0.000E+00
U-234	9.157E-01	2.494E-01	2.409E-01	0.000E+00
NP-237	9.783E+00	2.196E+00	5.401E-01	0.000E+00
AM-241	1.395E+01	1.263E+00	2.336E-01	0.000E+00
AM-243	2.554E-01	7.021E-02	1.002E-01	0.000E+00
ANH-511	1.353E-01	1.118E-01	1.050E-01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	
BE-7	-1.023E+01		5.429E+01	9.310E+01	0.000E+00 NOT IDENT.
NA-22	-4.157E-02		7.261E-02	1.100E-01	0.000E+00 NOT IDENT.

NA-24	0.000E+00	1.029E+42	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.707E-02	4.345E-02	8.002E-02	0.000E+00	NOT IDENT.
K-40	6.073E-01	6.633E-01	1.271E+00	0.000E+00	NOT IDENT.
TI-44	0.000E+00	5.369E-02	8.983E-02	0.000E+00	FAIL ABUN
SC-46	2.310E-01	1.584E+00	2.759E+00	0.000E+00	NOT IDENT.
V-48	0.000E+00	2.639E+05	0.000E+00	0.000E+00	SHORT HLIF
CR-51	0.000E+00	2.539E+03	0.000E+00	0.000E+00	SHORT HLIF
MN-52	0.000E+00	9.734E+16	0.000E+00	0.000E+00	SHORT HLIF
MN-54	7.389E-02	1.779E-01	3.167E-01	0.000E+00	NOT IDENT.
CO-56	-1.188E+00	1.719E+00	2.834E+00	0.000E+00	NOT IDENT.
CO-58	-1.341E-01	2.272E+00	3.937E+00	0.000E+00	NOT IDENT.
FE-59	-2.853E+01	3.735E+01	5.959E+01	0.000E+00	NOT IDENT.
ZN-65	-4.381E-01	5.310E-01	8.404E-01	0.000E+00	NOT IDENT.
GE-68	9.434E+00	7.299E+00	1.340E+01	0.000E+00	NOT IDENT.
AS-74	0.000E+00	6.746E+04	0.000E+00	0.000E+00	SHORT HLIF
SE-75	-1.543E-01	5.199E-01	9.250E-01	0.000E+00	FAIL ABUN
BR-77	0.000E+00	3.929E+41	0.000E+00	0.000E+00	SHORT HLIF
SR-82	0.000E+00	7.213E+03	0.000E+00	0.000E+00	SHORT HLIF
RB-83	8.029E-01	2.004E+00	3.537E+00	0.000E+00	NOT IDENT.
RB-84	0.000E+00	1.803E+02	0.000E+00	0.000E+00	SHORT HLIF
KR-85	5.184E+00	1.868E+01	2.843E+01	0.000E+00	NOT IDENT.
SR-85	8.286E-01	2.986E+00	4.544E+00	0.000E+00	NOT IDENT.
RB-86	0.000E+00	4.032E+05	0.000E+00	0.000E+00	SHORT HLIF
Y-88	1.666E-01	4.863E-01	8.744E-01	0.000E+00	NOT IDENT.
ZR-88	2.686E-01	9.970E-01	1.775E+00	0.000E+00	NOT IDENT.
Y-91	-1.591E+02	1.239E+03	2.049E+03	0.000E+00	NOT IDENT.
NB-94	4.271E-02	6.746E-02	1.235E-01	0.000E+00	NOT IDENT.
NB-95	7.427E-02	2.937E+00	5.142E+00	0.000E+00	NOT IDENT.
NB-95M	1.085E+01	8.471E+00	1.423E+01	0.000E+00	NOT IDENT.
ZR-95	-1.835E-01	5.154E+00	8.992E+00	0.000E+00	NOT IDENT.
NB-97	0.000E+00	2.026E+40	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	9.645E+40	0.000E+00	0.000E+00	SHORT HLIF
MO-99	0.000E+00	1.669E+37	0.000E+00	0.000E+00	SHORT HLIF
TC-99M	0.000E+00	6.903E+41	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.988E-03	6.828E-02	1.199E-01	0.000E+00	NOT IDENT.
RH-102	6.751E-03	9.003E-02	1.566E-01	0.000E+00	NOT IDENT.
RU-103	0.000E+00	2.740E+01	0.000E+00	0.000E+00	SHORT HLIF
RH-106	7.365E-01	1.290E+00	2.271E+00	0.000E+00	FAIL ABUN
RU-106	7.365E-01	1.287E+00	2.271E+00	0.000E+00	FAIL ABUN
AG-108M	-1.812E-02	7.456E-02	1.284E-01	0.000E+00	NOT IDENT.
AG-110M	0.000E+00	2.727E-01	4.982E-01	0.000E+00	NOT IDENT.
IN-111	0.000E+00	1.234E+35	0.000E+00	0.000E+00	SHORT HLIF
IN-113M	4.912E-01	6.842E-01	1.244E+00	0.000E+00	NOT IDENT.
SN-113	4.912E-01	6.842E-01	1.244E+00	0.000E+00	NOT IDENT.
IN-114M	2.170E+01	3.266E+01	5.170E+01	0.000E+00	NOT IDENT.
CD-115	0.000E+00	1.314E+42	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	0.000E+00	1.534E+06	0.000E+00	0.000E+00	SHORT HLIF
SB-122	0.000E+00	1.234E+37	0.000E+00	0.000E+00	SHORT HLIF
I-123	0.000E+00	4.356E+41	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.955E-02	3.030E-01	5.276E-01	0.000E+00	NOT IDENT.
I-124	0.000E+00	5.284E+23	0.000E+00	0.000E+00	SHORT HLIF
SB-124	1.666E+00	5.282E+00	9.498E+00	0.000E+00	NOT IDENT.
SB-125	-2.609E-01	2.612E-01	4.310E-01	0.000E+00	NOT IDENT.
TE-125M	-2.537E+02	6.331E+02	1.115E+03	0.000E+00	NOT IDENT.
I-126	0.000E+00	1.644E+07	0.000E+00	0.000E+00	SHORT HLIF
SB-126	0.000E+00	2.482E+07	0.000E+00	0.000E+00	SHORT HLIF
SB-127	0.000E+00	1.363E+26	0.000E+00	0.000E+00	SHORT HLIF
XE-127	0.000E+00	4.291E+01	0.000E+00	0.000E+00	SHORT HLIF
I-131	0.000E+00	4.028E+11	0.000E+00	0.000E+00	SHORT HLIF
TE-132	0.000E+00	2.136E+30	0.000E+00	0.000E+00	SHORT HLIF
BA-133	4.679E-02	9.486E-02	1.510E-01	0.000E+00	FAIL ABUN
I-133	0.000E+00	6.153E+41	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.102E-01	1.377E-01	2.520E-01	0.000E+00	NOT IDENT.
CS-135	9.420E-02	2.849E-01	5.187E-01	0.000E+00	NOT IDENT.
I-135	0.000E+00	5.375E+41	0.000E+00	0.000E+00	SHORT HLIF
CS-136	0.000E+00	8.608E+06	0.000E+00	0.000E+00	SHORT HLIF
CE-139	-4.529E-02	2.592E-01	4.515E-01	0.000E+00	NOT IDENT.
BA-140	0.000E+00	2.797E+07	0.000E+00	0.000E+00	SHORT HLIF
LA-140	0.000E+00	5.744E+06	0.000E+00	0.000E+00	SHORT HLIF
CE-141	0.000E+00	1.061E+02	0.000E+00	0.000E+00	SHORT HLIF
CE-143	0.000E+00	2.160E+41	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.533E-01	7.168E-01	1.242E+00	0.000E+00	NOT IDENT.
PM-144	-8.653E-02	1.232E-01	2.055E-01	0.000E+00	NOT IDENT.
PR-144	-6.970E+00	9.917E+00	1.656E+01	0.000E+00	NOT IDENT.
PM-146	-5.219E-02	1.166E-01	1.979E-01	0.000E+00	NOT IDENT.
ND-147	0.000E+00	1.124E+09	0.000E+00	0.000E+00	SHORT HLIF
PM-149	0.000E+00	2.661E+42	0.000E+00	0.000E+00	SHORT HLIF
EU-152	3.290E-02	2.251E-01	3.500E-01	0.000E+00	FAIL ABUN

GD-153	1.764E-01	2.814E-01	4.617E-01	0.000E+00	NOT IDENT.
EU-154	-9.581E-02	1.719E-01	2.611E-01	0.000E+00	FAIL ABUN
EU-155	8.152E-02	1.593E-01	2.929E-01	0.000E+00	FAIL ABUN
TB-160	7.809E-01	8.300E+00	1.443E+01	0.000E+00	FAIL ABUN
HO-166M	1.128E-03	1.286E-01	2.261E-01	0.000E+00	NOT IDENT.
LU-176	-2.776E-02	4.521E-02	7.818E-02	0.000E+00	FAIL ABUN
LU-177	0.000E+00	9.280E+14	0.000E+00	0.000E+00	SHORT HLIF
LU-177M	-6.427E-01	1.582E+00	2.710E+00	0.000E+00	FAIL ABUN
HF-181	0.000E+00	2.008E+01	0.000E+00	0.000E+00	SHORT HLIF
W-181	-1.364E+00	2.069E+00	3.444E+00	0.000E+00	NOT IDENT.
TA-182	1.691E-01	1.727E+00	2.939E+00	0.000E+00	NOT IDENT.
RE-183	-2.356E+00	4.554E+00	7.806E+00	0.000E+00	FAIL ABUN
RE-184	2.475E-02	1.586E+00	2.872E+00	0.000E+00	FAIL ABUN
OS-185	-1.172E-01	9.877E-01	1.656E+00	0.000E+00	FAIL ABUN
RE-188	2.774E+00	7.361E+00	1.318E+01	0.000E+00	NOT IDENT.
W-188	-1.399E+02	3.839E+02	5.826E+02	0.000E+00	NOT IDENT.
IR-192	9.809E-01	1.412E+00	2.599E+00	0.000E+00	FAIL ABUN
AU-195	9.168E-02	9.988E-01	1.812E+00	0.000E+00	FAIL ABUN
TL-200	0.000E+00	1.742E+41	0.000E+00	0.000E+00	SHORT HLIF
TL-201	0.000E+00	2.632E+33	0.000E+00	0.000E+00	SHORT HLIF
TL-202	0.000E+00	1.743E+07	0.000E+00	0.000E+00	SHORT HLIF
HG-203	1.363E+01	9.608E+00	1.820E+01	0.000E+00	NOT IDENT.
BI-207	5.654E-02	1.328E-01	2.325E-01	0.000E+00	FAIL ABUN
TL-207	-6.013E-01	1.243E+00	2.152E+00	0.000E+00	FAIL ABUN
PO-209	-2.130E+00	2.068E+01	3.544E+01	0.000E+00	NOT IDENT.
BI-210	0.000E+00	1.374E+00	2.486E+00	0.000E+00	NOT IDENT.
PB-210	0.000E+00	1.374E+00	2.486E+00	0.000E+00	NOT IDENT.
PO-210	0.000E+00	1.369E+00	2.486E+00	0.000E+00	NOT IDENT.
PB-211	-2.152E-01	2.034E+00	3.539E+00	0.000E+00	NOT IDENT.
BI-212	7.619E-01	6.148E-01	1.156E+00	0.000E+00	NOT IDENT.
PO-215	-6.013E-01	1.243E+00	2.152E+00	0.000E+00	FAIL ABUN
RN-219	1.141E-01	8.783E-01	1.551E+00	0.000E+00	NOT IDENT.
RN-220	-7.758E-01	5.707E+01	9.772E+01	0.000E+00	NOT IDENT.
RA-223	-6.013E-01	1.243E+00	2.152E+00	0.000E+00	FAIL ABUN
RA-224	0.000E+00	1.603E+00	2.807E+00	0.000E+00	NOT IDENT.
AC-227	-7.691E-02	6.760E-01	1.216E+00	0.000E+00	NOT IDENT.
TH-227	-7.691E-02	6.761E-01	1.216E+00	0.000E+00	FAIL ABUN
AC-228	0.000E+00	5.434E-01	7.405E-01	0.000E+00	FAIL ABUN
RA-228	0.000E+00	5.434E-01	7.405E-01	0.000E+00	FAIL ABUN
TH-229	3.826E-01	8.423E-01	1.496E+00	0.000E+00	FAIL ABUN
PA-231	-7.503E-01	2.740E+00	4.854E+00	0.000E+00	NOT IDENT.
TH-231	-6.013E-01	1.243E+00	2.152E+00	0.000E+00	FAIL ABUN
U-231	0.000E+00	4.362E+23	0.000E+00	0.000E+00	SHORT HLIF
TH-232	0.000E+00	5.434E-01	7.405E-01	0.000E+00	FAIL ABUN
PA-233	-8.020E-02	1.189E-01	2.047E-01	0.000E+00	FAIL ABUN
PA-234	4.117E-01	9.179E-01	1.610E+00	0.000E+00	FAIL ABUN
PA-234M	-5.900E+00	1.125E+01	1.850E+01	0.000E+00	NOT IDENT.
TH-234	-9.818E-01	1.105E+00	1.731E+00	0.000E+00	FAIL ABUN
U-235	-1.163E-02	3.275E-01	5.763E-01	0.000E+00	FAIL ABUN
NP-236	-9.938E-02	1.288E-01	2.177E-01	0.000E+00	NOT IDENT.
U-238	-9.818E-01	1.105E+00	1.731E+00	0.000E+00	FAIL ABUN
NP-239	1.327E-01	3.088E-01	4.962E-01	0.000E+00	NOT IDENT.
CM-243	8.365E-02	1.300E-01	2.403E-01	0.000E+00	NOT IDENT.
AM-246	2.813E-01	3.828E-01	6.808E-01	0.000E+00	NOT IDENT.
CM-247	6.686E-02	7.808E-02	1.428E-01	0.000E+00	NOT IDENT.
CF-249	-4.291E-02	8.689E-02	1.490E-01	0.000E+00	NOT IDENT.
CF-251	1.371E-01	2.018E-01	3.637E-01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 08:39:43.14

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004734.CNF;1
Sample date : 28-JAN-2009 00:00:00 Acquisition date : 5-JAN-2010 07:39:15.
Sample ID : G1202004734 Sample quantity : 1.55440E+02 GRAM
Detector name : GAM05 Detector geometry: CAN
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:01.72 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 936923 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
CO-57	122.06	295	85.51*	7.079E+00	2.350E-01	5.644E-01	31.03
	136.48	------	10.60	6.728E+00	------ Line Not Found		------
CO-60	1173.22	1523	100.00	1.208E+00	6.089E+00	6.888E+00	8.78
	1332.49	1395	100.00*	1.083E+00	6.220E+00	7.036E+00	8.16
AS-73	53.44	242	10.30*	7.908E+00	1.436E+00	2.758E+01	47.01
CD-109	88.03	2003	3.72*	7.847E+00	3.313E+01	5.526E+01	9.95
SN-126	64.28	------	9.60	8.070E+00	------ Line Not Found		------
	86.94	2003	8.90	7.847E+00	1.385E+01	1.385E+01	41.66
	87.57	2003	37.00*	7.847E+00	3.331E+00	3.331E+00	9.95
BA-137M	661.65	2025	89.98*	2.015E+00	5.392E+00	5.510E+00	8.44
CS-137	661.65	2025	85.12*	2.015E+00	5.700E+00	5.824E+00	8.46
TM-171	51.35	628	0.29	7.801E+00	1.341E+02	1.882E+02	23.44
	52.39	242	0.52	7.908E+00	2.845E+01	3.991E+01	47.01
	59.40	8308	0.21	8.027E+00	2.347E+03	3.292E+03	8.62
	66.72	------	0.16*	8.075E+00	------ Line Not Found		------
TL-208	277.35	------	6.80	4.261E+00	------ Line Not Found		------
	510.84	71	21.60	2.545E+00	6.262E-01	6.262E-01	84.77
	583.14	149	84.20*	2.258E+00	3.779E-01	3.779E-01	32.47
	860.37	------	12.46	1.590E+00	------ Line Not Found		------
BI-211	72.87	------	1.27	8.052E+00	------ Line Not Found		------
	351.07	200	12.94*	3.515E+00	2.124E+00	2.124E+00	27.89
PB-212	74.81	280	10.70	8.037E+00	1.575E+00	1.575E+00	29.57
	77.11	405	18.00	8.014E+00	1.355E+00	1.355E+00	21.63
	87.30	2003	8.00	7.847E+00	1.541E+01	1.541E+01	14.11
	238.63	409	44.60*	4.773E+00	9.271E-01	9.271E-01	22.41
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-212	74.81	280	10.70	8.037E+00	1.575E+00	1.575E+00	29.57
	77.11	405	18.00	8.014E+00	1.355E+00	1.355E+00	21.63
	87.30	2003	8.00	7.847E+00	1.541E+01	1.541E+01	14.11
	115.19	------	0.60	7.241E+00	------ Line Not Found		------
	238.63	409	44.60*	4.773E+00	9.271E-01	9.271E-01	22.41
	300.09	------	3.41	4.005E+00	------ Line Not Found		------

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	2-Sigma %Error
BI-214	609.31	190	46.30*	2.169E+00	9.157E-01	9.161E-01	27.79
	1120.29	------	15.10	1.258E+00	------ Line Not Found		------
	1764.49	19	15.80	8.610E-01	6.659E-01	6.662E-01	73.45
PB-214	74.81	280	6.21	8.037E+00	2.714E+00	2.715E+00	29.01
	77.11	405	10.50	8.014E+00	2.323E+00	2.323E+00	22.93
	87.30	2003	4.67	7.847E+00	2.639E+01	2.640E+01	12.59
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	121	19.20	4.058E+00	7.486E-01	7.489E-01	56.31
	351.92	200	37.20*	3.515E+00	7.389E-01	7.392E-01	28.38
PO-214	74.81	280	6.21	8.037E+00	2.714E+00	2.715E+00	29.01
	77.11	405	10.50	8.014E+00	2.323E+00	2.323E+00	22.93
	87.30	2003	4.67	7.847E+00	2.639E+01	2.640E+01	12.59
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	121	19.20	4.058E+00	7.486E-01	7.489E-01	56.31
	351.92	200	37.20*	3.515E+00	7.389E-01	7.392E-01	28.38
PO-216	74.81	280	10.70	8.037E+00	1.575E+00	1.575E+00	29.57
	77.11	405	18.00	8.014E+00	1.355E+00	1.355E+00	21.63
	87.30	2003	8.00	7.847E+00	1.541E+01	1.541E+01	14.11
	238.63	409	44.60*	4.773E+00	9.271E-01	9.271E-01	22.41
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
PO-218	74.81	280	6.21	8.037E+00	2.714E+00	2.715E+00	29.01
	77.11	405	10.50	8.014E+00	2.323E+00	2.323E+00	22.93
	87.30	2003	4.67	7.847E+00	2.639E+01	2.640E+01	12.59
	241.98	------	7.49	4.724E+00	------ Line Not Found		------
	295.21	121	19.20	4.058E+00	7.486E-01	7.489E-01	56.31
	351.92	200	37.20*	3.515E+00	7.389E-01	7.392E-01	28.38
RA-226	609.31	190	46.30*	2.169E+00	9.157E-01	9.161E-01	27.79
	1120.29	------	15.10	1.258E+00	------ Line Not Found		------
	1764.49	19	15.80	8.610E-01	6.659E-01	6.662E-01	73.45
TH-228	74.81	280	10.70	8.037E+00	1.575E+00	2.213E+00	28.08
	77.11	405	18.00	8.014E+00	1.355E+00	1.904E+00	21.63
	87.30	2003	8.00	7.847E+00	1.541E+01	2.165E+01	9.96
	238.63	409	44.60*	4.773E+00	9.271E-01	1.303E+00	22.42
	300.09	------	3.41	4.005E+00	------ Line Not Found		------
TH-230	609.31	190	46.30*	2.169E+00	9.157E-01	9.157E-01	27.79
	1120.29	------	15.10	1.258E+00	------ Line Not Found		------
	1764.49	19	15.80	8.610E-01	6.659E-01	6.659E-01	73.45
U-234	609.31	190	46.30*	2.169E+00	9.157E-01	9.157E-01	27.79
	1120.29	------	15.10	1.258E+00	------ Line Not Found		------
	1764.49	19	15.80	8.610E-01	6.659E-01	6.659E-01	73.45
NP-237	86.50	2003	12.60*	7.847E+00	9.783E+00	9.783E+00	22.91
	95.87	------	2.60	7.687E+00	------ Line Not Found		------
AM-241	59.54	8308	35.90*	8.027E+00	1.393E+01	1.395E+01	9.24
AM-243	74.67	280	66.00*	8.037E+00	2.554E-01	2.554E-01	28.05
	86.72	2003	0.34	7.847E+00	3.668E+02	3.669E+02	9.95
	117.66	------	0.55	7.181E+00	------ Line Not Found		------
	142.18	------	0.13	6.593E+00	------ Line Not Found		------
ANH-511	511.00	71	100.00*	2.545E+00	1.353E-01	1.353E-01	84.36

Flag: "*" = Keyline

Sample ID : G1202004734 Acquisition date : 5-JAN-2010 07:39:15

Total number of lines in spectrum 22
Number of unidentified lines 1
Number of lines tentatively identified by NID 21 95.45%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/GRAM	Decay Corr pCi/GRAM	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	2.40	2.350E-01	5.644E-01	1.751E-01	31.03	
CO-60	5.27Y	1.13	6.220E+00	7.036E+00	0.574E+00	8.16	
AS-73	80.30D	19.2	1.436E+00	2.758E+01	1.297E+01	47.01	
CD-109	464.00D	1.67	3.313E+01	5.526E+01	0.550E+01	9.95	
SN-126	1.00E+05Y	1.00	3.331E+00	3.331E+00	0.332E+00	9.95	
BA-137M	30.17Y	1.02	5.392E+00	5.510E+00	0.465E+00	8.44	
CS-137	30.17Y	1.02	5.700E+00	5.824E+00	0.493E+00	8.46	
TM-171	1.92Y	1.40	2.845E+01	3.991E+01	1.876E+01	47.01	K
TL-208	1.41E+10Y	1.00	3.779E-01	3.779E-01	1.227E-01	32.47	
BI-211	7.04E+08Y	1.00	2.124E+00	2.124E+00	0.593E+00	27.89	
PB-212	1.41E+10Y	1.00	9.271E-01	9.271E-01	2.078E-01	22.41	
PO-212	1.41E+10Y	1.00	9.271E-01	9.271E-01	2.078E-01	22.41	
BI-214	1600.00Y	1.00	9.157E-01	9.161E-01	2.546E-01	27.79	
PB-214	1600.00Y	1.00	7.389E-01	7.392E-01	2.098E-01	28.38	
PO-214	1600.00Y	1.00	7.389E-01	7.392E-01	2.098E-01	28.38	
PO-216	1.41E+10Y	1.00	9.271E-01	9.271E-01	2.078E-01	22.41	
PO-218	1600.00Y	1.00	7.389E-01	7.392E-01	2.098E-01	28.38	
RA-226	1600.00Y	1.00	9.157E-01	9.161E-01	2.546E-01	27.79	
TH-228	1.91Y	1.41	9.271E-01	1.303E+00	0.292E+00	22.42	
TH-230	4.47E+09Y	1.00	9.157E-01	9.157E-01	2.545E-01	27.79	
U-234	4.47E+09Y	1.00	9.157E-01	9.157E-01	2.545E-01	27.79	
NP-237	2.14E+06Y	1.00	9.783E+00	9.783E+00	2.241E+00	22.91	
AM-241	432.20Y	1.00	1.393E+01	1.395E+01	0.129E+01	9.24	
AM-243	7380.00Y	1.00	2.554E-01	2.554E-01	0.716E-01	28.05	
ANH-511	1.00E+09Y	1.00	1.353E-01	1.353E-01	1.141E-01	84.36	
	Total Activity :		1.201E+02	1.816E+02			

Grand Total Activity : 1.201E+02 1.816E+02

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	92.90	79	328	1.48	186.77	183	8	2.21E-02	84.5	7.75E+00	T
0	185.95	35	280	1.57	372.84	369	9	9.84E-03	****	5.66E+00	T
0	338.15	152	186	1.41	677.18	672	13	4.23E-02	40.3	3.63E+00	T
0	911.08	76	111	1.71	1822.42	1816	13	2.10E-02	62.2	1.51E+00	T
0	1257.58	7	20	1.02	2514.77	2504	13	1.81E-03	****	1.14E+00	

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 08:39:47.95

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202004734.CNF;1		
Acquisition date	: 5-JAN-2010 07:39:15.	Detector SN#	:
Detector ID	: GAM05	Sensitivity	: 5.00000
Geometry	: CAN	Energy tolerance	: 1.50000
Elapsed live time	: 0 01:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 01:00:01.72	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 28-JAN-2009 00:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004734	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.55440E+02 GRAM

QC DATA

CALIB. DATE/TIME	: 11-JUN-2009 16:41:00.5	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CO-57	5.644E-01	1.751E-01	1.454E-01	2.064E-02	3.880
CO-60	7.036E+00	5.743E-01	1.263E-01	7.310E-03	55.693
AS-73	2.758E+01	1.297E+01	1.440E+01	1.084E+00	1.915
CD-109	5.526E+01	5.500E+00	2.877E+00	2.191E-01	19.205
SN-126	3.331E+00	3.316E-01	1.732E-01	1.319E-02	19.231
BA-137M	5.510E+00	4.650E-01	1.258E-01	8.270E-03	43.810
CS-137	5.824E+00	4.926E-01	1.329E-01	8.771E-03	43.810
TM-171	3.991E+01	1.876E+01	5.671E+01	4.557E+00	0.704
TL-208	3.779E-01	1.227E-01	1.209E-01	8.894E-03	3.126
BI-211	2.124E+00	5.925E-01	6.501E-01	5.152E-02	3.268
PB-212	9.271E-01	2.078E-01	1.785E-01	1.925E-02	5.193
PO-212	9.271E-01	2.078E-01	1.785E-01	1.925E-02	5.193
BI-214	9.161E-01	2.546E-01	2.333E-01	1.956E-02	3.927
PB-214	7.392E-01	2.098E-01	2.286E-01	2.164E-02	3.233
PO-214	7.392E-01	2.098E-01	2.286E-01	2.164E-02	3.233
PO-216	9.271E-01	2.078E-01	1.785E-01	1.925E-02	5.193
PO-218	7.392E-01	2.098E-01	2.286E-01	2.164E-02	3.233
RA-226	9.161E-01	2.546E-01	2.333E-01	1.956E-02	3.927

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
TH-228	1.303E+00	2.920E-01	2.509E-01	2.706E-02	5.193
TH-230	9.157E-01	2.545E-01	2.332E-01	1.955E-02	3.927
U-234	9.157E-01	2.545E-01	2.332E-01	1.955E-02	3.927
NP-237	9.783E+00	2.241E+00	4.973E-01	1.094E-01	19.673
AM-241	1.395E+01	1.289E+00	2.132E-01	1.907E-02	65.423
AM-243	2.554E-01	7.164E-02	9.192E-02	7.200E-03	2.778
ANH-511	1.353E-01	1.141E-01	1.012E-01	6.475E-03	1.337

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
BE-7	-1.023E+01		5.540E+01	8.953E+01	6.551E+00	-0.114
NA-22	-4.157E-02		7.409E-02	1.087E-01	6.331E-03	-0.382
NA-24	-1.000E+35		5.252E+35	Half-Life too short		
AL-26	1.707E-02		4.434E-02	7.982E-02	4.580E-03	0.214
K-40	6.073E-01		6.769E-01	1.260E+00	7.838E-02	0.482
TI-44	2.533E-01	+	5.479E-02	8.251E-02	6.402E-03	3.070
SC-46	2.310E-01		1.616E+00	2.698E+00	2.710E-01	0.086
V-48	-7.551E-02		1.346E-01	Half-Life too short		
CR-51	-1.009E-03		1.295E-03	Half-Life too short		
MN-52	7.518E+10		4.967E+10	Half-Life too short		
MN-54	7.389E-02		1.815E-01	3.092E-01	2.833E-02	0.239
CO-56	-1.188E+00		1.754E+00	2.768E+00	2.601E-01	-0.429
CO-58	-1.341E-01		2.319E+00	3.840E+00	3.389E-01	-0.035
FE-59	-2.853E+01		3.811E+01	5.862E+01	4.911E+00	-0.487
ZN-65	-4.381E-01		5.418E-01	8.270E-01	5.780E-02	-0.530
GE-68	9.434E+00		7.448E+00	1.317E+01	1.012E+00	0.716
AS-74	1.085E-02		3.442E-02	Half-Life too short		
SE-75	-1.543E-01		5.305E-01	8.758E-01	8.363E-02	-0.176
BR-77	1.000E+35		2.005E+35	Half-Life too short		
SR-82	-1.282E-03		3.680E-03	Half-Life too short		
RB-83	8.029E-01		2.044E+00	3.409E+00	2.192E-01	0.235
RB-84	-5.089E-05		9.201E-05	Half-Life too short		
KR-85	5.184E+00		1.906E+01	2.739E+01	1.756E+00	0.189
SR-85	8.286E-01		3.047E+00	4.378E+00	2.810E-01	0.189
RB-86	2.990E-01		2.057E-01	Half-Life too short		
Y-88	1.666E-01		4.962E-01	8.727E-01	4.995E-02	0.191
ZR-88	2.686E-01		1.017E+00	1.698E+00	9.891E-02	0.158
Y-91	-1.591E+02		1.265E+03	2.020E+03	1.174E+02	-0.079
NB-94	4.271E-02		6.883E-02	1.200E-01	8.584E-03	0.356
NB-95	7.427E-02		2.997E+00	5.007E+00	4.083E-01	0.015
NB-95M	1.085E+01		8.644E+00	1.343E+01	1.470E+00	0.808
ZR-95	-1.835E-01		5.259E+00	8.754E+00	7.787E-01	-0.021
NB-97	1.000E+35		1.034E+34	Half-Life too short		
ZR-97	1.000E+35		4.921E+34	Half-Life too short		
MO-99	-2.726E+30		8.516E+30	Half-Life too short		
TC-99M	-1.000E+35		3.522E+35	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
RH-101	8.988E-03		6.967E-02	1.127E-01	1.126E-02	0.080
RH-102	6.751E-03		9.187E-02	1.506E-01	9.434E-03	0.045
RU-103	-8.381E-06		1.398E-05	Half-Life too short		
RH-106	7.365E-01		1.316E+00	2.199E+00	2.673E-01	0.335
RU-106	7.365E-01		1.314E+00	2.199E+00	1.450E-01	0.335
AG-108M	-1.812E-02		7.608E-02	1.231E-01	8.060E-03	-0.147
AG-110M	1.046E+00		2.782E-01	4.832E-01	3.340E-02	2.164
IN-111	-1.863E+29		6.294E+28	Half-Life too short		
IN-113M	4.912E-01		6.982E-01	1.190E+00	7.494E-02	0.413
SN-113	4.912E-01		6.982E-01	1.190E+00	7.494E-02	0.413
IN-114M	2.170E+01		3.333E+01	4.854E+01	4.847E+00	0.447
CD-115	1.000E+35		6.704E+35	Half-Life too short		
SN-117M	-3.280E-01		7.825E-01	Half-Life too short		
SB-122	9.747E+30		6.295E+30	Half-Life too short		
I-123	-1.000E+35		2.222E+35	Half-Life too short		
TE-123M	-6.955E-02		3.091E-01	4.931E-01	5.301E-02	-0.141
I-124	-2.140E+16		2.696E+17	Half-Life too short		
SB-124	1.666E+00		5.390E+00	9.457E+00	5.997E-01	0.176
SB-125	-2.609E-01		2.665E-01	4.132E-01	2.606E-02	-0.631
TE-125M	-2.537E+02		6.460E+02	1.033E+03	1.969E+02	-0.246
I-126	1.744E+01		8.386E+00	Half-Life too short		
SB-126	-8.883E+00		1.267E+01	Half-Life too short		
SB-127	5.044E+19		6.955E+19	Half-Life too short		
XE-127	-2.802E-05		2.189E-05	Half-Life too short		
I-131	2.305E+05		2.055E+05	Half-Life too short		
TE-132	-5.271E+23		1.090E+24	Half-Life too short		
BA-133	4.679E-02		9.680E-02	1.441E-01	1.780E-02	0.325
I-133	1.000E+35		3.139E+35	Half-Life too short		
CS-134	1.102E-01		1.406E-01	2.456E-01	2.116E-02	0.449
CS-135	9.420E-02		2.908E-01	4.913E-01	5.256E-02	0.192
I-135	1.000E+35		2.742E+35	Half-Life too short		
CS-136	-5.056E+00		4.392E+00	Half-Life too short		
CE-139	-4.529E-02		2.645E-01	4.224E-01	4.196E-02	-0.107
BA-140	-1.555E+01		1.427E+01	Half-Life too short		
LA-140	2.123E+00		2.931E+00	Half-Life too short		
CE-141	-2.336E-05		5.414E-05	Half-Life too short		
CE-143	1.000E+35		1.102E+35	Half-Life too short		
CE-144	-3.533E-01		7.314E-01	1.156E+00	2.141E-01	-0.306
PM-144	-8.653E-02		1.257E-01	1.996E-01	1.733E-02	-0.433
PR-144	-6.970E+00		1.012E+01	1.608E+01	1.137E+00	-0.433
PM-146	-5.219E-02		1.190E-01	1.900E-01	1.687E-02	-0.275
ND-147	5.845E+02		5.737E+02	Half-Life too short		
PM-149	-1.000E+35		1.358E+36	Half-Life too short		
EU-152	3.290E-02		2.297E-01	3.337E-01	2.744E-02	0.099
GD-153	1.764E-01		2.871E-01	4.263E-01	3.952E-02	0.414
EU-154	-9.581E-02		1.754E-01	2.579E-01	2.412E-02	-0.371
EU-155	8.152E-02		1.625E-01	2.709E-01	2.935E-02	0.301
TB-160	7.809E-01		8.469E+00	1.410E+01	1.394E+00	0.055

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
HO-166M	1.128E-03		1.312E-01	2.197E-01	1.601E-02	0.005
LU-176	-2.776E-02		4.613E-02	7.431E-02	6.472E-03	-0.374
LU-177	7.201E+08		4.734E+08	Half-Life too short		
LU-177M	-6.427E-01		1.614E+00	2.596E+00	1.545E-01	-0.248
HF-181	1.373E-05		1.025E-05	Half-Life too short		
W-181	-1.364E+00		2.111E+00	3.149E+00	2.546E-01	-0.433
TA-182	1.691E-01		1.762E+00	2.899E+00	1.686E-01	0.058
RE-183	-2.356E+00		4.647E+00	7.300E+00	7.542E-01	-0.323
RE-184	2.475E-02		1.618E+00	2.716E+00	2.624E-01	0.009
OS-185	-1.172E-01		1.008E+00	1.605E+00	1.057E-01	-0.073
RE-188	2.774E+00		7.512E+00	1.231E+01	1.371E+00	0.225
W-188	-1.399E+02		3.917E+02	5.529E+02	5.012E+01	-0.253
IR-192	9.809E-01		1.441E+00	2.472E+00	2.133E-01	0.397
AU-195	9.168E-02		1.019E+00	1.674E+00	1.596E-01	0.055
TL-200	-1.000E+35		8.889E+34	Half-Life too short		
TL-201	2.366E+27		1.343E+27	Half-Life too short		
TL-202	1.072E+00		8.894E+00	Half-Life too short		
HG-203	1.363E+01		9.804E+00	1.726E+01	1.651E+00	0.790
BI-207	5.654E-02		1.355E-01	2.285E-01	1.809E-02	0.247
TL-207	-6.013E-01		1.268E+00	2.048E+00	3.591E-01	-0.294
PO-209	-2.130E+00		2.110E+01	3.467E+01	3.524E+00	-0.061
BI-210	2.929E+00		1.403E+00	2.254E+00	1.807E-01	1.299
PB-210	2.929E+00		1.403E+00	2.254E+00	1.807E-01	1.299
PO-210	2.929E+00		1.397E+00	2.254E+00	1.516E-01	1.299
PB-211	-2.152E-01		2.075E+00	3.389E+00	2.113E+00	-0.063
BI-212	7.619E-01		6.273E-01	1.124E+00	1.019E-01	0.678
PO-215	-6.013E-01		1.268E+00	2.048E+00	3.591E-01	-0.294
RN-219	1.141E-01		8.962E-01	1.484E+00	2.025E-01	0.077
RN-220	-7.758E-01		5.824E+01	9.432E+01	6.137E+00	-0.008
RA-223	-6.013E-01		1.268E+00	2.048E+00	3.591E-01	-0.294
RA-224	6.226E+00		1.636E+00	2.652E+00	2.594E-01	2.348
AC-227	-7.691E-02		6.898E-01	1.150E+00	1.833E-01	-0.067
TH-227	-7.691E-02		6.899E-01	1.150E+00	2.135E-01	-0.067
AC-228	8.740E-01	+	5.545E-01	7.246E-01	8.968E-02	1.206
RA-228	8.740E-01	+	5.545E-01	7.246E-01	8.968E-02	1.206
TH-229	3.826E-01		8.594E-01	1.405E+00	1.403E-01	0.272
PA-231	-7.503E-01		2.796E+00	4.604E+00	7.145E-01	-0.163
TH-231	-6.013E-01		1.268E+00	2.048E+00	3.591E-01	-0.294
U-231	-1.385E+16		2.225E+17	Half-Life too short		
TH-232	8.740E-01	+	5.545E-01	7.246E-01	8.968E-02	1.206
PA-233	-8.020E-02		1.214E-01	1.947E-01	1.719E-02	-0.412
PA-234	4.117E-01		9.367E-01	1.578E+00	3.038E-01	0.261
PA-234M	-5.900E+00		1.148E+01	1.815E+01	1.855E+00	-0.325
TH-234	-9.818E-01		1.127E+00	1.582E+00	2.810E-01	-0.621
U-235	-1.163E-02		3.342E-01	5.373E-01	1.051E-01	-0.022
NP-236	-9.938E-02		1.314E-01	2.035E-01	2.149E-02	-0.488
U-238	-9.818E-01		1.127E+00	1.582E+00	2.810E-01	-0.621
NP-239	1.327E-01		3.151E-01	4.602E-01	6.029E-02	0.288

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L. Ided	Act error	MDA (pCi/GRAM)	MDA error	Act/MDA
CM-243	8.365E-02		1.326E-01	2.222E-01	2.323E-02	0.376
AM-246	2.813E-01		3.906E-01	6.693E-01	5.123E-02	0.420
CM-247	6.686E-02		7.968E-02	1.367E-01	8.043E-03	0.489
CF-249	-4.291E-02		8.866E-02	1.425E-01	8.520E-03	-0.301
CF-251	1.371E-01		2.059E-01	3.408E-01	3.395E-02	0.402

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202004734		
Acquisition date	: 5-JAN-2010 07:39:15	Detector SN#	:
Detector ID	: GAM05	Sensitivity	: 5.000
Geometry	: CAN	Energy tolerance	: 1.500
Elapsed live time	: 0 01:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 01:00:01.72	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 28-JAN-2009 00:00:00	Nuclide Library	: SOLID
Sample ID	: G1202004734	Analyst initials	: MXR1
Batch Number	: 936923	Sample Quantity	: 1.5544E+02 GRAM
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 11-JUN-2009 16:41:00	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/GRAM)	Act Error	DLC (pCi/GRAM)	TPU
CO-57	5.644E-01	1.716E-01	7.837E-02	8.756E-02
CO-60	7.036E+00	5.628E-01	6.391E-02	2.871E-01
AS-73	2.758E+01	1.271E+01	7.918E+00	6.483E+00
CD-109	5.526E+01	5.390E+00	1.563E+00	2.750E+00
SN-126	3.331E+00	3.250E-01	9.411E-02	1.658E-01
BA-137M	5.510E+00	4.557E-01	6.486E-02	2.325E-01
CS-137	5.824E+00	4.827E-01	6.857E-02	2.463E-01
TM-171	2.211E+01	3.301E+01	3.101E+01	1.684E+01
TL-208	3.779E-01	1.203E-01	6.255E-02	6.136E-02
BI-211	2.124E+00	5.807E-01	3.410E-01	2.963E-01
PB-212	9.271E-01	2.037E-01	9.459E-02	1.039E-01
PO-212	9.271E-01	2.037E-01	9.459E-02	1.039E-01
BI-214	9.161E-01	2.495E-01	1.206E-01	1.273E-01
PB-214	7.392E-01	2.056E-01	1.199E-01	1.049E-01
PO-214	7.392E-01	2.056E-01	1.199E-01	1.049E-01
PO-216	9.271E-01	2.037E-01	9.459E-02	1.039E-01
PO-218	7.392E-01	2.056E-01	1.199E-01	1.049E-01
RA-226	9.161E-01	2.495E-01	1.206E-01	1.273E-01
TH-228	1.303E+00	2.862E-01	1.329E-01	1.460E-01
TH-230	9.157E-01	2.494E-01	1.205E-01	1.272E-01
U-234	9.157E-01	2.494E-01	1.205E-01	1.272E-01
NP-237	9.783E+00	2.196E+00	2.702E-01	1.121E+00
AM-241	1.395E+01	1.263E+00	1.169E-01	6.444E-01
AM-243	2.554E-01	7.021E-02	5.013E-02	3.582E-02
ANH-511	1.353E-01	1.118E-01	5.254E-02	5.705E-02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/GRAM)	K.L Act error	DLC (pCi/GRAM)	TPU	
BE-7	-1.023E+01	5.429E+01	4.658E+01	2.770E+01	NOT IDENT.
NA-22	-4.157E-02	7.261E-02	5.505E-02	3.705E-02	NOT IDENT.

NA-24	-1.000E+41	1.029E+42	0.000E+00	0.000E+00	SHORT HLIF
AL-26	1.707E-02	4.345E-02	4.003E-02	2.217E-02	NOT IDENT.
K-40	6.073E-01	6.633E-01	6.359E-01	3.384E-01	NOT IDENT.
TI-44	2.533E-01	5.369E-02	4.494E-02	2.739E-02	FAIL ABUN
SC-46	2.310E-01	1.584E+00	1.380E+00	8.082E-01	NOT IDENT.
V-48	-7.551E+04	2.639E+05	0.000E+00	1.346E+05	SHORT HLIF
CR-51	-1.009E+03	2.539E+03	0.000E+00	1.295E+03	SHORT HLIF
MN-52	7.518E+16	9.734E+16	0.000E+00	0.000E+00	SHORT HLIF
MN-54	7.389E-02	1.779E-01	1.584E-01	9.075E-02	NOT IDENT.
CO-56	-1.188E+00	1.719E+00	1.418E+00	8.770E-01	NOT IDENT.
CO-58	-1.341E-01	2.272E+00	1.970E+00	1.159E+00	NOT IDENT.
FE-59	-2.853E+01	3.735E+01	2.981E+01	1.906E+01	NOT IDENT.
ZN-65	-4.381E-01	5.310E-01	4.205E-01	2.709E-01	NOT IDENT.
GE-68	9.434E+00	7.299E+00	6.703E+00	3.724E+00	NOT IDENT.
AS-74	1.085E+04	6.746E+04	0.000E+00	3.442E+04	SHORT HLIF
SE-75	-1.543E-01	5.199E-01	4.628E-01	2.653E-01	FAIL ABUN
BR-77	1.000E+41	3.929E+41	0.000E+00	0.000E+00	SHORT HLIF
SR-82	-1.282E+03	7.213E+03	0.000E+00	3.680E+03	SHORT HLIF
RB-83	8.029E-01	2.004E+00	1.770E+00	1.022E+00	NOT IDENT.
RB-84	-5.089E+01	1.803E+02	0.000E+00	9.201E+01	SHORT HLIF
KR-85	5.184E+00	1.868E+01	1.422E+01	9.530E+00	NOT IDENT.
SR-85	8.286E-01	2.986E+00	2.273E+00	1.523E+00	NOT IDENT.
RB-86	2.990E+05	4.032E+05	0.000E+00	2.057E+05	SHORT HLIF
Y-88	1.666E-01	4.863E-01	4.375E-01	2.481E-01	NOT IDENT.
ZR-88	2.686E-01	9.970E-01	8.883E-01	5.086E-01	NOT IDENT.
Y-91	-1.591E+02	1.239E+03	1.025E+03	6.323E+02	NOT IDENT.
NB-94	4.271E-02	6.746E-02	6.177E-02	3.442E-02	NOT IDENT.
NB-95	7.427E-02	2.937E+00	2.572E+00	1.499E+00	NOT IDENT.
NB-95M	1.085E+01	8.471E+00	7.117E+00	4.322E+00	NOT IDENT.
ZR-95	-1.835E-01	5.154E+00	4.499E+00	2.630E+00	NOT IDENT.
NB-97	1.000E+41	2.026E+40	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	1.000E+41	9.645E+40	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-2.726E+36	1.669E+37	0.000E+00	0.000E+00	SHORT HLIF
TC-99M	-1.000E+41	6.903E+41	0.000E+00	0.000E+00	SHORT HLIF
RH-101	8.988E-03	6.828E-02	6.000E-02	3.484E-02	NOT IDENT.
RH-102	6.751E-03	9.003E-02	7.836E-02	4.594E-02	NOT IDENT.
RU-103	-8.381E+00	2.740E+01	0.000E+00	1.398E+01	SHORT HLIF
RH-106	7.365E-01	1.290E+00	1.136E+00	6.579E-01	FAIL ABUN
RU-106	7.365E-01	1.287E+00	1.136E+00	6.569E-01	FAIL ABUN
AG-108M	-1.812E-02	7.456E-02	6.423E-02	3.804E-02	NOT IDENT.
AG-110M	1.046E+00	2.727E-01	2.492E-01	1.391E-01	NOT IDENT.
IN-111	-1.863E+35	1.234E+35	0.000E+00	0.000E+00	SHORT HLIF
IN-113M	4.912E-01	6.842E-01	6.226E-01	3.491E-01	NOT IDENT.
SN-113	4.912E-01	6.842E-01	6.226E-01	3.491E-01	NOT IDENT.
IN-114M	2.170E+01	3.266E+01	2.587E+01	1.666E+01	NOT IDENT.
CD-115	1.000E+41	1.314E+42	0.000E+00	0.000E+00	SHORT HLIF
SN-117M	-3.280E+05	1.534E+06	0.000E+00	7.825E+05	SHORT HLIF
SB-122	9.747E+36	1.234E+37	0.000E+00	0.000E+00	SHORT HLIF
I-123	-1.000E+41	4.356E+41	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-6.955E-02	3.030E-01	2.639E-01	1.546E-01	NOT IDENT.
I-124	-2.140E+22	5.284E+23	0.000E+00	0.000E+00	SHORT HLIF
SB-124	1.666E+00	5.282E+00	4.752E+00	2.695E+00	NOT IDENT.
SB-125	-2.609E-01	2.612E-01	2.156E-01	1.333E-01	NOT IDENT.
TE-125M	-2.537E+02	6.331E+02	5.579E+02	3.230E+02	NOT IDENT.
I-126	1.744E+07	1.644E+07	0.000E+00	8.386E+06	SHORT HLIF
SB-126	-8.883E+06	2.482E+07	0.000E+00	1.267E+07	SHORT HLIF
SB-127	5.044E+25	1.363E+26	0.000E+00	0.000E+00	SHORT HLIF
XE-127	-2.802E+01	4.291E+01	0.000E+00	2.189E+01	SHORT HLIF
I-131	2.305E+11	4.028E+11	0.000E+00	2.055E+11	SHORT HLIF
TE-132	-5.271E+29	2.136E+30	0.000E+00	0.000E+00	SHORT HLIF
BA-133	4.679E-02	9.486E-02	7.556E-02	4.840E-02	FAIL ABUN
I-133	1.000E+41	6.153E+41	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.102E-01	1.377E-01	1.261E-01	7.028E-02	NOT IDENT.
CS-135	9.420E-02	2.849E-01	2.595E-01	1.454E-01	NOT IDENT.
I-135	1.000E+41	5.375E+41	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-5.056E+06	8.608E+06	0.000E+00	4.392E+06	SHORT HLIF
CE-139	-4.529E-02	2.592E-01	2.259E-01	1.322E-01	NOT IDENT.
BA-140	-1.555E+07	2.797E+07	0.000E+00	1.427E+07	SHORT HLIF
LA-140	2.123E+06	5.744E+06	0.000E+00	2.931E+06	SHORT HLIF
CE-141	-2.336E+01	1.061E+02	0.000E+00	5.414E+01	SHORT HLIF
CE-143	1.000E+41	2.160E+41	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.533E-01	7.168E-01	6.215E-01	3.657E-01	NOT IDENT.
PM-144	-8.653E-02	1.232E-01	1.028E-01	6.285E-02	NOT IDENT.
PR-144	-6.970E+00	9.917E+00	8.283E+00	5.060E+00	NOT IDENT.
PM-146	-5.219E-02	1.166E-01	9.899E-02	5.949E-02	NOT IDENT.
ND-147	5.845E+08	1.124E+09	0.000E+00	5.737E+08	SHORT HLIF
PM-149	-1.000E+41	2.661E+42	0.000E+00	0.000E+00	SHORT HLIF
EU-152	3.290E-02	2.251E-01	1.751E-01	1.148E-01	FAIL ABUN

GD-153	1.764E-01	2.814E-01	2.310E-01	1.436E-01 NOT IDENT.
EU-154	-9.581E-02	1.719E-01	1.306E-01	8.771E-02 FAIL ABUN
EU-155	8.152E-02	1.593E-01	1.465E-01	8.125E-02 FAIL ABUN
TB-160	7.809E-01	8.300E+00	7.217E+00	4.235E+00 FAIL ABUN
HO-166M	1.128E-03	1.286E-01	1.131E-01	6.559E-02 NOT IDENT.
LU-176	-2.776E-02	4.521E-02	3.911E-02	2.307E-02 FAIL ABUN
LU-177	7.201E+14	9.280E+14	0.000E+00	4.734E+14 SHORT HLIF
LU-177M	-6.427E-01	1.582E+00	1.356E+00	8.072E-01 FAIL ABUN
HF-181	1.373E+01	2.008E+01	0.000E+00	1.025E+01 SHORT HLIF
W-181	-1.364E+00	2.069E+00	1.723E+00	1.055E+00 NOT IDENT.
TA-182	1.691E-01	1.727E+00	1.470E+00	8.811E-01 NOT IDENT.
RE-183	-2.356E+00	4.554E+00	3.905E+00	2.324E+00 FAIL ABUN
RE-184	2.475E-02	1.586E+00	1.437E+00	8.091E-01 FAIL ABUN
OS-185	-1.172E-01	9.877E-01	8.283E-01	5.039E-01 FAIL ABUN
RE-188	2.774E+00	7.361E+00	6.594E+00	3.756E+00 NOT IDENT.
W-188	-1.399E+02	3.839E+02	2.914E+02	1.959E+02 NOT IDENT.
IR-192	9.809E-01	1.412E+00	1.300E+00	7.206E-01 FAIL ABUN
AU-195	9.168E-02	9.988E-01	9.066E-01	5.096E-01 FAIL ABUN
TL-200	-1.000E+41	1.742E+41	0.000E+00	0.000E+00 SHORT HLIF
TL-201	2.366E+33	2.632E+33	0.000E+00	0.000E+00 SHORT HLIF
TL-202	1.072E+06	1.743E+07	0.000E+00	8.894E+06 SHORT HLIF
HG-203	1.363E+01	9.608E+00	9.105E+00	4.902E+00 NOT IDENT.
BI-207	5.654E-02	1.328E-01	1.163E-01	6.774E-02 FAIL ABUN
TL-207	-6.013E-01	1.243E+00	1.077E+00	6.340E-01 FAIL ABUN
PO-209	-2.130E+00	2.068E+01	1.773E+01	1.055E+01 NOT IDENT.
BI-210	2.929E+00	1.374E+00	1.244E+00	7.013E-01 NOT IDENT.
PB-210	2.929E+00	1.374E+00	1.244E+00	7.013E-01 NOT IDENT.
PO-210	2.929E+00	1.369E+00	1.244E+00	6.984E-01 NOT IDENT.
PB-211	-2.152E-01	2.034E+00	1.771E+00	1.038E+00 NOT IDENT.
BI-212	7.619E-01	6.148E-01	5.781E-01	3.137E-01 NOT IDENT.
PO-215	-6.013E-01	1.243E+00	1.077E+00	6.340E-01 FAIL ABUN
RN-219	1.141E-01	8.783E-01	7.759E-01	4.481E-01 NOT IDENT.
RN-220	-7.758E-01	5.707E+01	4.889E+01	2.912E+01 NOT IDENT.
RA-223	-6.013E-01	1.243E+00	1.077E+00	6.340E-01 FAIL ABUN
RA-224	6.226E+00	1.603E+00	1.404E+00	8.179E-01 NOT IDENT.
AC-227	-7.691E-02	6.760E-01	6.083E-01	3.449E-01 NOT IDENT.
TH-227	-7.691E-02	6.761E-01	6.083E-01	3.449E-01 FAIL ABUN
AC-228	8.740E-01	5.434E-01	3.705E-01	2.773E-01 FAIL ABUN
RA-228	8.740E-01	5.434E-01	3.705E-01	2.773E-01 FAIL ABUN
TH-229	3.826E-01	8.423E-01	7.482E-01	4.297E-01 FAIL ABUN
PA-231	-7.503E-01	2.740E+00	2.428E+00	1.398E+00 NOT IDENT.
TH-231	-6.013E-01	1.243E+00	1.077E+00	6.340E-01 FAIL ABUN
U-231	-1.385E+22	4.362E+23	0.000E+00	0.000E+00 SHORT HLIF
TH-232	8.740E-01	5.434E-01	3.705E-01	2.773E-01 FAIL ABUN
PA-233	-8.020E-02	1.189E-01	1.024E-01	6.068E-02 FAIL ABUN
PA-234	4.117E-01	9.179E-01	8.057E-01	4.683E-01 FAIL ABUN
PA-234M	-5.900E+00	1.125E+01	9.255E+00	5.739E+00 NOT IDENT.
TH-234	-9.818E-01	1.105E+00	8.659E-01	5.637E-01 FAIL ABUN
U-235	-1.163E-02	3.275E-01	2.883E-01	1.671E-01 FAIL ABUN
NP-236	-9.938E-02	1.288E-01	1.089E-01	6.569E-02 NOT IDENT.
U-238	-9.818E-01	1.105E+00	8.659E-01	5.637E-01 FAIL ABUN
NP-239	1.327E-01	3.088E-01	2.482E-01	1.575E-01 NOT IDENT.
CM-243	8.365E-02	1.300E-01	1.202E-01	6.632E-02 NOT IDENT.
AM-246	2.813E-01	3.828E-01	3.406E-01	1.953E-01 NOT IDENT.
CM-247	6.686E-02	7.808E-02	7.143E-02	3.984E-02 NOT IDENT.
CF-249	-4.291E-02	8.689E-02	7.452E-02	4.433E-02 NOT IDENT.
CF-251	1.371E-01	2.018E-01	1.820E-01	1.029E-01 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	603.0443
46.50	603.0443
46.50	603.0443
48.70	919.3983
49.72	0.0000
51.35	736.9890
52.39	738.2314
52.97	738.9195
53.15	739.1317
53.44	739.4739
54.07	740.2141
56.28	0.0000
56.28	742.7740
57.37	0.0000
57.53	744.2001
57.53	0.0000
57.60	0.0000
57.98	744.7097
57.98	744.7097
59.32	746.2151
59.32	746.2151
59.40	746.3047
59.54	746.4603
59.72	746.6616
60.01	499.7997
61.10	0.0000
61.14	432.2260
61.30	432.3278
63.00	494.2005
63.29	494.4070
63.29	494.4070
63.58	508.6567
64.28	529.4708
65.12	526.4552
65.20	0.0000
65.20	526.5148
66.05	480.4999
66.72	485.8470
66.83	470.2478
66.91	0.0000
67.20	470.4904
67.20	470.4904
67.75	448.2869
67.85	460.1225
68.90	0.0000
68.90	0.0000
69.30	500.1649
69.67	500.4191
70.82	0.0000
70.82	0.0000
70.83	535.8798
72.80	434.5752
72.87	434.6155
72.87	434.6155
74.67	471.2898
74.81	471.3752
74.81	471.3752
74.81	471.3752
74.81	471.3752
74.81	471.3752
74.81	471.3752
74.81	471.3752
74.81	471.3752
74.97	471.4732
75.28	471.6639
75.70	471.9217
77.11	427.4874
77.11	427.4874

77.11	427.4874
77.11	427.4874
77.11	427.4874
77.11	427.4874
77.11	427.4874
78.38	423.4050
79.62	430.4460
79.80	464.0299
79.80	464.0299
80.11	464.2111
80.18	0.0000
80.30	0.0000
80.30	0.0000
80.57	507.5733
81.00	531.8000
81.07	531.8467
81.07	531.8467
81.07	531.8467
81.07	531.8467
82.60	475.2490
83.37	445.2632
83.78	450.2963
83.78	450.2963
83.78	450.2963
83.78	450.2963
84.21	0.0000
84.90	441.2807
85.43	451.1967
86.29	0.0000
86.50	482.3236
86.54	482.3474
86.59	482.3767
86.72	482.4518
86.79	529.1310
86.94	529.2274
87.30	502.0964
87.30	502.0964
87.30	502.0964
87.30	502.0964
87.30	502.0964
87.30	502.0964
87.30	502.0964
87.57	502.2564
87.88	0.0000
88.03	502.5306
88.36	502.7268
88.47	502.7915
89.95	347.0772
91.11	0.0000
92.29	0.0000
92.38	291.3959
92.38	291.3959
93.35	306.3060
94.00	306.5332
94.67	311.6332
94.67	311.6356
94.90	290.6106
94.90	290.6106
94.90	290.6106
94.90	290.6106
95.87	0.0000
95.87	316.9333
96.73	278.1954
97.43	257.2457
98.44	266.6152
98.44	266.6152
98.88	282.3246
99.55	289.6725
99.55	289.6725
99.86	285.6898
100.00	285.7336
100.10	285.7657
103.18	277.5046
103.76	250.0119
105.00	239.0573
105.31	245.2935
108.00	0.0000
109.28	276.2053

111.00	246.7550
111.00	246.7550
111.76	0.0000
112.95	0.0000
115.19	266.4714
116.30	0.0000
117.00	245.9714
117.00	245.9714
117.66	252.7844
121.11	251.9739
121.62	266.0815
121.78	266.1224
122.06	266.1953
122.32	266.2615
122.32	266.2615
122.32	266.2615
122.32	266.2615
123.07	266.4551
127.23	261.8499
129.76	262.8937
131.20	279.0393
133.02	0.0000
133.54	292.3048
135.34	0.0000
136.00	268.6367
136.25	0.0000
136.48	272.9853
140.51	0.0000
140.51	0.0000
142.18	257.3613
142.65	271.2994
143.76	266.2392
144.24	274.8730
144.24	274.8730
144.24	274.8730
144.24	274.8730
145.22	0.0000
145.44	0.0000
147.16	279.8442
152.43	262.8658
152.70	265.0720
153.22	0.0000
154.21	278.3017
154.21	278.3017
154.21	278.3017
154.21	278.3017
155.03	269.8913
156.02	0.0000
158.56	0.0000
159.00	0.0000
159.00	259.9918
160.31	274.3108
161.27	273.4451
162.32	271.5152
162.64	0.0000
163.35	246.8405
163.89	0.0000
165.85	275.5413
167.43	0.0000
171.28	0.0000
171.86	253.9656
172.10	0.0000
176.55	0.0000
176.60	216.6108
181.06	0.0000
184.41	281.7246
185.71	253.3576
186.00	255.6174
190.27	219.2872
192.34	285.9091
193.63	230.4612
197.04	253.2419
198.01	246.7487
198.60	270.2029
200.40	0.0000
201.83	265.2515
202.84	0.0000
205.31	299.4165

208.36	0.0000
208.81	283.3472
209.75	281.2892
209.75	281.2892
210.97	241.1467
215.65	269.1456
216.55	250.3951
218.09	232.6220
222.10	281.1604
223.80	0.0000
226.40	244.7880
227.00	249.4185
227.08	243.9898
227.20	244.0095
228.16	0.0000
228.18	247.7961
228.18	247.7961
231.56	0.0000
235.69	246.2629
236.00	246.3124
236.00	246.3124
238.63	286.3221
238.63	286.3221
238.63	286.3221
238.63	286.3221
239.00	0.0000
240.98	247.0902
241.98	219.7734
241.98	219.7734
241.98	219.7734
244.69	272.1261
245.39	0.0000
247.94	235.2969
248.90	228.9982
249.79	0.0000
252.40	0.0000
252.85	218.4916
252.85	218.4916
254.15	0.0000
256.20	218.0119
256.20	218.0119
260.50	224.1336
260.90	0.0000
262.80	221.6585
264.65	213.5474
268.24	218.6516
268.79	196.3830
269.46	213.2199
269.46	213.2199
269.46	213.2199
269.46	213.2199
271.23	222.7613
273.65	0.0000
276.40	200.9930
277.35	214.1983
277.60	217.9710
277.60	217.9710
278.00	217.0837
278.60	0.0000
279.20	182.5887
279.53	183.5586
280.46	197.7121
281.68	0.0000
283.67	199.0114
284.30	0.0000
285.00	190.7065
285.90	0.0000
286.10	198.3457
286.10	198.3457
287.40	185.0064
288.45	0.0000
290.67	190.0570
290.80	0.0000
291.72	168.1649
293.26	0.0000
293.70	185.6546
295.21	212.5800
295.21	212.5800

295.21	212.5800
295.96	223.6951
296.50	0.0000
297.23	0.0000
298.57	208.2400
299.80	195.7506
299.80	195.7506
300.09	211.5696
300.09	211.5696
300.09	211.5696
300.09	211.5696
300.12	211.5724
301.29	200.6492
302.84	197.1277
303.76	0.0000
303.91	189.8584
304.40	193.7079
304.40	193.7079
304.84	0.0000
306.84	192.0603
308.46	182.7117
311.98	193.5414
316.51	174.8910
318.01	170.2473
319.02	182.7767
319.41	0.0000
320.08	0.0000
323.87	195.7100
323.87	195.7100
323.87	195.7100
323.87	195.7100
325.23	198.7296
328.77	0.0000
333.44	176.7493
334.20	170.3867
334.20	170.3867
334.30	163.9653
338.28	198.1208
338.28	198.1208
338.28	198.1208
338.28	198.1208
338.32	198.1258
338.32	198.1258
338.32	198.1258
340.50	175.7678
340.57	0.0000
344.27	174.4827
345.85	0.0000
350.59	0.0000
351.07	174.0967
351.92	177.0879
351.92	177.0879
351.92	177.0879
355.39	0.0000
356.01	139.7430
364.48	0.0000
366.43	0.0000
367.43	196.0645
367.94	0.0000
369.80	186.4723
374.96	0.0000
383.85	178.8104
387.95	201.9132
388.63	0.0000
391.69	170.5303
391.69	170.5303
392.90	177.5688
398.62	182.0081
400.65	186.1554
401.10	175.2416
401.81	177.2895
402.60	160.4124
404.84	190.4941
410.95	163.0099
411.60	0.0000
413.65	189.2353
414.70	0.0000
415.30	0.0000

415.76	169.3672
417.63	0.0000
418.52	188.6357
423.70	0.0000
427.08	179.2646
427.89	198.4669
432.53	0.0000
433.93	179.7893
439.47	0.0000
439.56	0.0000
439.89	0.0000
443.98	161.2806
444.90	0.0000
445.03	173.5278
445.03	173.5278
445.03	173.5278
445.03	173.5278
453.90	194.5393
463.38	192.2272
468.07	214.1051
473.00	0.0000
475.06	187.9972
475.35	188.0195
476.78	188.1268
477.59	182.0170
477.96	179.9860
482.03	0.0000
484.57	0.0000
487.03	0.0000
490.36	0.0000
492.35	0.0000
497.08	0.0000
507.63	0.0000
510.53	0.0000
510.84	131.2572
511.00	131.2649
511.85	107.6851
511.85	107.6851
513.99	147.7531
513.99	147.7531
520.41	111.8667
520.65	0.0000
527.90	0.0000
528.96	0.0000
529.64	125.8916
529.87	0.0000
531.02	0.0000
537.32	0.0000
543.00	0.0000
546.56	0.0000
549.76	121.5361
552.65	124.8363
555.20	0.0000
563.23	90.2648
563.90	0.0000
568.70	113.8468
569.32	107.4876
569.50	107.4925
569.67	101.1138
573.80	0.0000
574.00	103.3988
574.64	0.0000
578.91	0.0000
579.30	0.0000
583.14	104.7973
585.48	0.0000
591.81	96.5303
592.07	96.5391
593.00	0.0000
595.88	0.0000
600.56	100.0477
602.52	0.0000
602.71	0.0000
602.71	101.5045
603.60	0.0000
604.41	122.0796
604.70	118.4998
609.31	108.9745

609.31	108.9745
609.31	108.9745
609.31	108.9745
610.33	0.0000
612.46	99.0094
614.37	111.6812
618.01	102.7999
621.84	98.5959
621.84	98.5959
631.29	96.7288
633.02	101.1330
633.10	101.1375
634.78	0.0000
635.90	101.2283
636.97	0.0000
645.85	90.6354
646.12	90.6435
656.30	0.0000
657.75	93.1742
657.90	0.0000
661.65	98.7759
661.65	98.7759
664.57	0.0000
666.33	0.0000
666.33	0.0000
675.00	0.0000
677.61	99.2725
685.20	0.0000
692.80	0.0000
695.00	0.0000
696.49	96.1543
696.49	96.1543
697.00	0.0000
697.49	98.9585
698.33	0.0000
698.50	0.0000
699.00	104.5558
702.63	87.0713
706.10	105.7084
706.58	0.0000
706.67	110.3641
709.31	96.5288
711.68	99.3851
713.82	92.9423
717.42	87.4595
720.50	0.0000
721.93	0.0000
722.20	0.0000
722.78	0.0000
722.78	118.3545
722.89	0.0000
722.95	124.8835
723.30	114.6443
724.18	117.4713
727.18	84.9145
733.00	114.0374
735.90	103.8434
739.58	0.0000
742.81	85.3069
744.21	0.0000
747.13	103.2481
751.79	0.0000
752.31	90.2422
753.82	0.0000
755.35	0.0000
756.15	90.3418
756.87	90.3613
763.93	106.5766
765.79	92.4791
766.42	89.6636
766.84	97.2268
776.49	0.0000
778.00	0.0000
778.57	113.6499
778.89	108.9262
783.80	0.0000
785.46	93.9445
792.07	103.6245

795.84	87.5546
796.30	91.3730
798.80	111.4371
801.93	101.0485
805.60	85.8820
810.29	88.8601
810.76	101.2943
815.85	0.0000
817.79	0.0000
818.51	0.0000
819.60	86.2115
826.30	110.3604
828.27	0.0000
831.60	97.0629
831.96	98.0322
834.83	99.0709
836.80	0.0000
846.75	114.8237
848.13	0.0000
856.28	0.0000
856.80	0.0000
860.37	108.4590
867.32	111.5677
867.82	0.0000
871.10	115.5621
873.19	113.6818
874.81	104.0089
875.33	0.0000
876.40	106.9676
879.36	107.0504
880.27	107.0750
880.51	107.0817
881.50	0.0000
883.24	111.0544
884.67	107.1958
889.25	115.1287
896.60	125.1198
898.02	120.2748
899.00	118.3487
903.28	113.0914
911.07	113.8052
911.07	113.8052
911.07	113.8052
919.63	0.0000
920.93	112.1190
925.00	121.0931
925.24	0.0000
926.50	108.3372
935.52	0.0000
937.48	139.2444
944.10	0.0000
946.00	136.5681
949.00	151.5245
962.29	117.2390
964.01	161.0211
966.15	137.2391
968.20	106.4623
969.11	108.4744
969.11	108.4744
969.11	108.4744
977.42	105.7002
980.50	85.8198
983.50	0.0000
989.30	0.0000
996.32	104.1714
1001.03	99.2739
1001.68	95.2764
1004.76	111.4042
1021.30	0.0000
1024.50	0.0000
1034.80	0.0000
1036.00	97.0508
1037.82	100.1239
1038.57	103.1746
1038.76	0.0000
1045.16	96.2408
1046.59	106.4056
1048.07	0.0000

1050.47	95.3425
1050.47	95.3425
1062.04	99.6589
1063.62	85.4526
1076.63	0.0000
1077.35	84.6954
1078.86	94.9299
1085.78	95.0737
1099.22	106.6364
1112.02	104.8762
1112.84	115.1810
1115.52	101.8722
1120.29	65.9245
1120.29	65.9245
1120.29	65.9245
1120.29	65.9245
1120.51	65.9271
1121.28	71.0889
1124.00	0.0000
1129.67	67.0894
1131.51	0.0000
1147.95	0.0000
1167.94	57.0826
1173.22	64.5859
1175.09	64.6111
1177.93	41.1131
1189.05	29.2635
1204.90	32.5048
1205.75	0.0000
1213.00	0.0000
1221.42	25.2500
1230.97	33.7318
1235.34	0.0000
1236.41	0.0000
1238.25	32.7256
1246.25	0.0000
1260.41	0.0000
1271.85	15.9412
1274.45	25.5186
1274.54	25.5186
1291.56	24.5367
1298.22	0.0000
1312.09	0.0000
1325.50	0.0000
1325.50	20.2490
1332.49	29.0314
1333.61	0.0000
1360.21	11.8898
1362.66	0.0000
1365.15	10.8187
1368.21	12.9897
1368.53	0.0000
1376.25	0.0000
1384.27	15.8207
1394.10	10.2553
1395.20	0.0000
1407.95	12.1508
1434.06	0.0000
1436.60	8.4557
1457.56	0.0000
1460.81	19.8149
1489.15	22.7586
1509.49	0.0000
1596.49	0.0000
1620.62	11.6350
1678.03	0.0000
1691.02	0.0000
1691.02	9.8064
1706.46	0.0000
1750.46	0.0000
1764.49	8.9272
1764.49	8.9272
1764.49	8.9272
1764.49	8.9272
1770.23	6.9495
1771.40	23.8309
1791.20	0.0000
1808.65	5.9916

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202004734

Total Uranium Activity	-2.9262E+00	ug/g
Total Uranium Counting Unc.	3.2907E+00	ug/g
Total Uranium Tpu	1.6789E-06	ug/g
Total Uranium Mda	2.5796E+00	ug/g

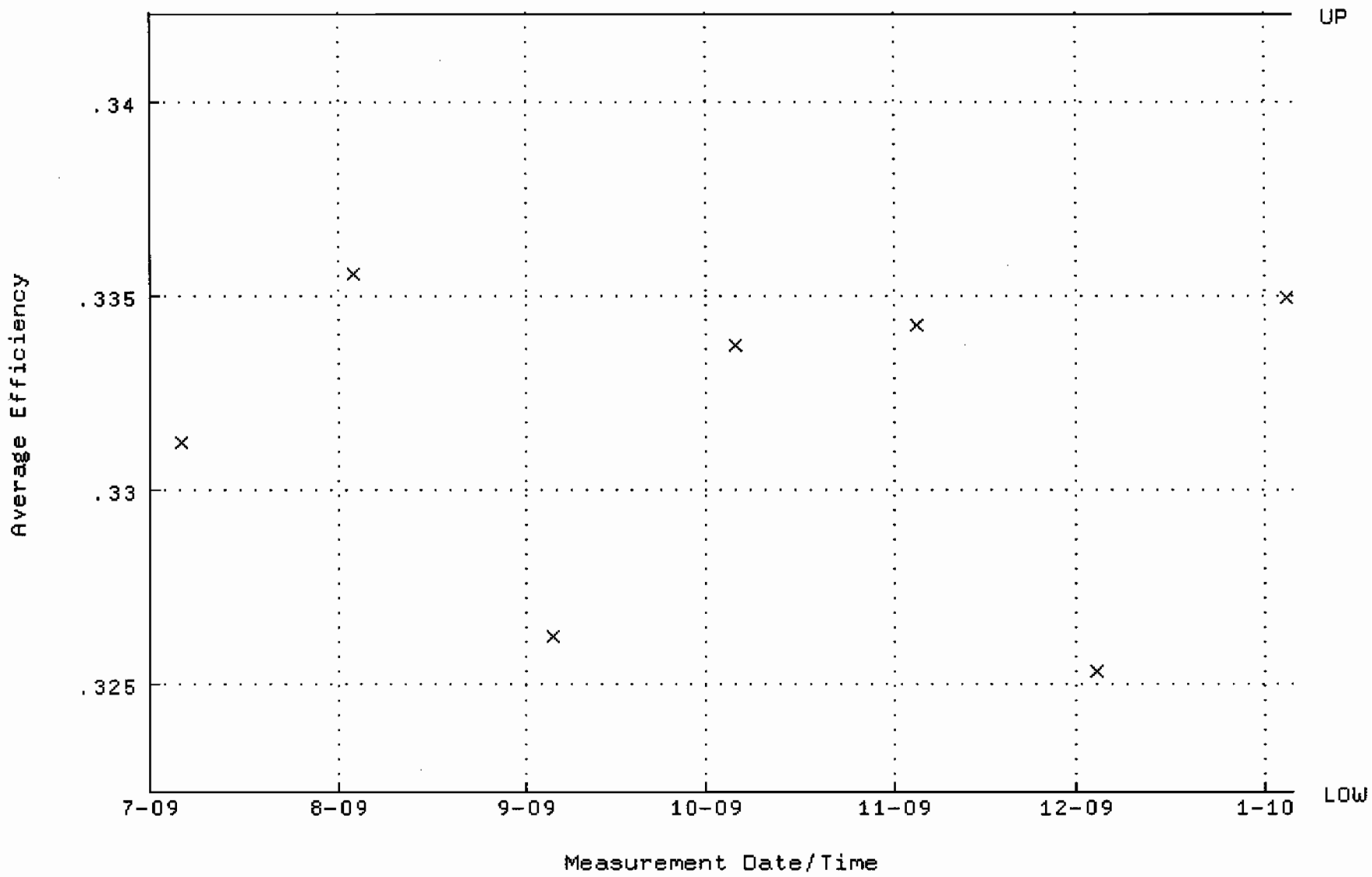
GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 936923	SAMPLE ID	: G1202004734
ANALYST	: MXR1	DETECTOR	: GAM05
SAMPLE DATE	: 28-JAN-2009 00:00:00.00	COUNT TIME	: 0 01:00:00.00
ANALYSIS DATE:	5-JAN-2010 07:39:15.79	SAMPLE ALQT:	155.440 GRAM

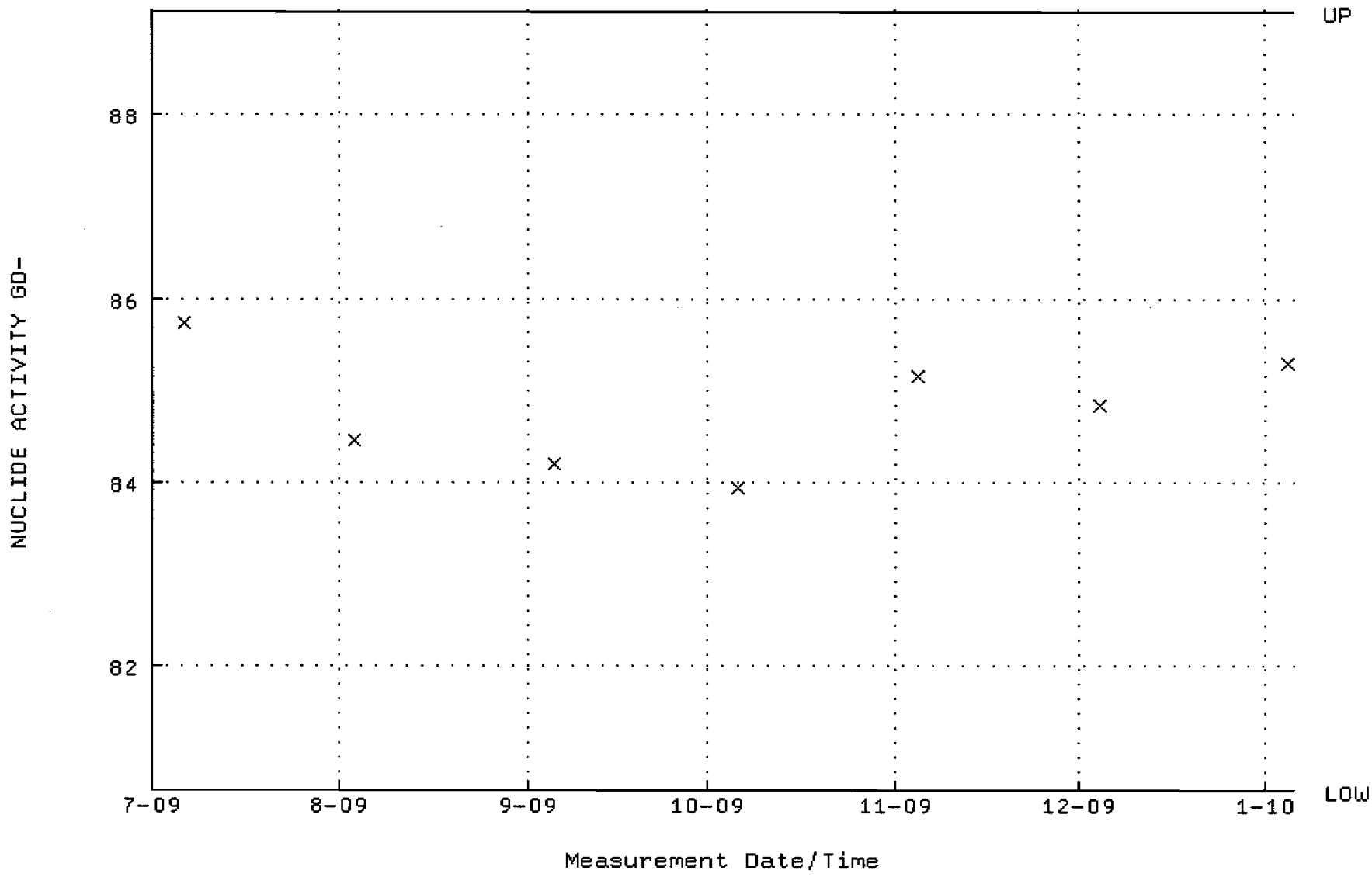
GROSS GAMMA ACTIVITY (pCi/GRAM)	: 2.691E+01
GROSS GAMMA ERROR (pCi/GRAM)	: 2.424E+00
GROSS GAMMA MDA (pCi/GRAM)	: 4.210E+00
GROSS GAMMA DLC (pCi/GRAM)	: 2.051E+00

BACKGROUND AND EFFICIENCY DATA

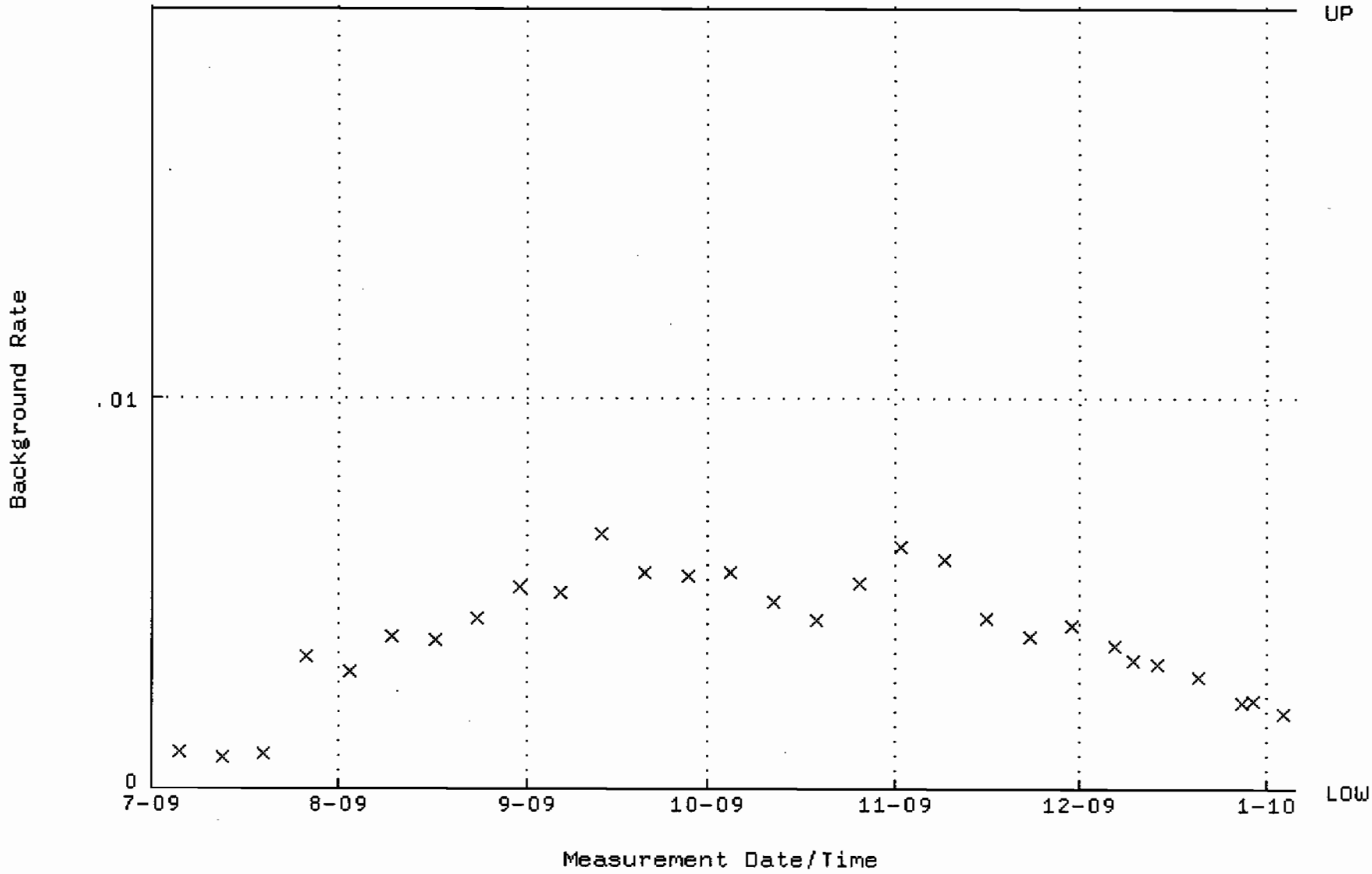
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.322243 through 0.342243



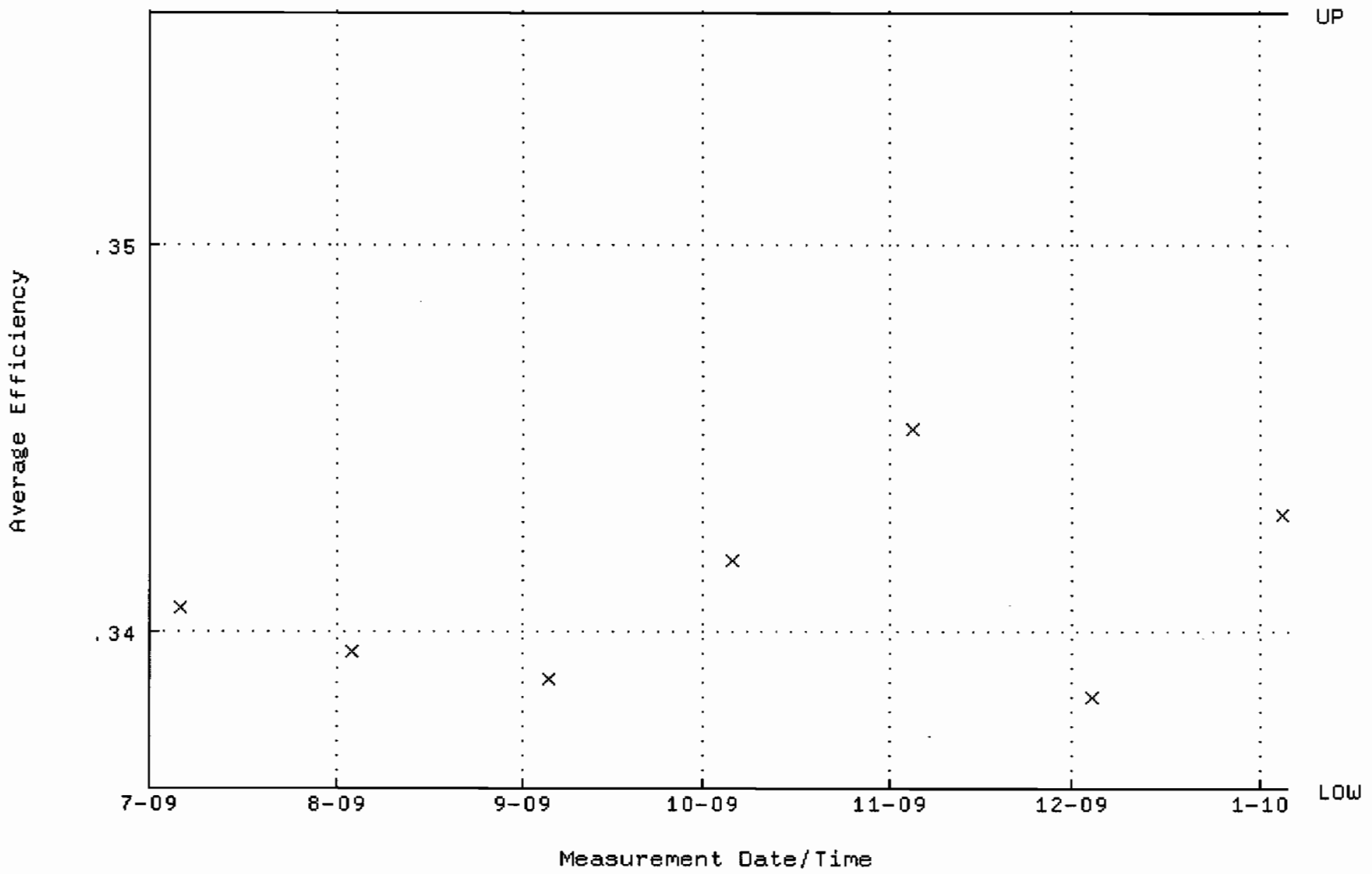
QA filename : DKA100:[ENV_ALPHA.QA.W]W042.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:16 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 80.6389 through 89.1273



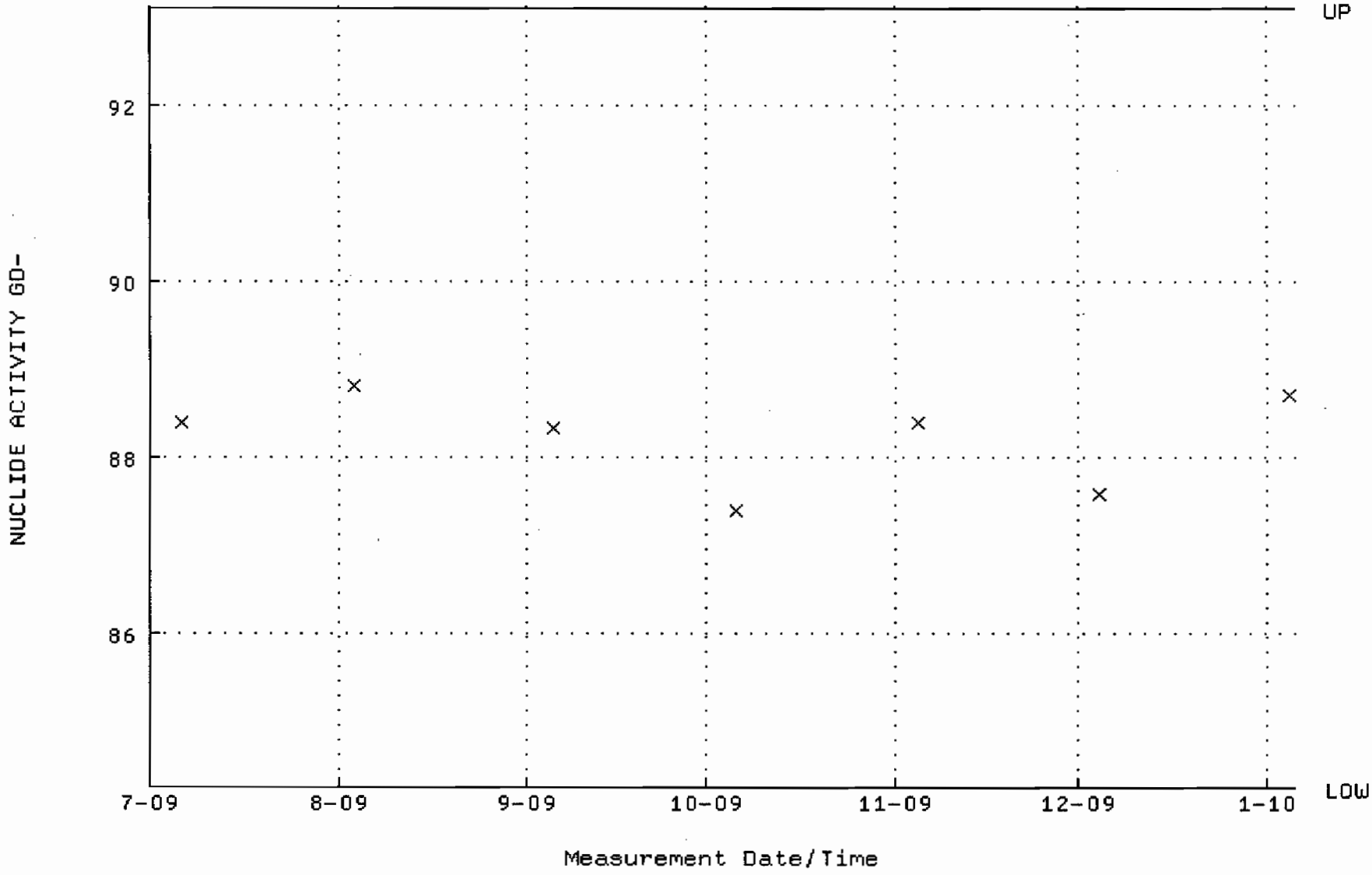
QA filename : DKA100:[ENV_ALPHA.QA.B]B042.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



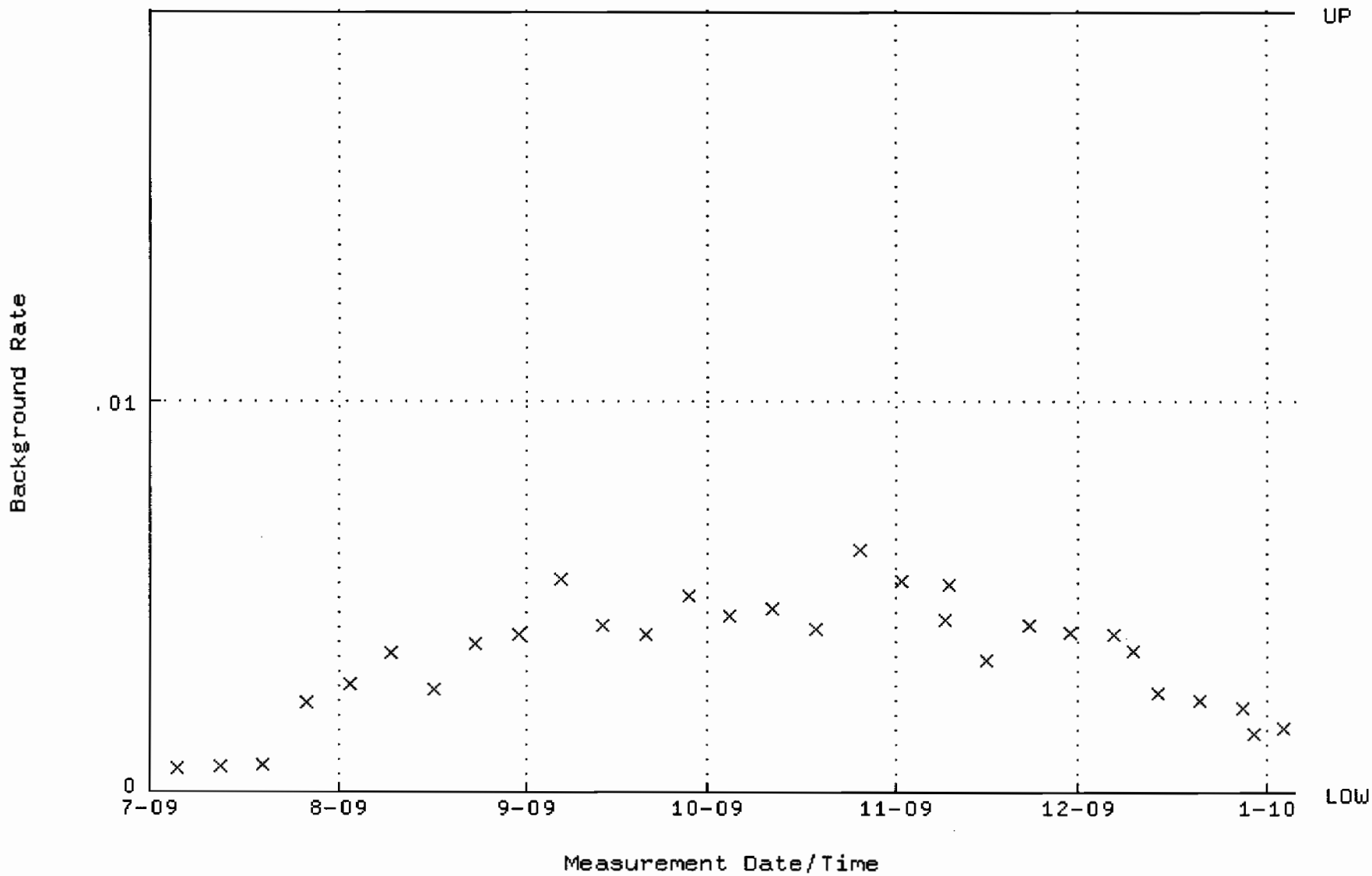
QA filename : DKA100:[ENV_ALPHA.QA.W]W043.QAF;102
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.335973 through 0.355973



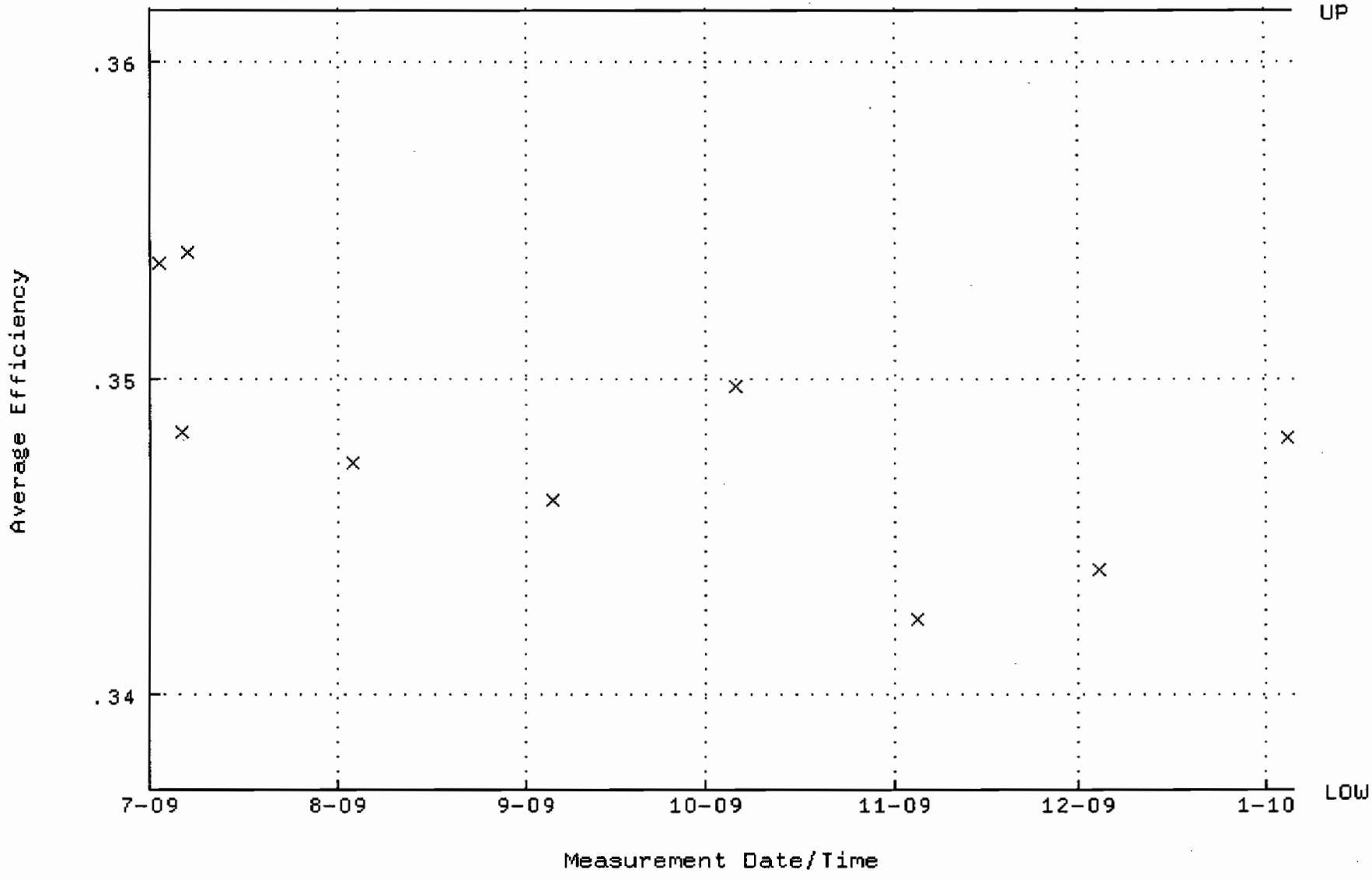
QA filename : DKA100:[ENV_ALPHA.QA.W]W043.QAF;102
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 84.2440 through 93.1118



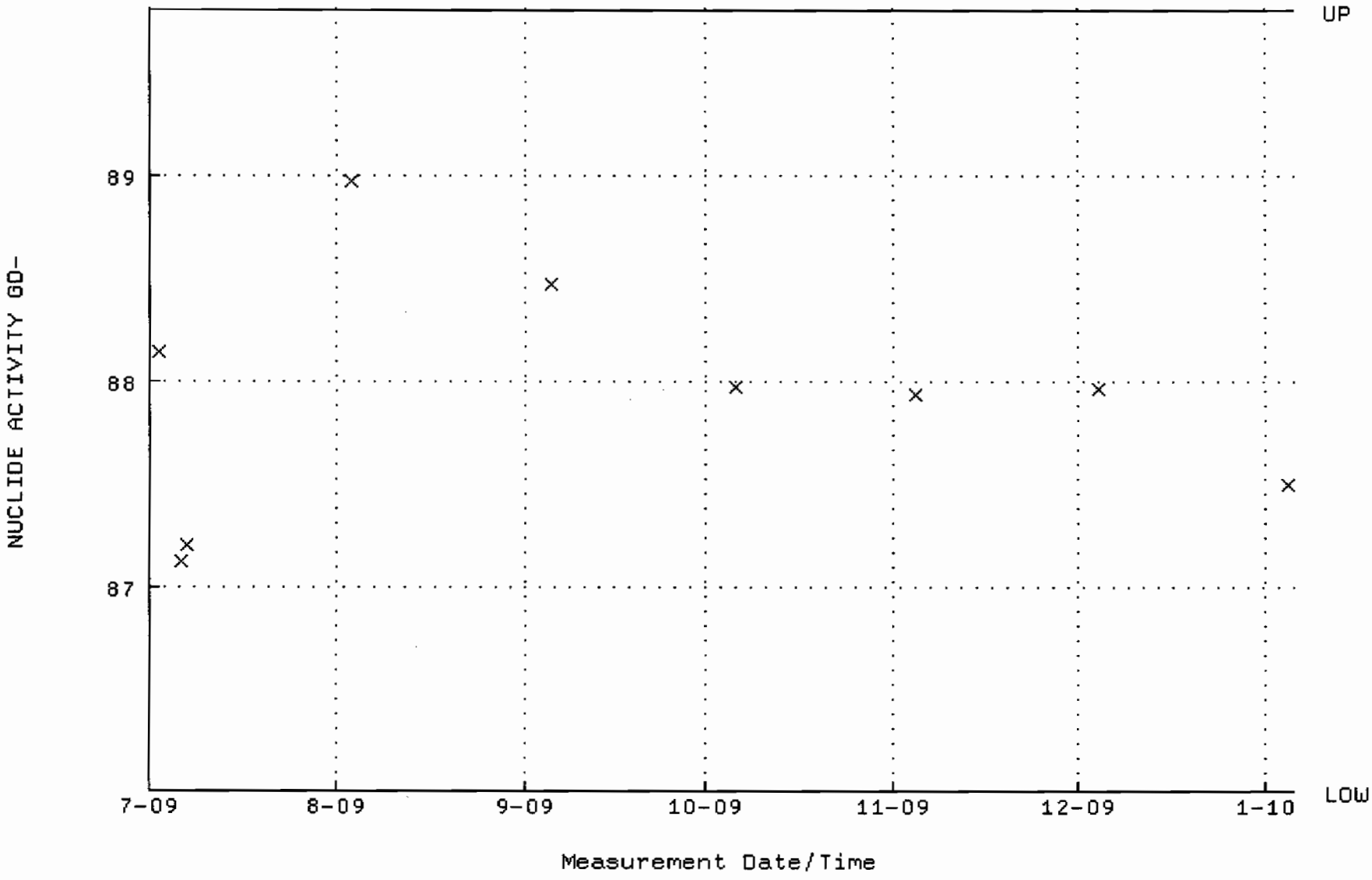
QA filename : DKA100:[ENV_ALPHA.QA.B]B043.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



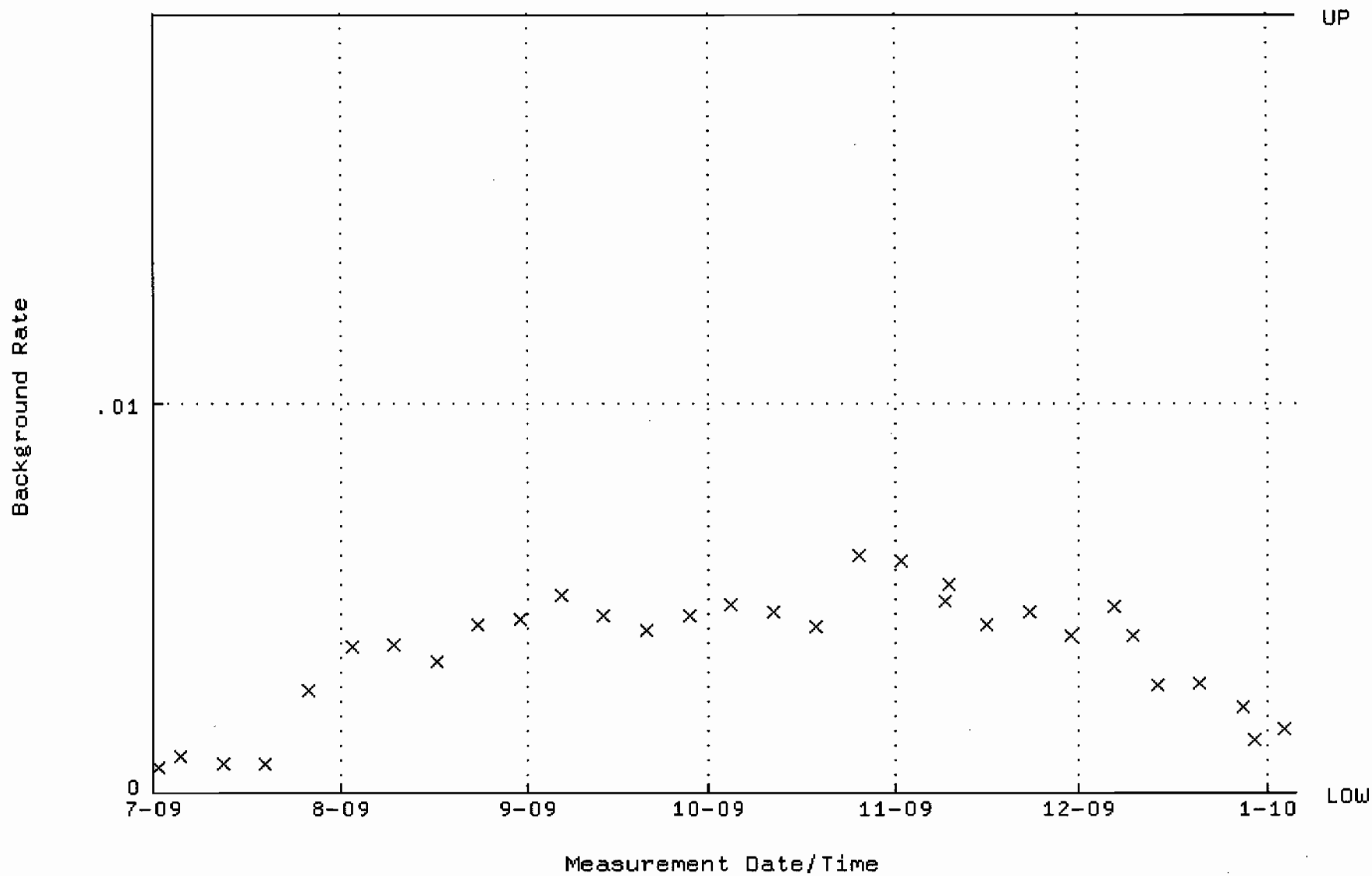
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUL-2009 15:04:12 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.336958 through 0.361648



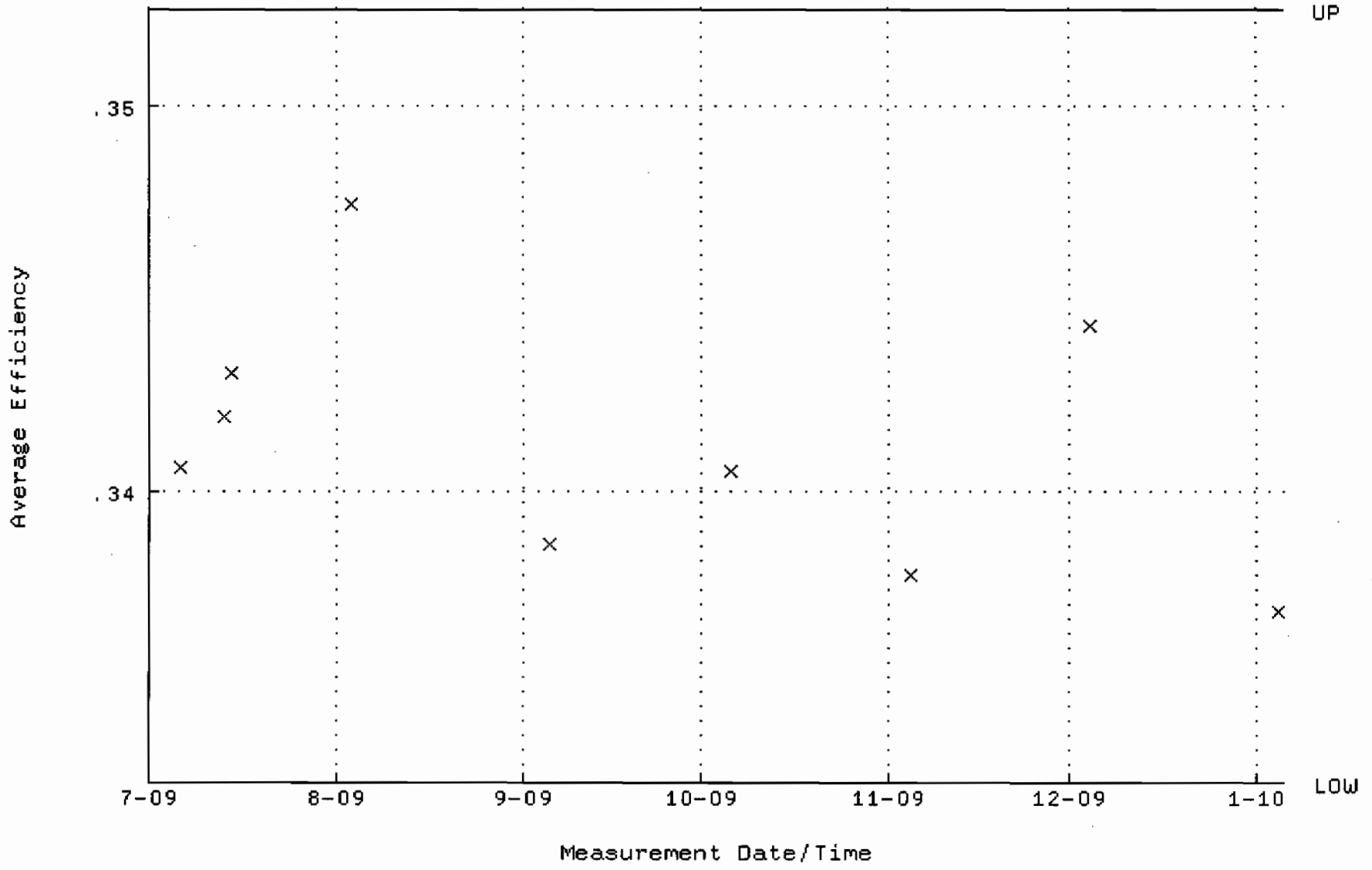
QA filename : DKA100:[ENV_ALPHA.QA.W]W044.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUL-2009 15:04:12 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 86.0137 through 89.8023



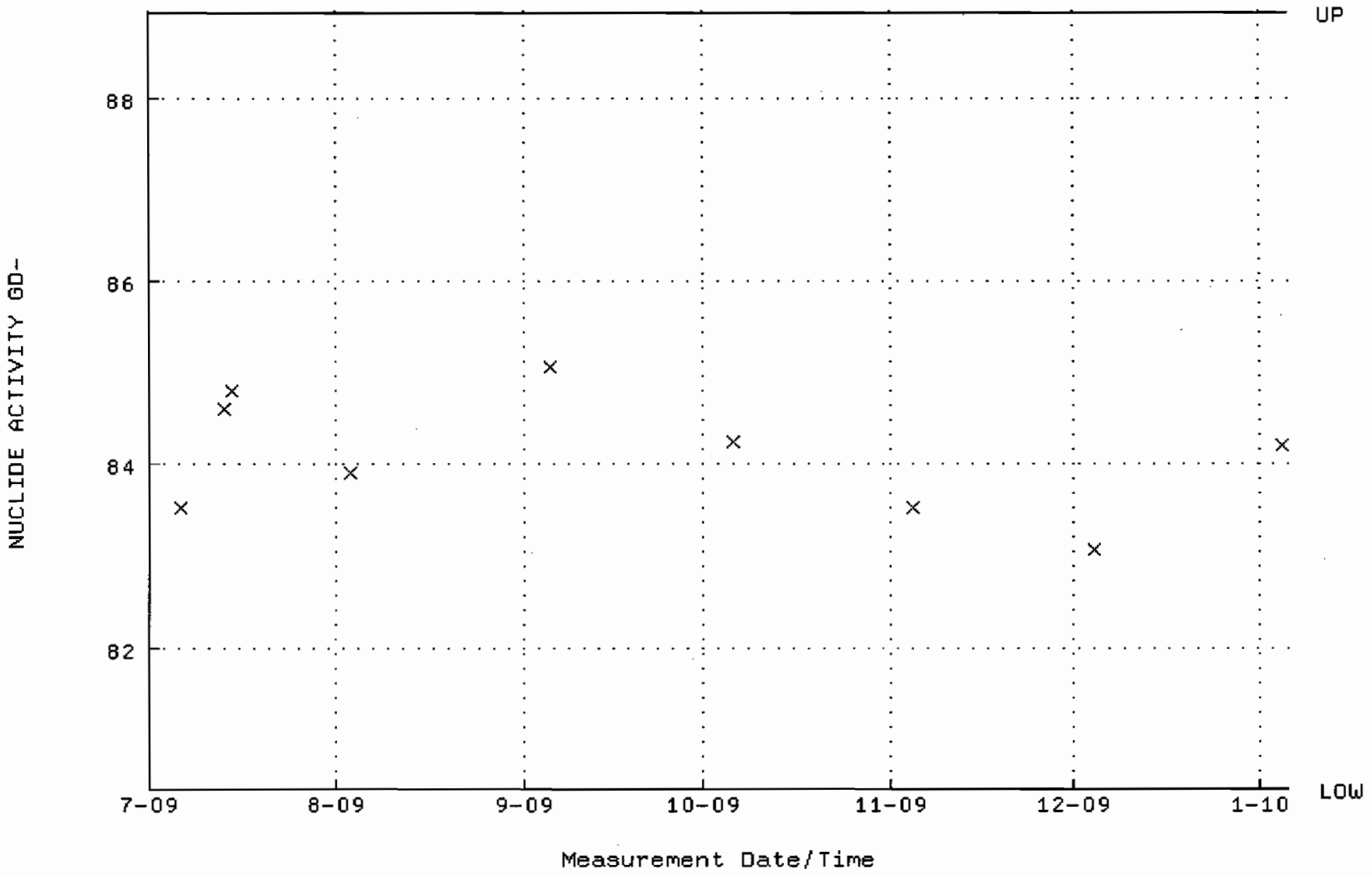
QA filename : DKA100:[ENV_ALPHA.QA.B]B044.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUL-2009 21:39:56 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



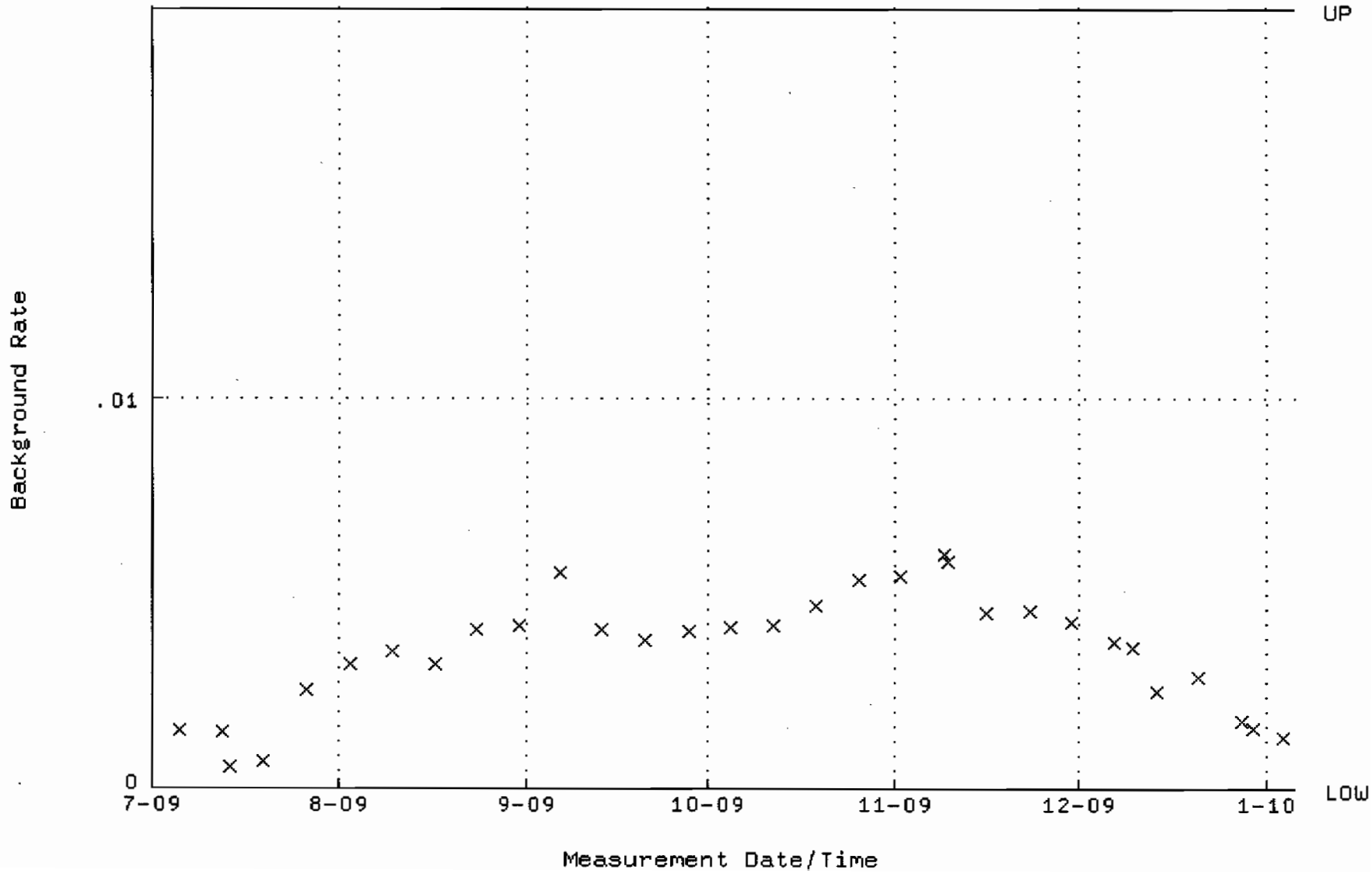
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.332472 through 0.352472



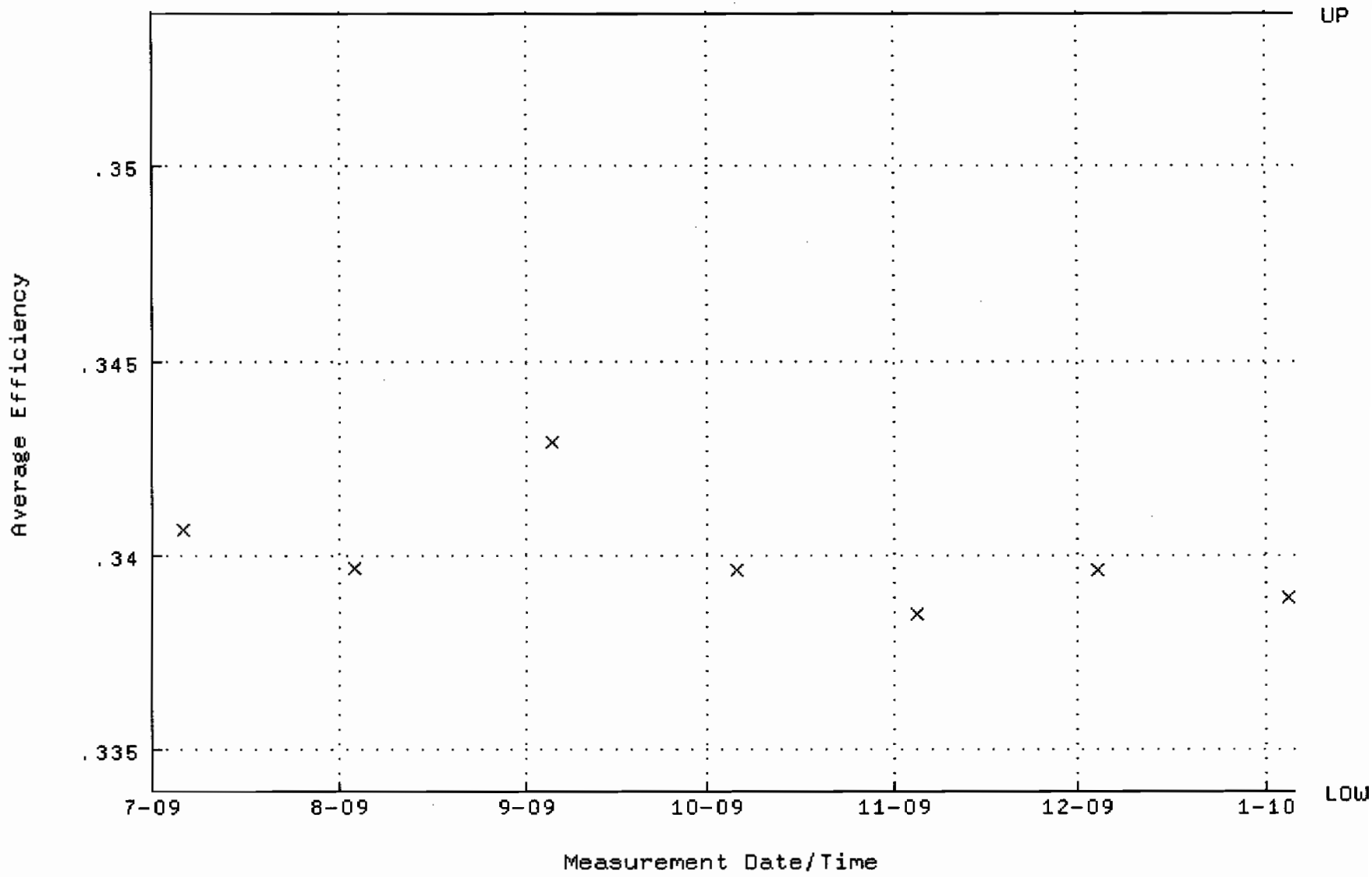
QA filename : DKA100:[ENV_ALPHA.QA.W]W045.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 80.4622 through 88.9320



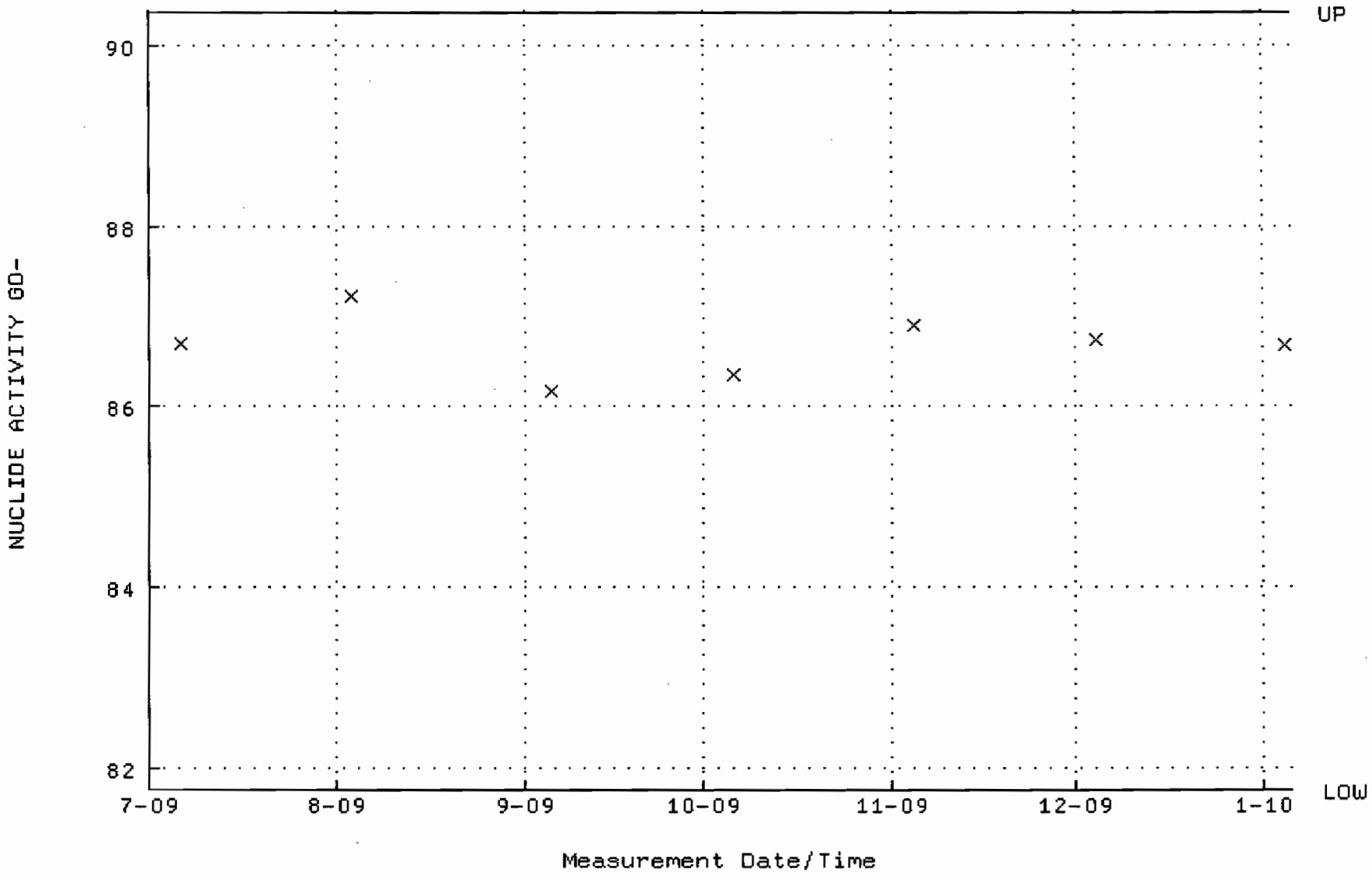
QA filename : DKA100:[ENV_ALPHA.QA.B]B045.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



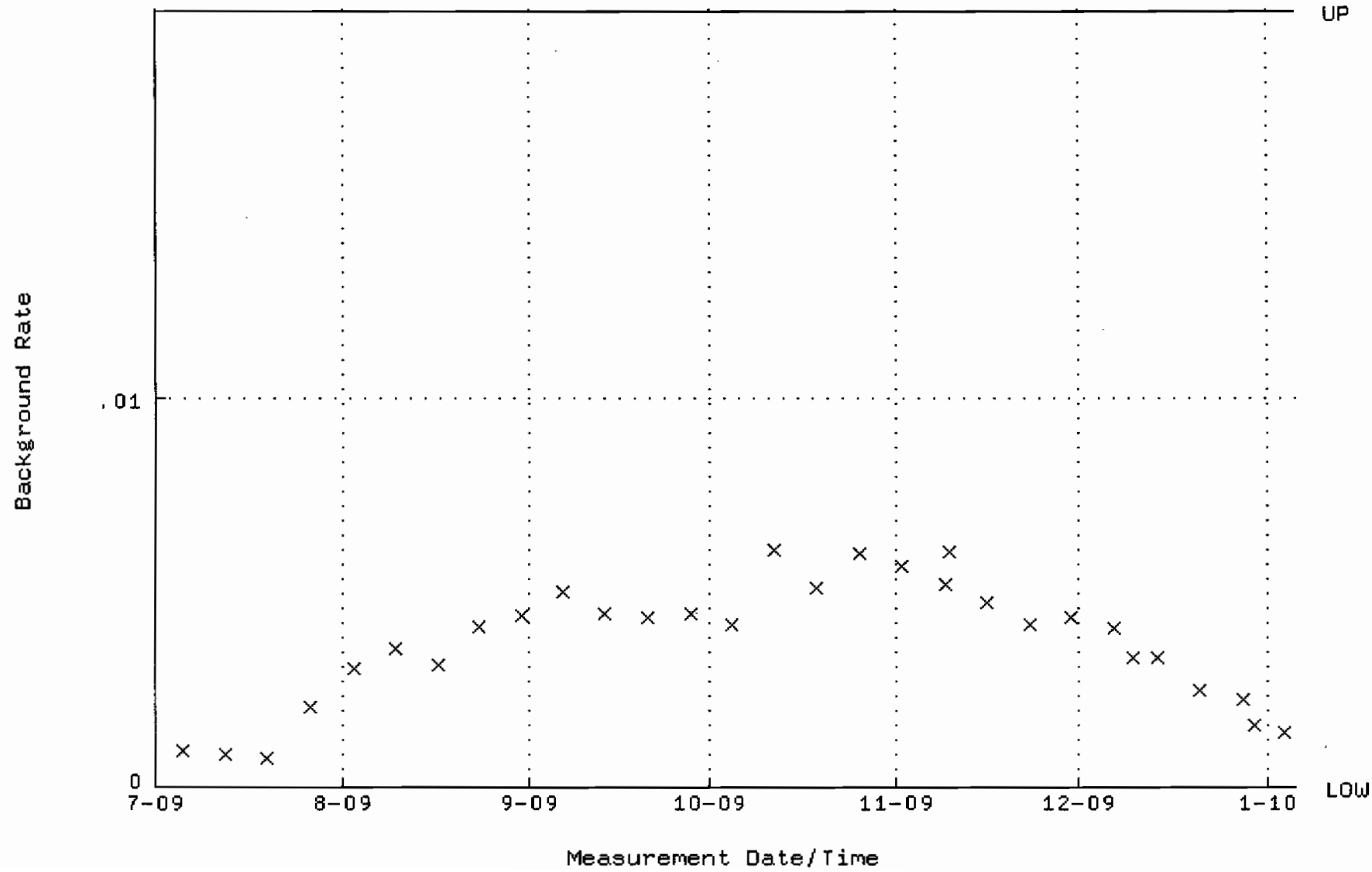
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.333927 through 0.353927



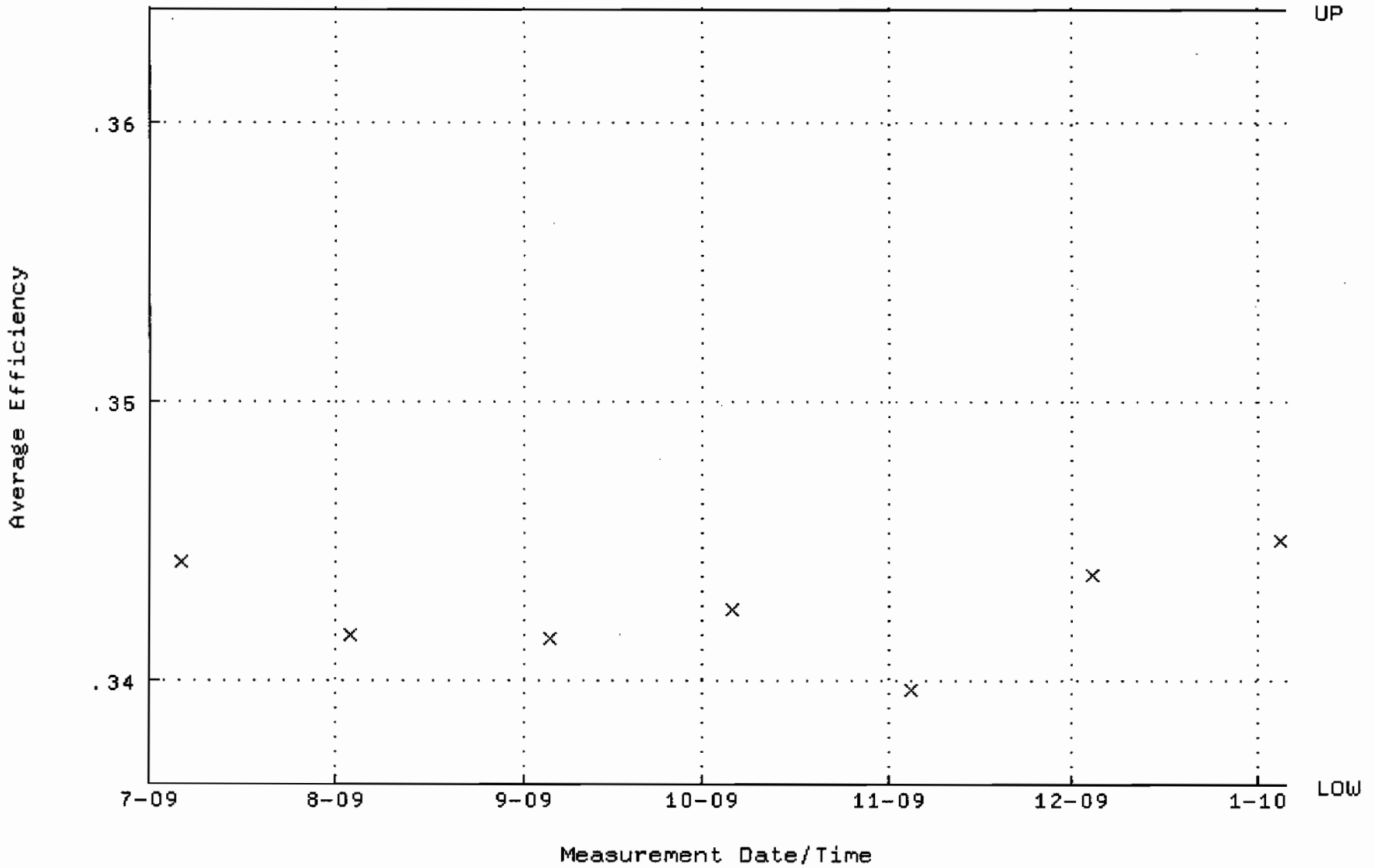
QA filename : DKA100:[ENV_ALPHA.QA.W]W046.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 81.7568 through 90.3628



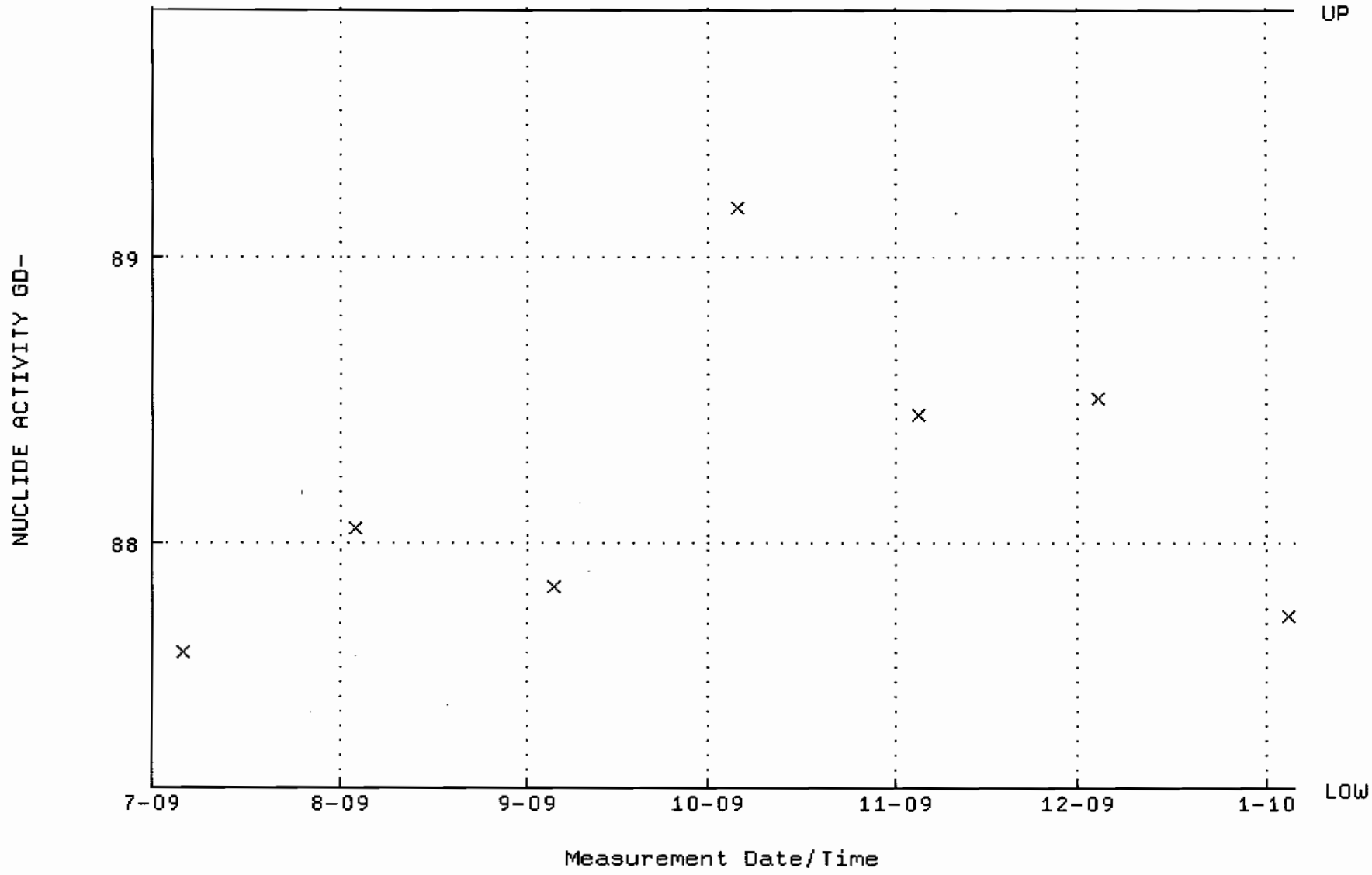
QA filename : DKA100:[ENV_ALPHA.QA.B]B046.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



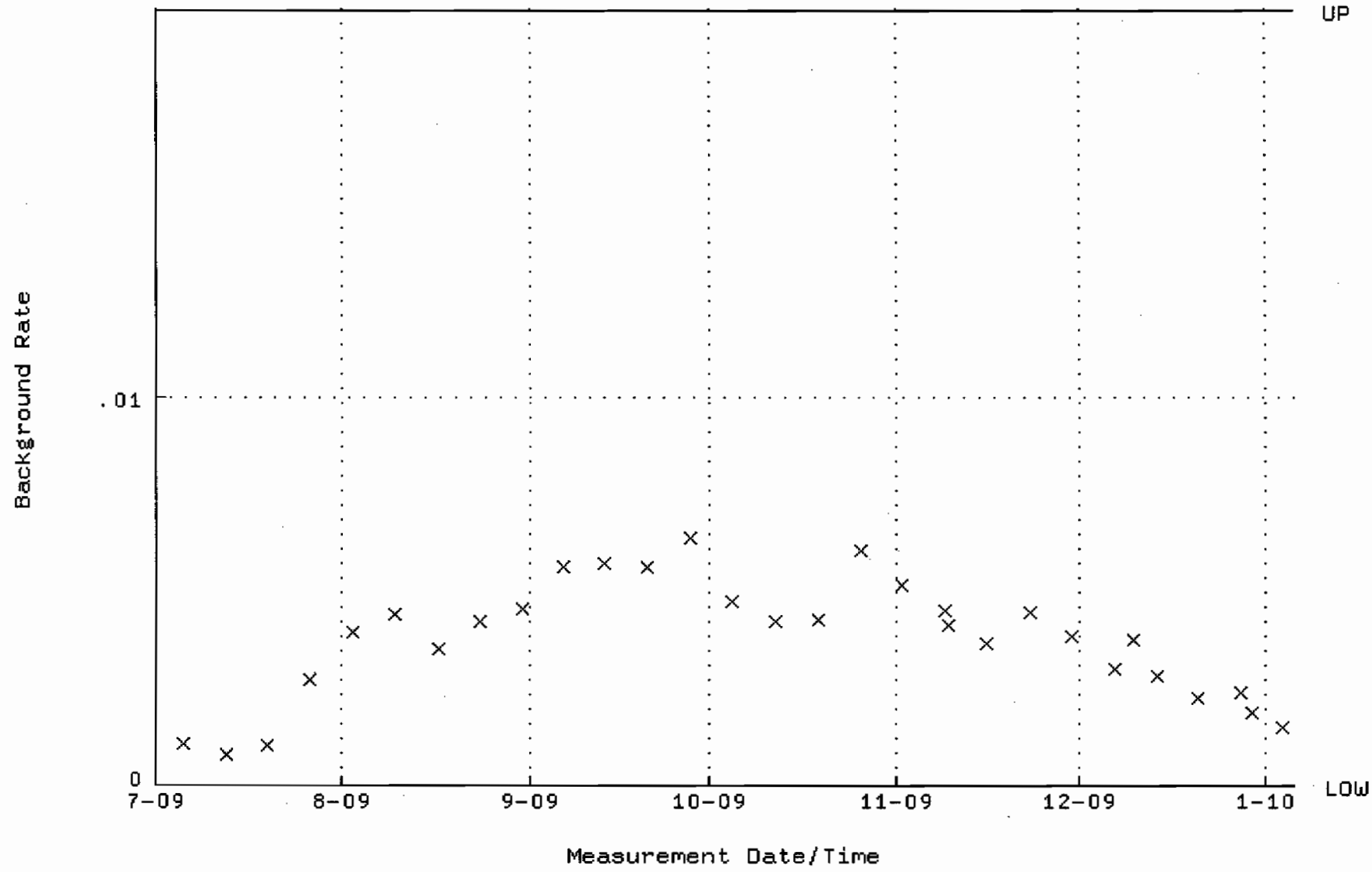
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.336276 through 0.364038



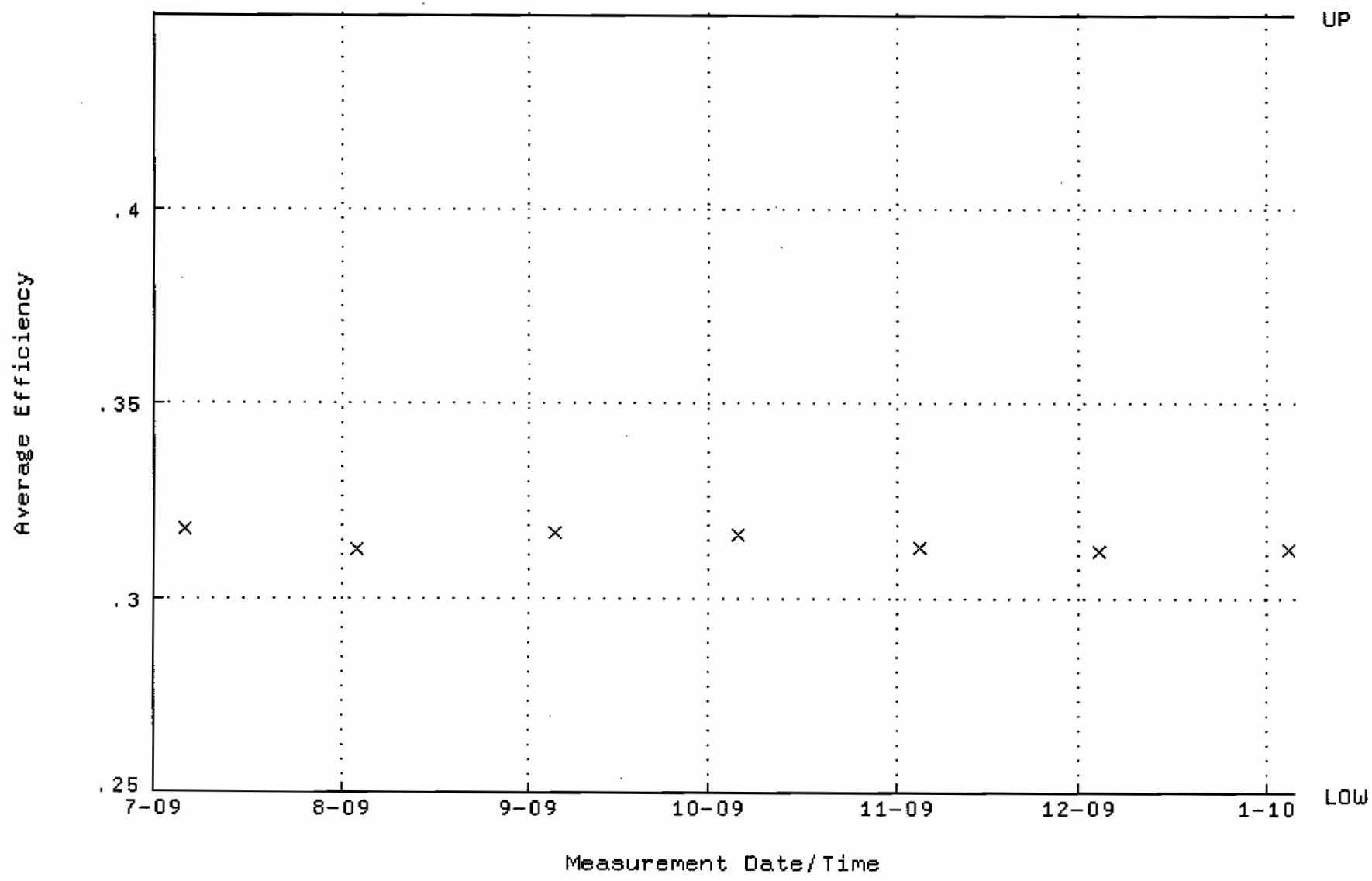
QA filename : DKA100:[ENV_ALPHA.QA.W]W047.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 87.1403 through 89.8631



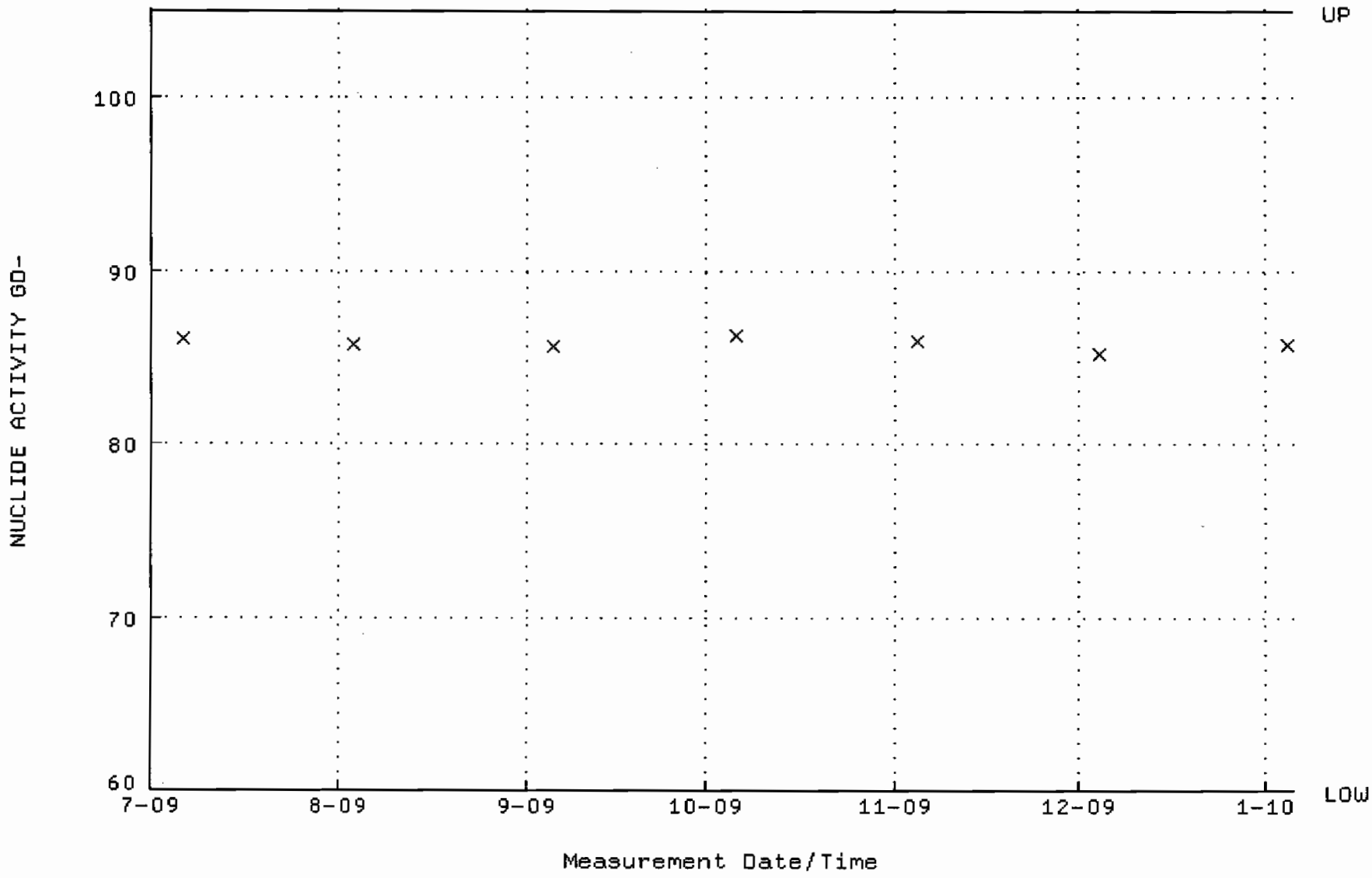
QA filename : DKA100:[ENV_ALPHA.QA.B]B047.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



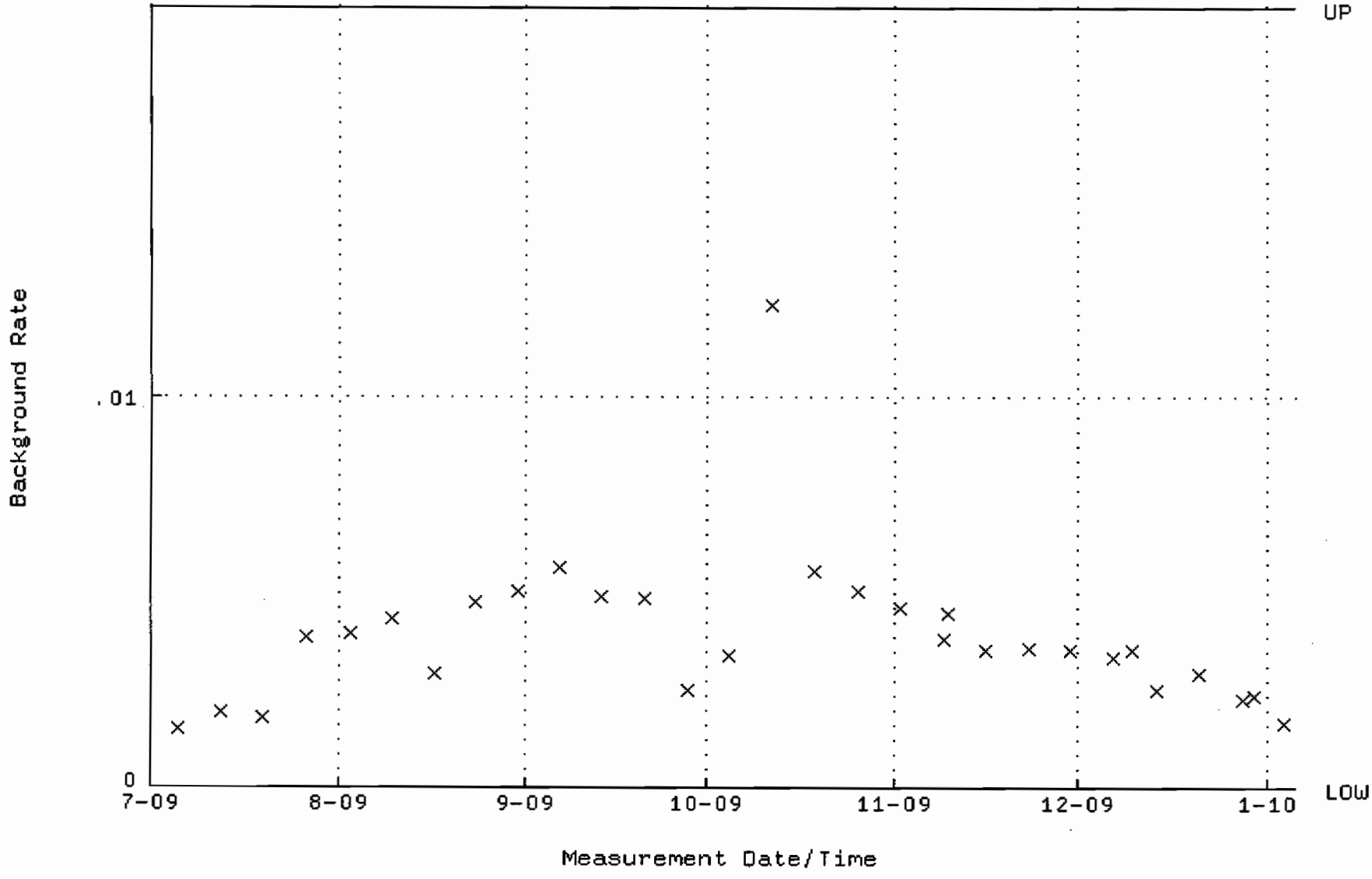
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



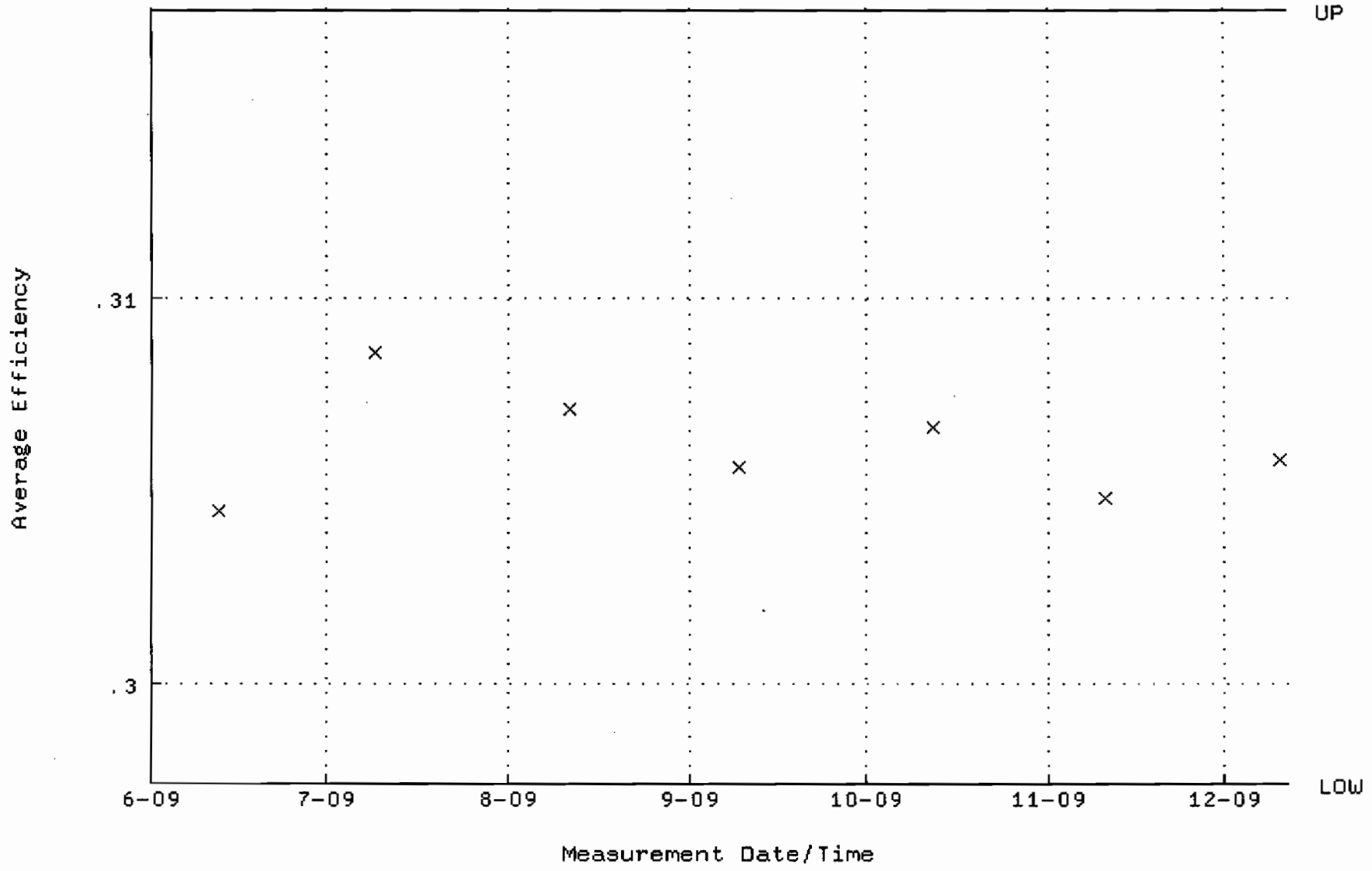
QA filename : DKA100:[ENV_ALPHA.QA.W]W048.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 6-JUL-2009 09:46:17 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



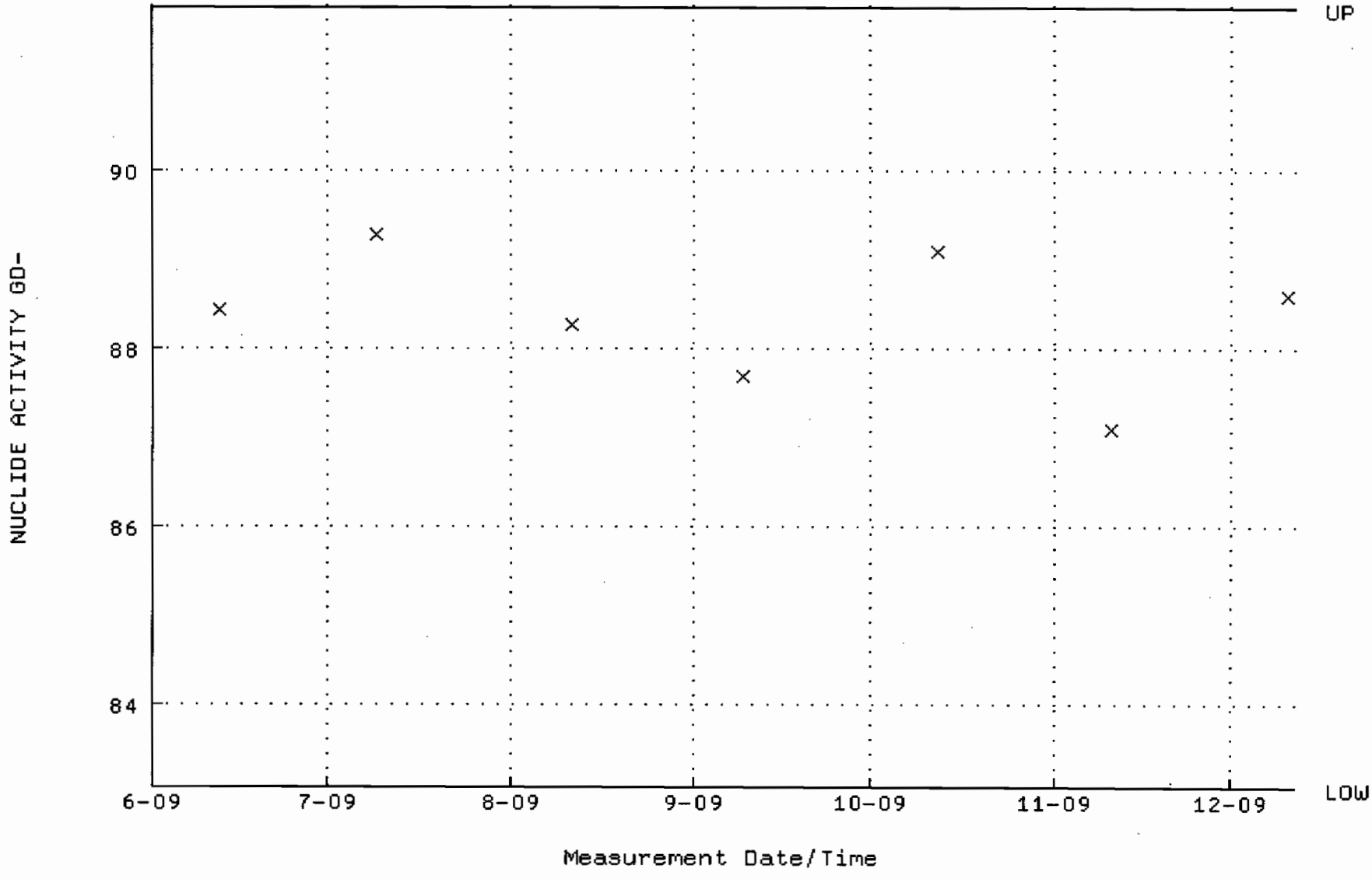
QA filename : DKA100:[ENV_ALPHA.QA.B]B048.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:00 through 5-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



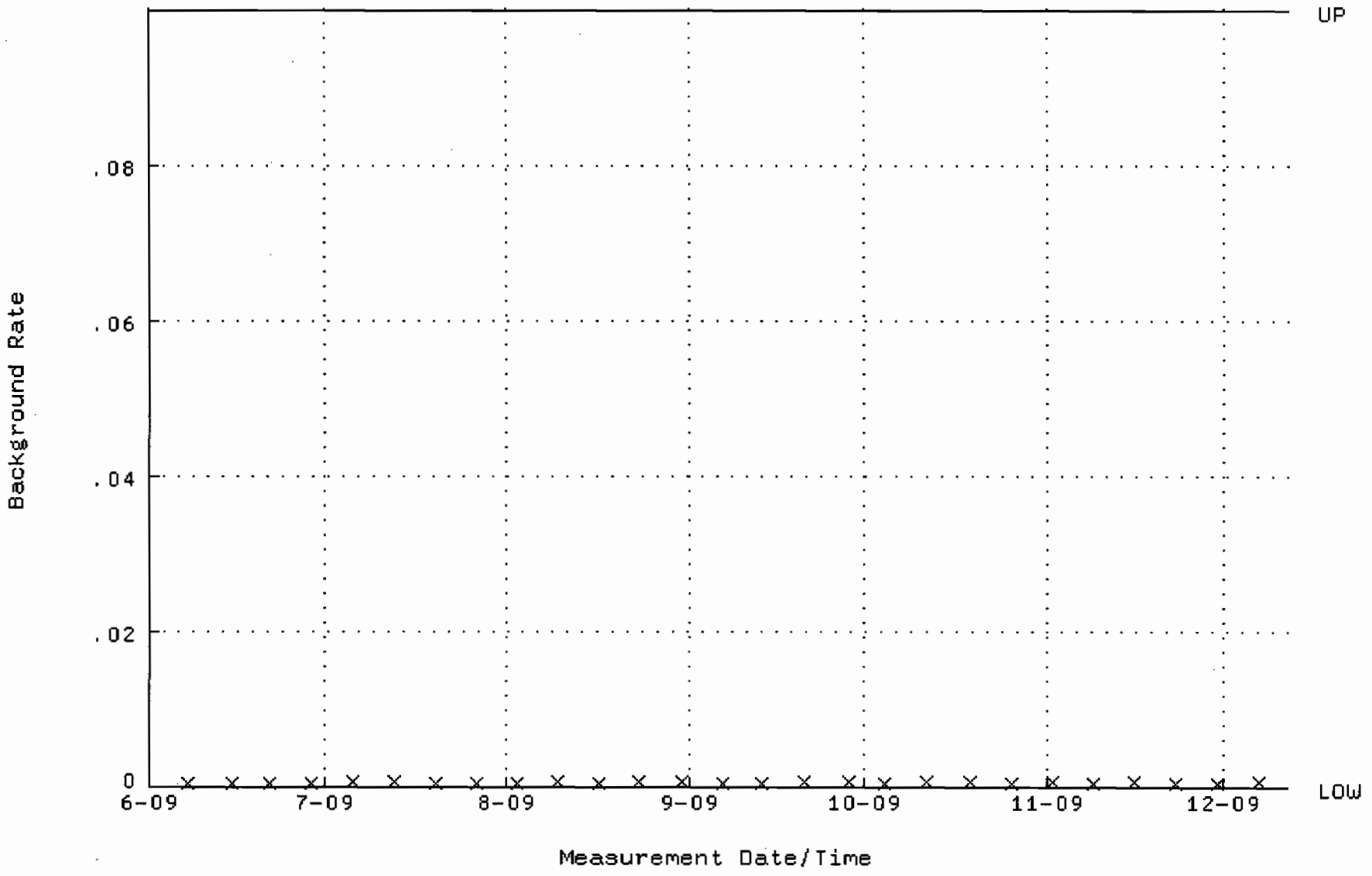
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-JUN-2009 07:18:28 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 0.297429 through 0.317429



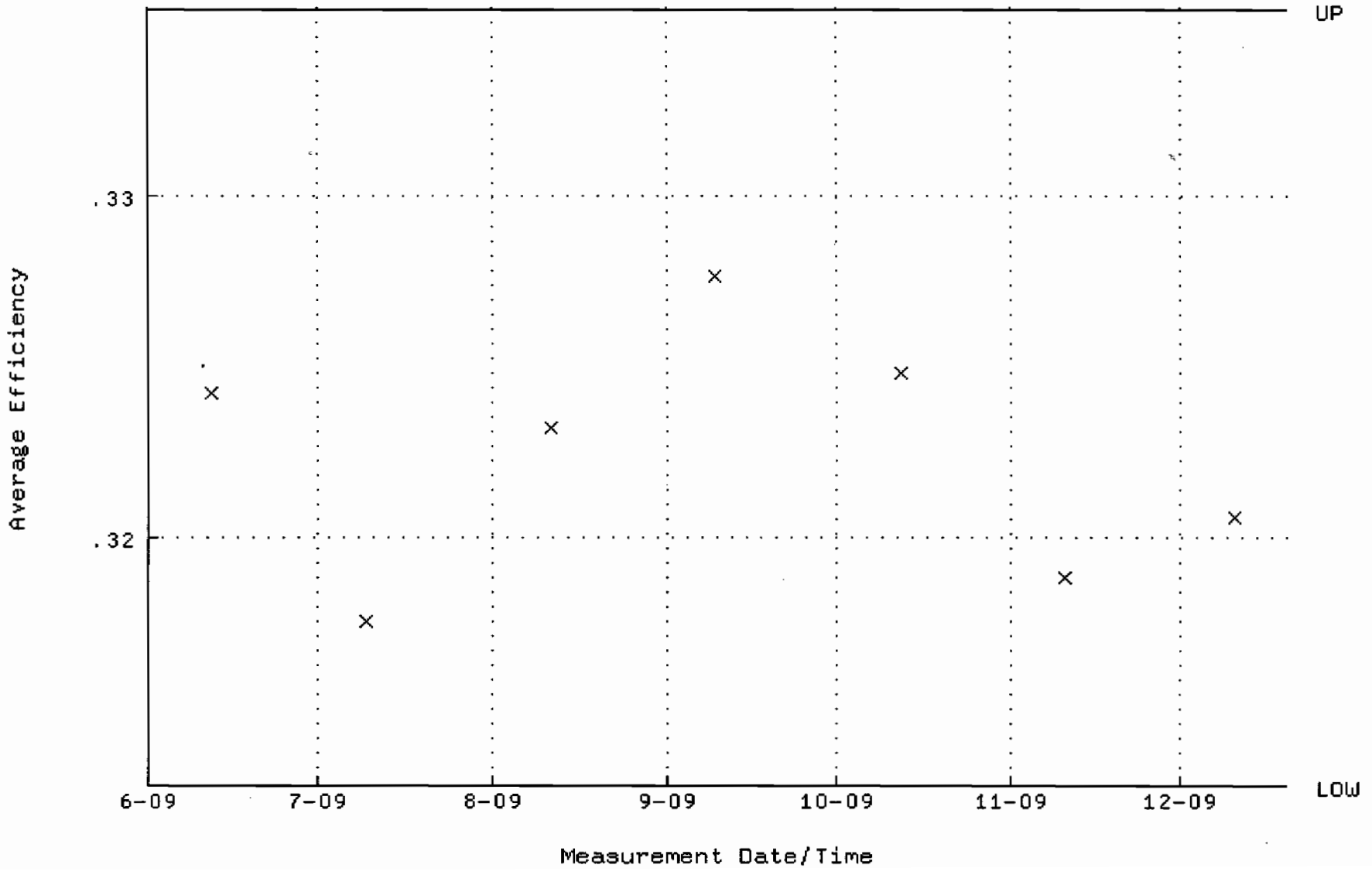
QA filename : DKA100:[ENV_ALPHA.QA.W]W094.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-JUN-2009 07:18:28 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 83.0827 through 91.8283



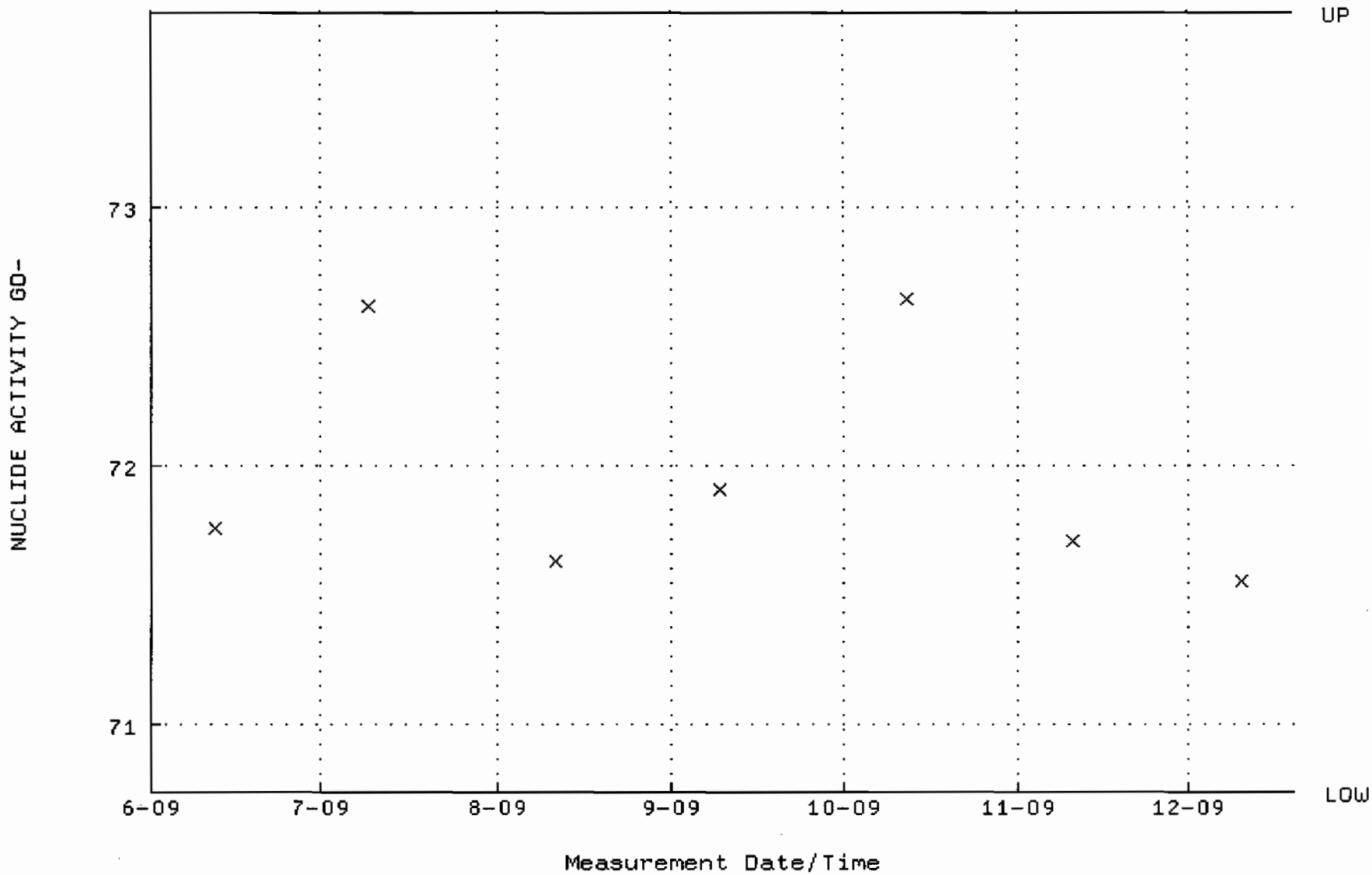
QA filename : DKA100:[ENV_ALPHA.QA.B]B094.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 16:45:41 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



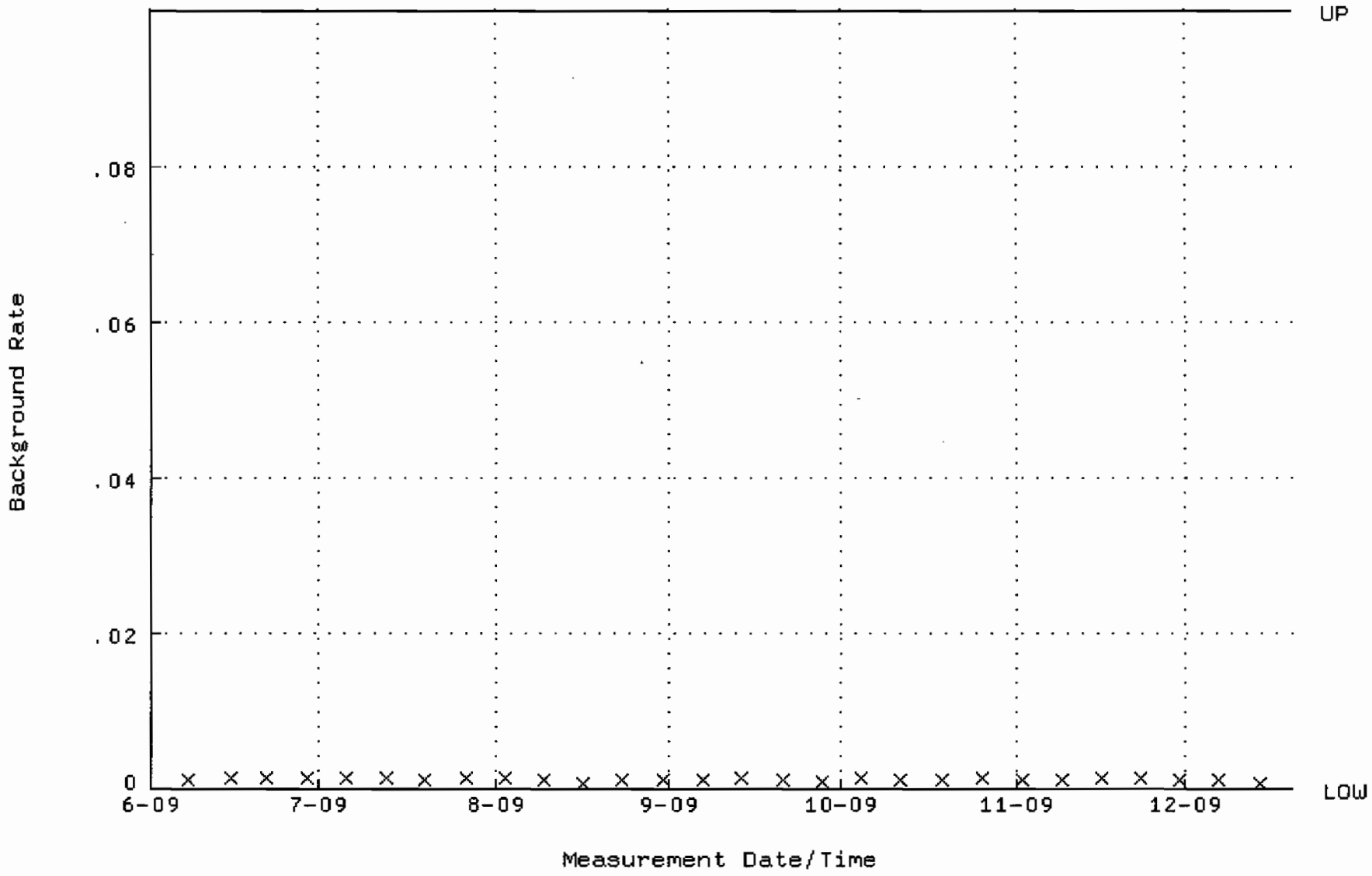
QA filename : DKA100:[ENV_ALPHA.QA.W]W110.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-JUN-2009 07:18:30 through 19-DEC-2009 12:00:00
Lower/Upper Lmts: 0.312683 through 0.335479



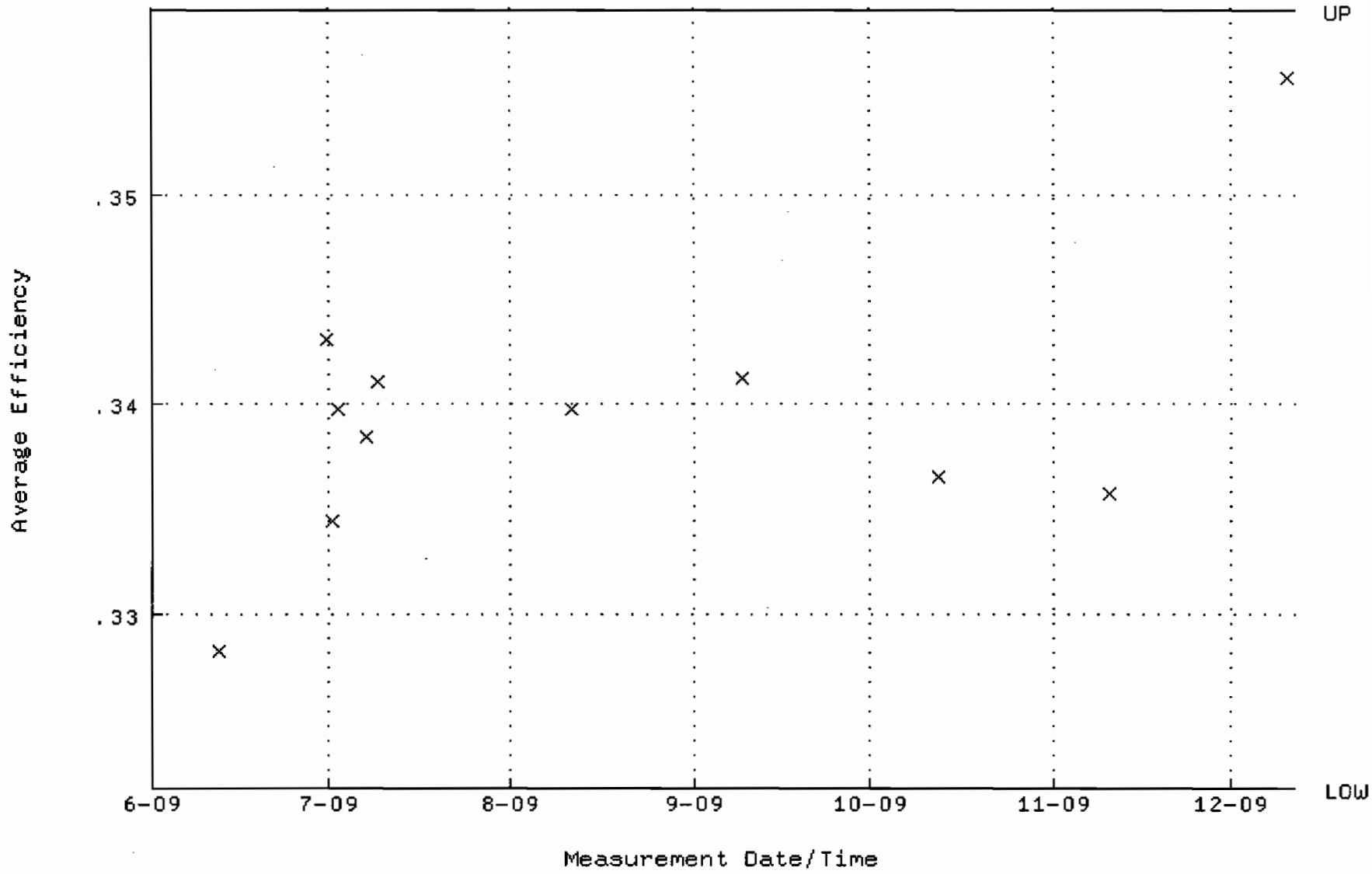
QA filename : DKA100:[ENV_ALPHA.QA.W]W110.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-JUN-2009 07:18:30 through 19-DEC-2009 12:00:00
Lower/Upper Lmts: 70.7404 through 73.7542



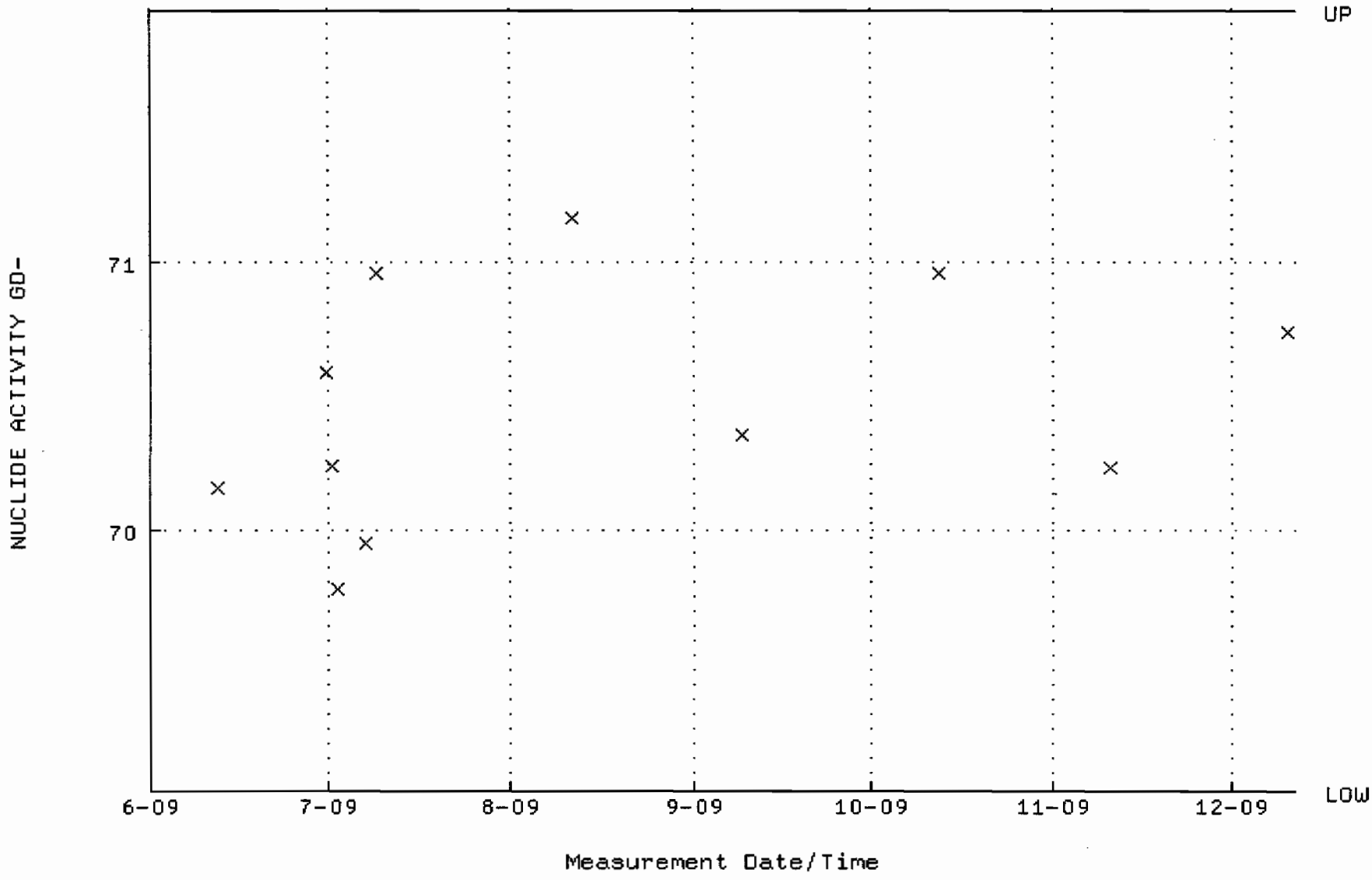
QA filename : DKA100:[ENV_ALPHA.QA.B]B110.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 16:45:47 through 19-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



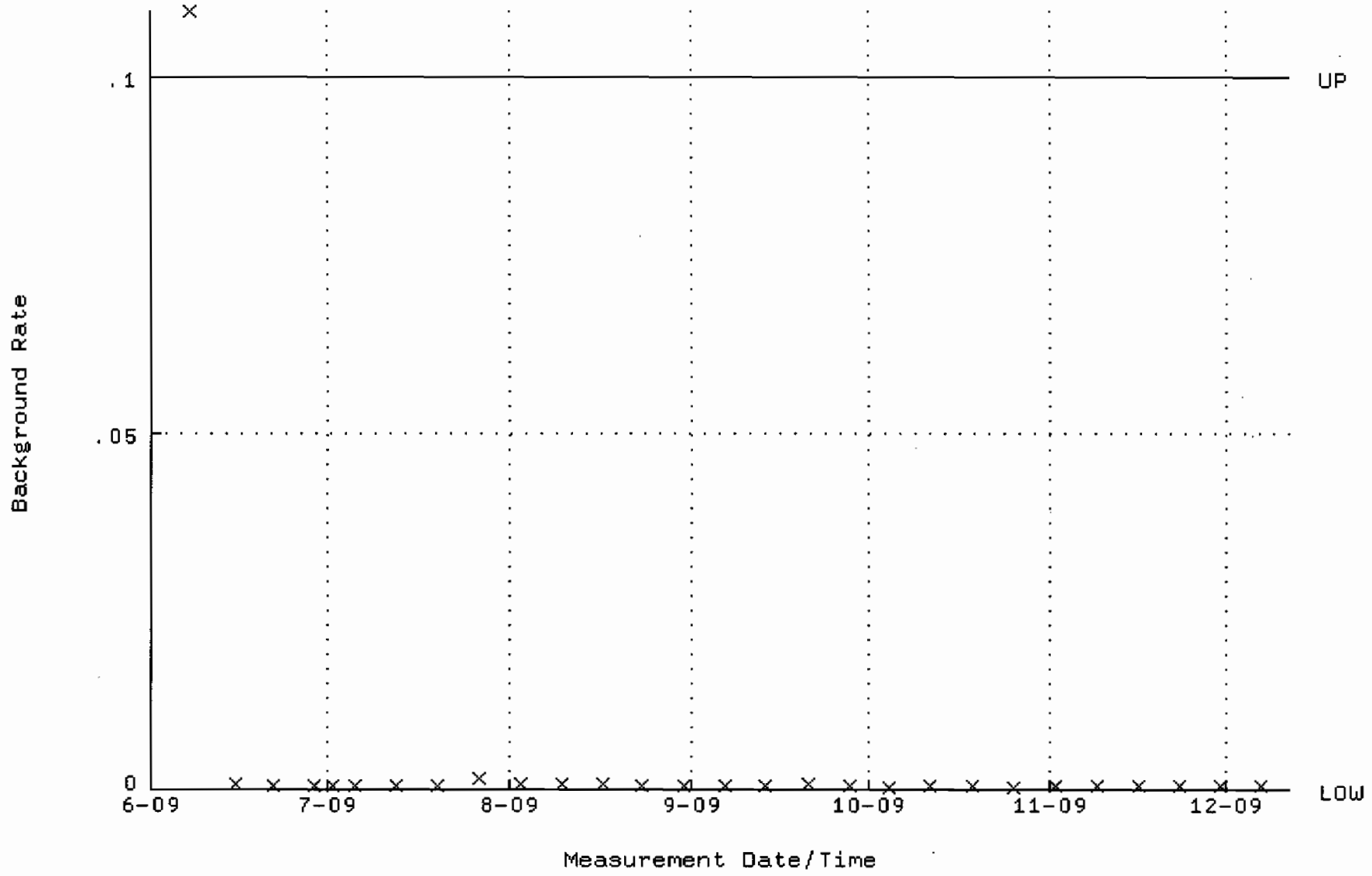
QA filename : DKA100:[ENV_ALPHA.QA.W]W111.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-JUN-2009 07:18:30 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 0.321662 through 0.358794



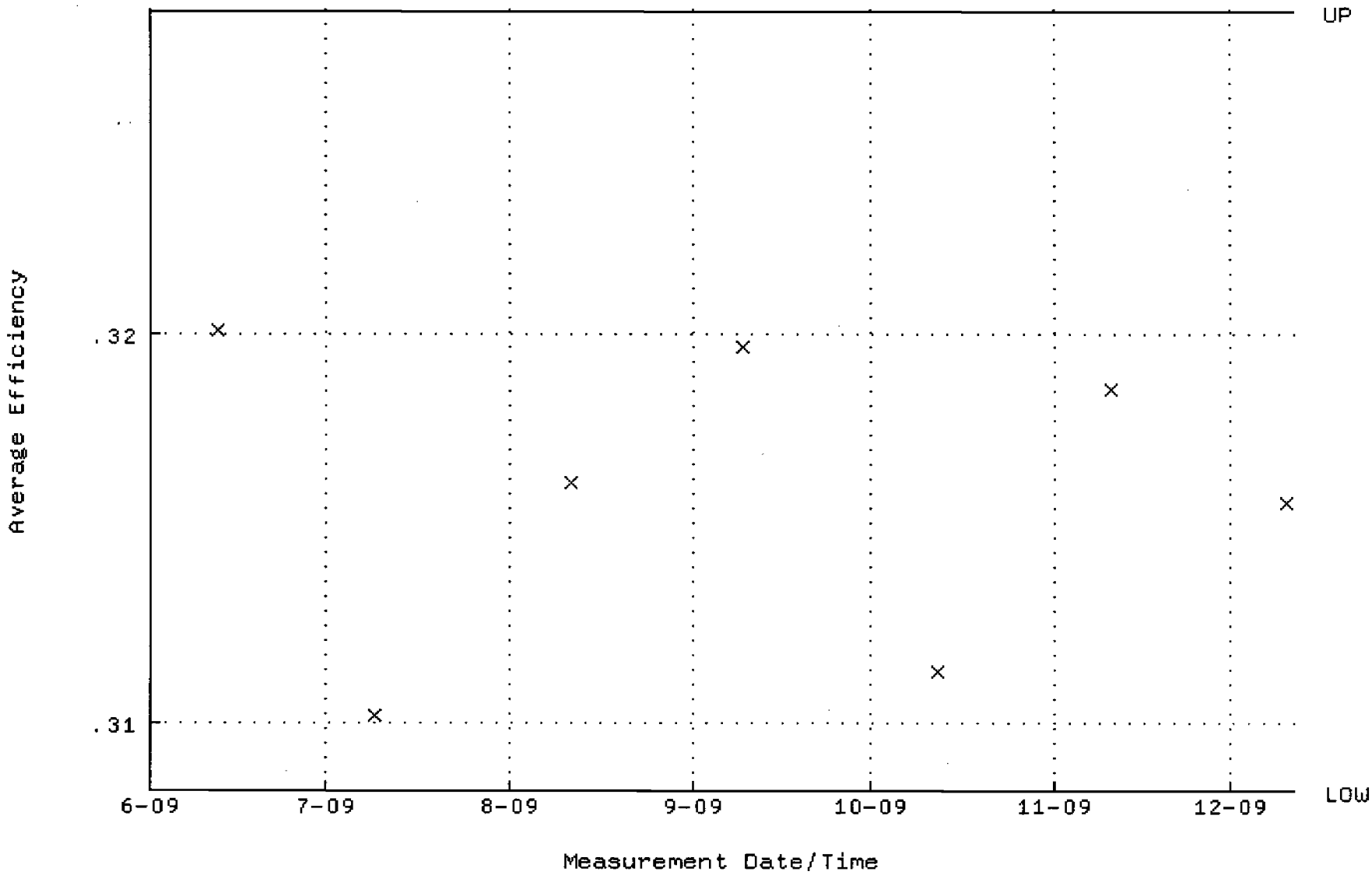
QA filename : DKA100:[ENV_ALPHA.QA.W]W111.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-JUN-2009 07:18:30 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 69.0200 through 71.9448



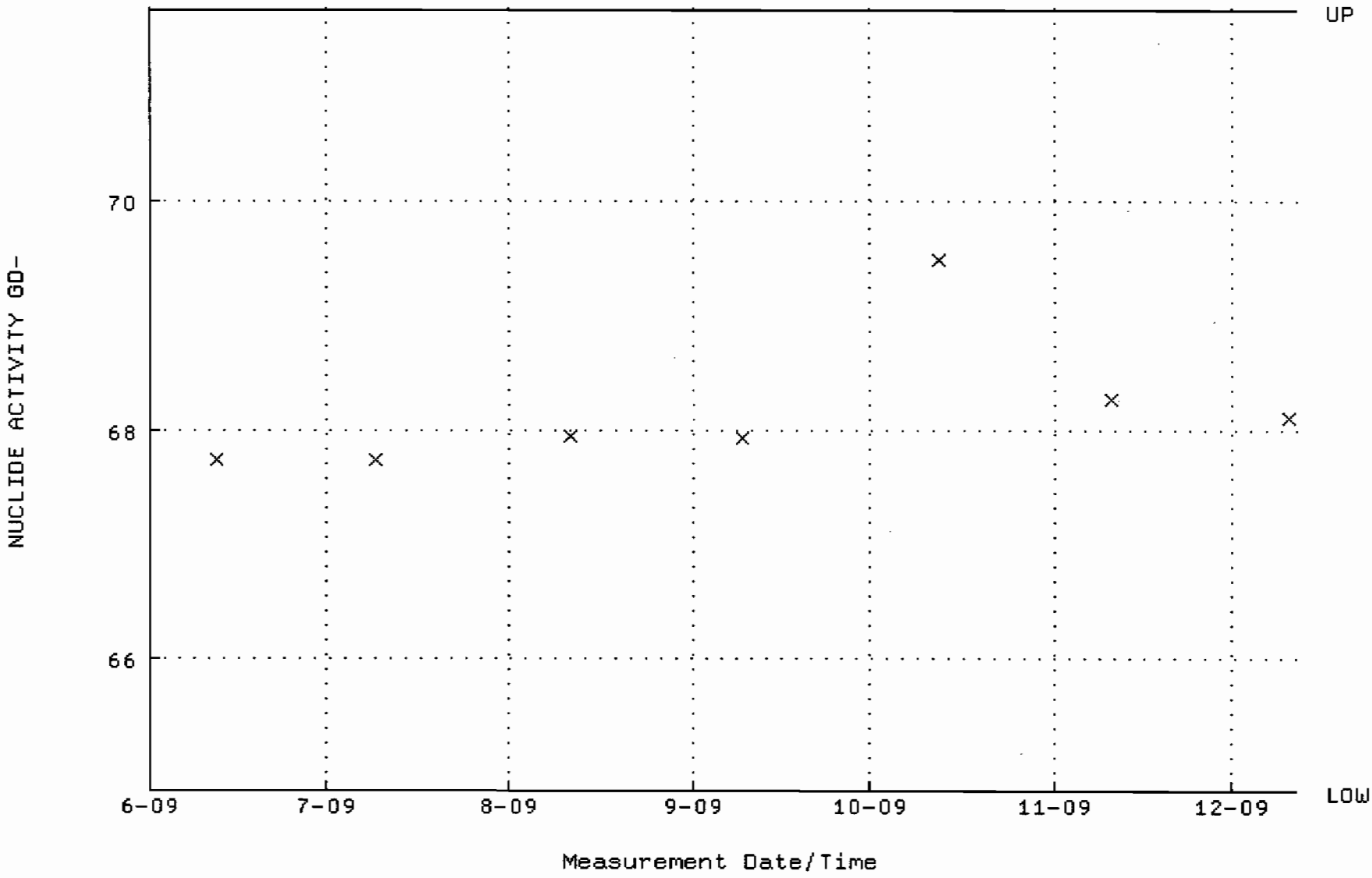
QA filename : DKA100:[ENV_ALPHA.QA.B]B111.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 16:45:47 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



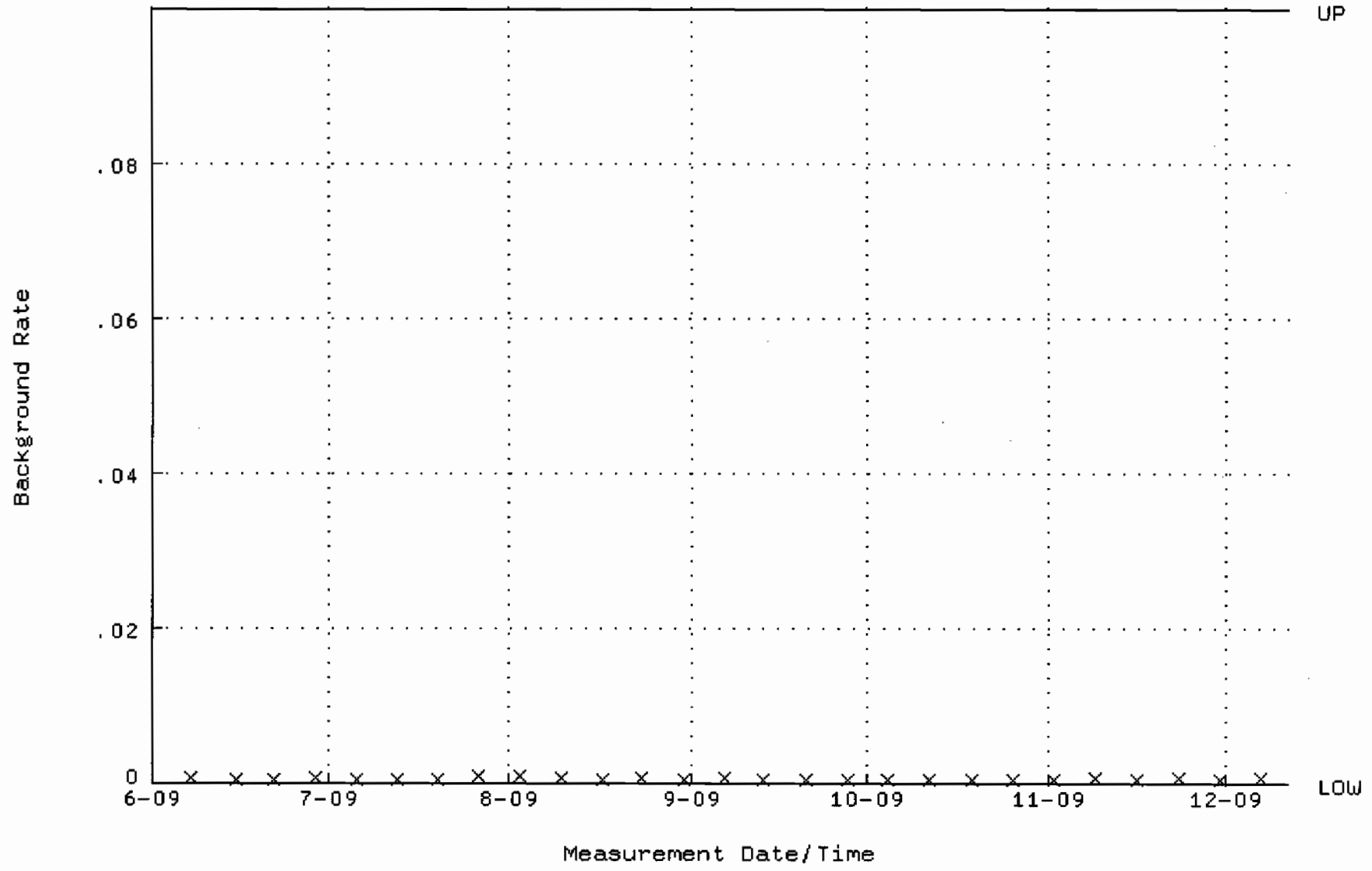
QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 12-JUN-2009 07:18:30 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 0.308263 through 0.328263



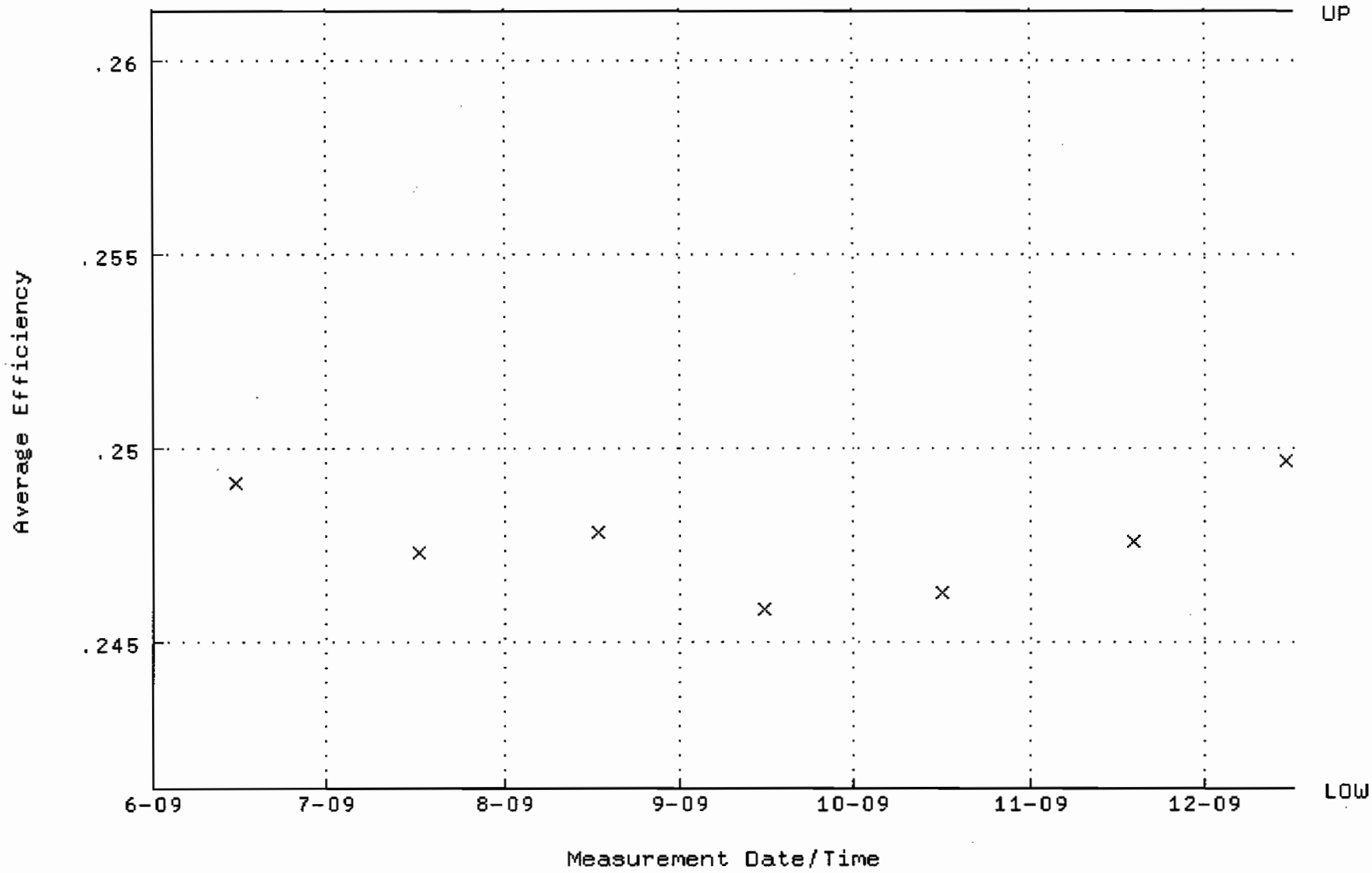
QA filename : DKA100:[ENV_ALPHA.QA.W]W112.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 12-JUN-2009 07:18:30 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 64.8451 through 71.6709



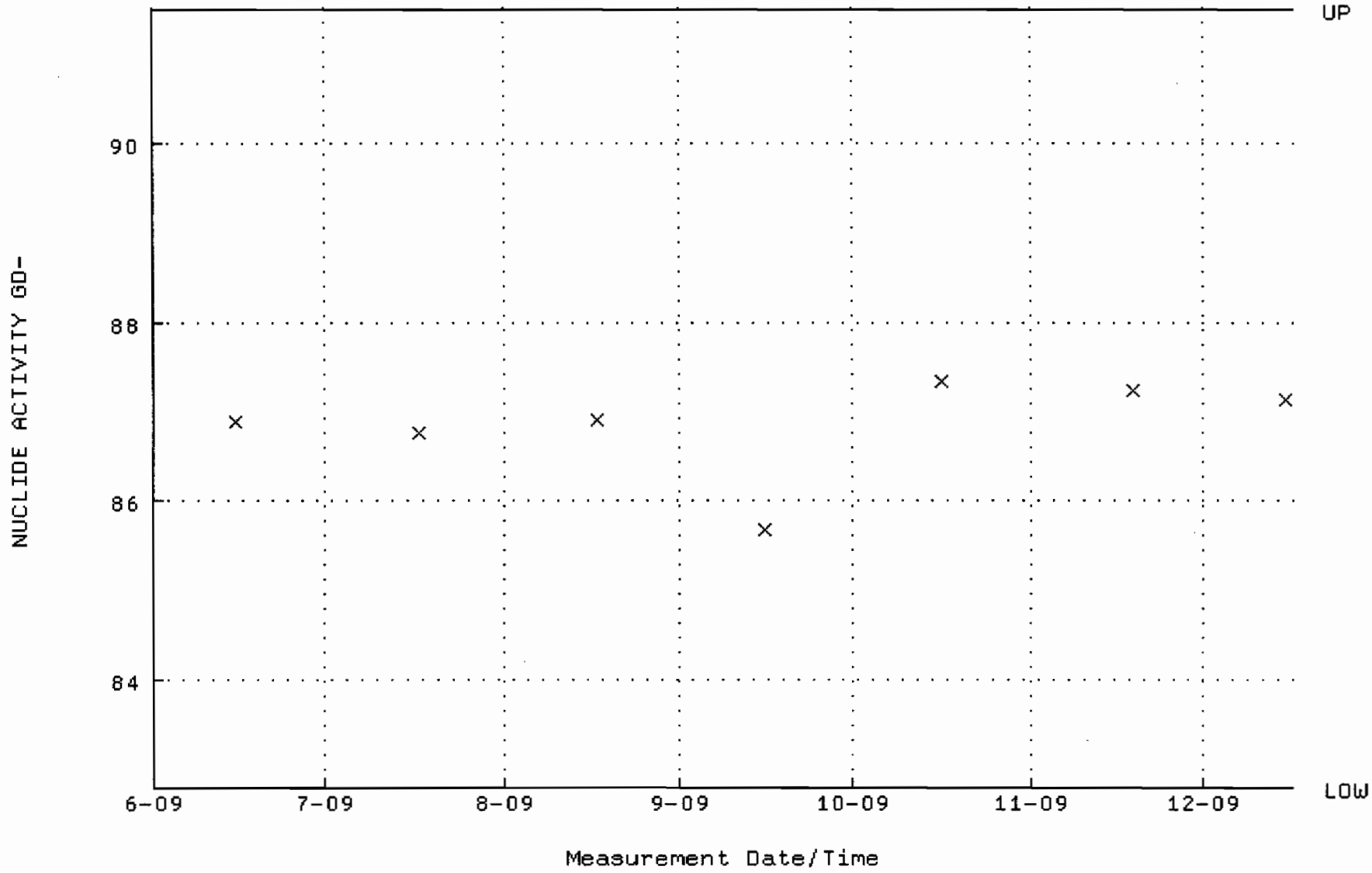
QA filename : DKA100:[ENV_ALPHA.QA.B]B112.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 16:45:47 through 11-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



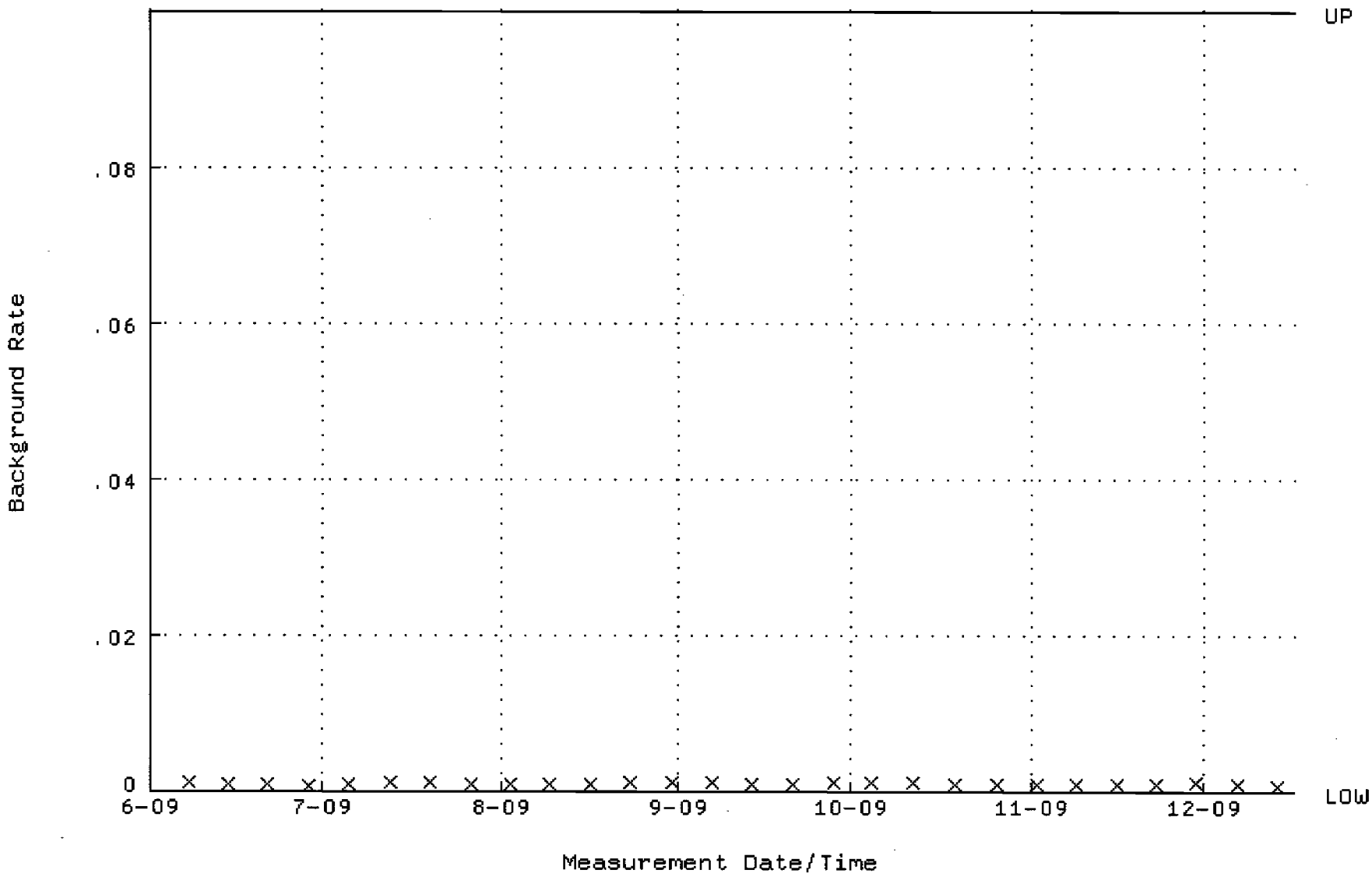
QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUN-2009 10:38:01 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.241250 through 0.261250



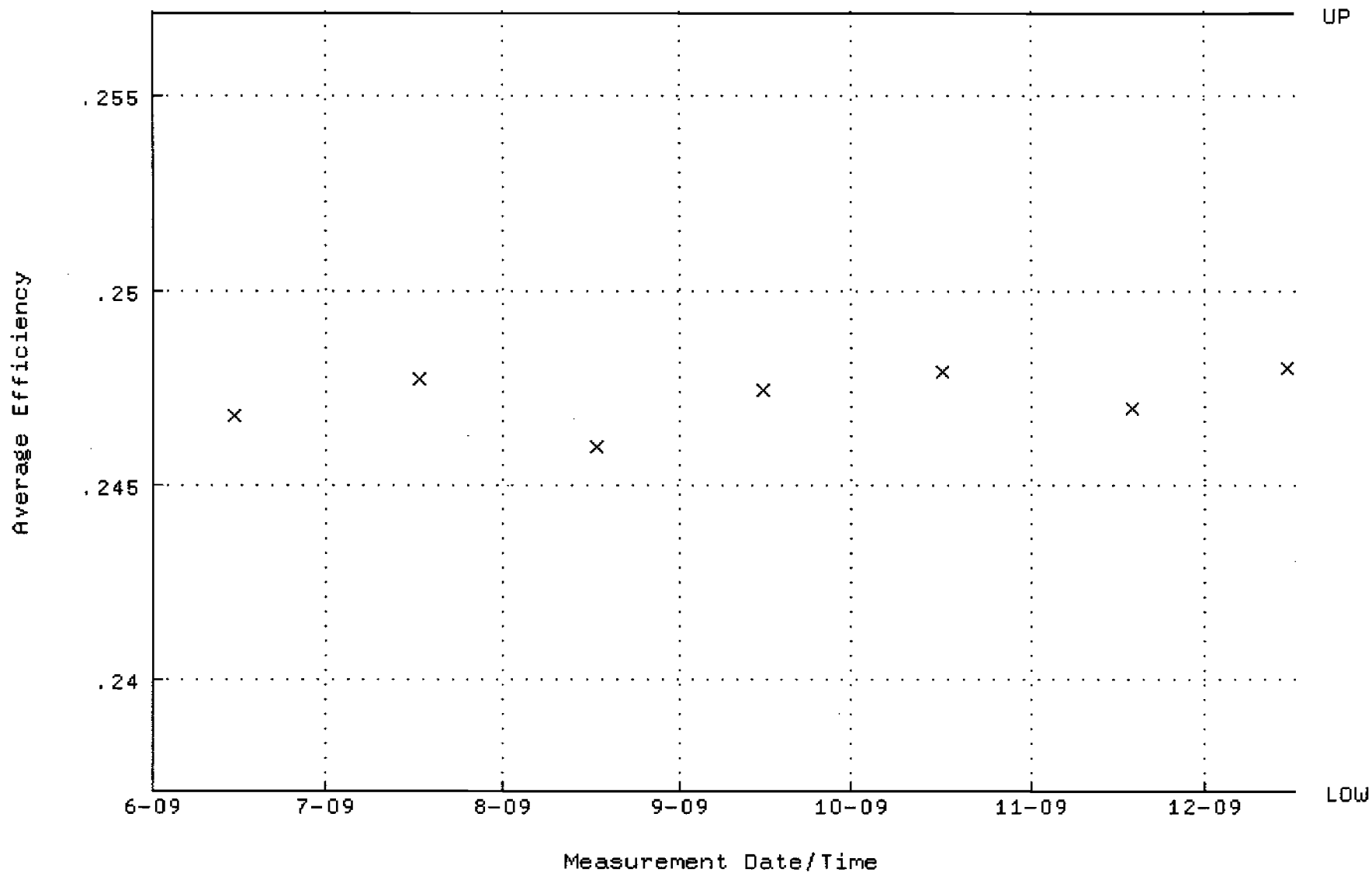
QA filename : DKA100:[ENV_ALPHA.QA.W]W156.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUN-2009 10:38:01 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 82.7847 through 91.4989



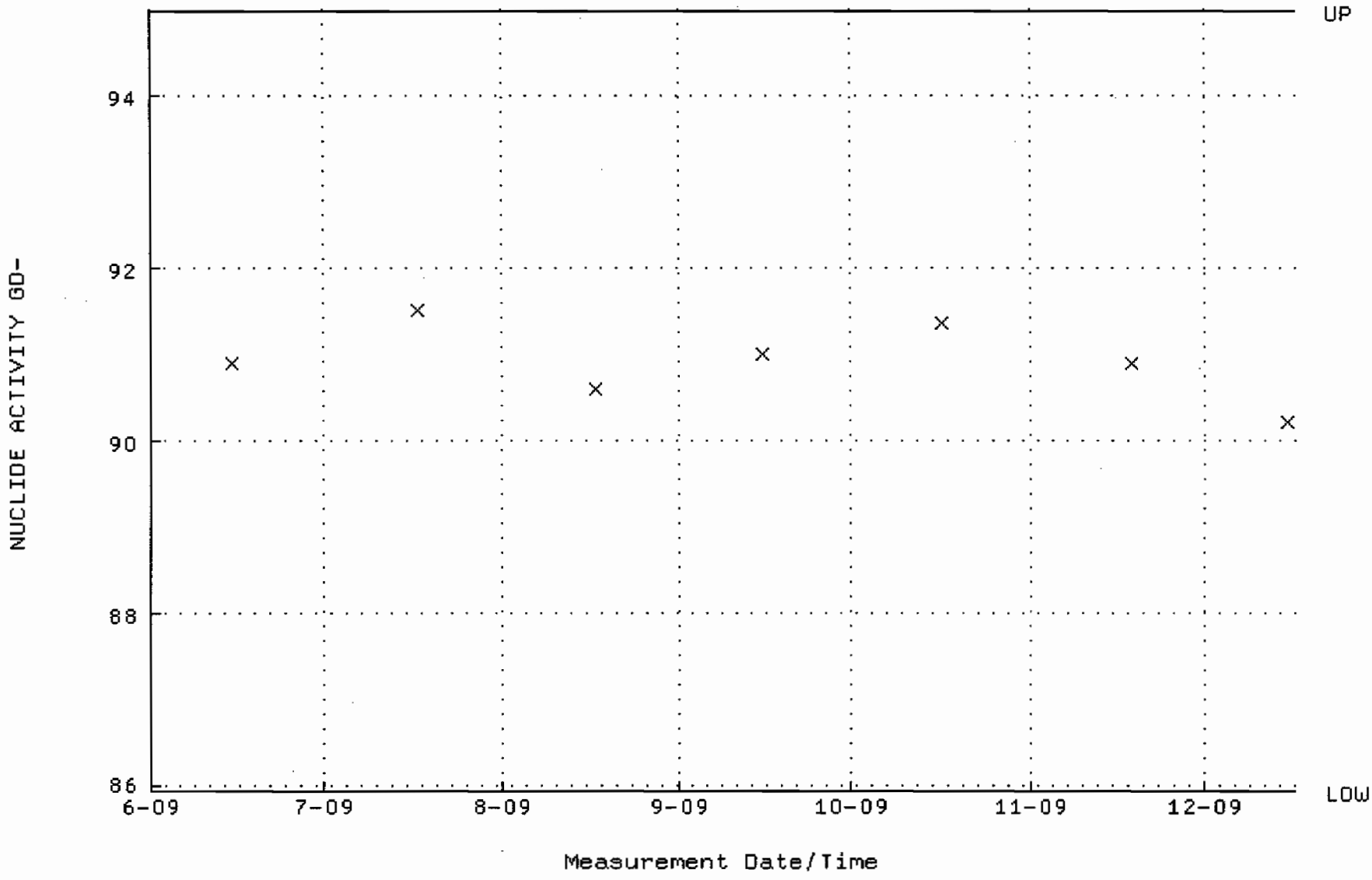
QA filename : DKA100:[ENV_ALPHA.QA.B]B156.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:11:41 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



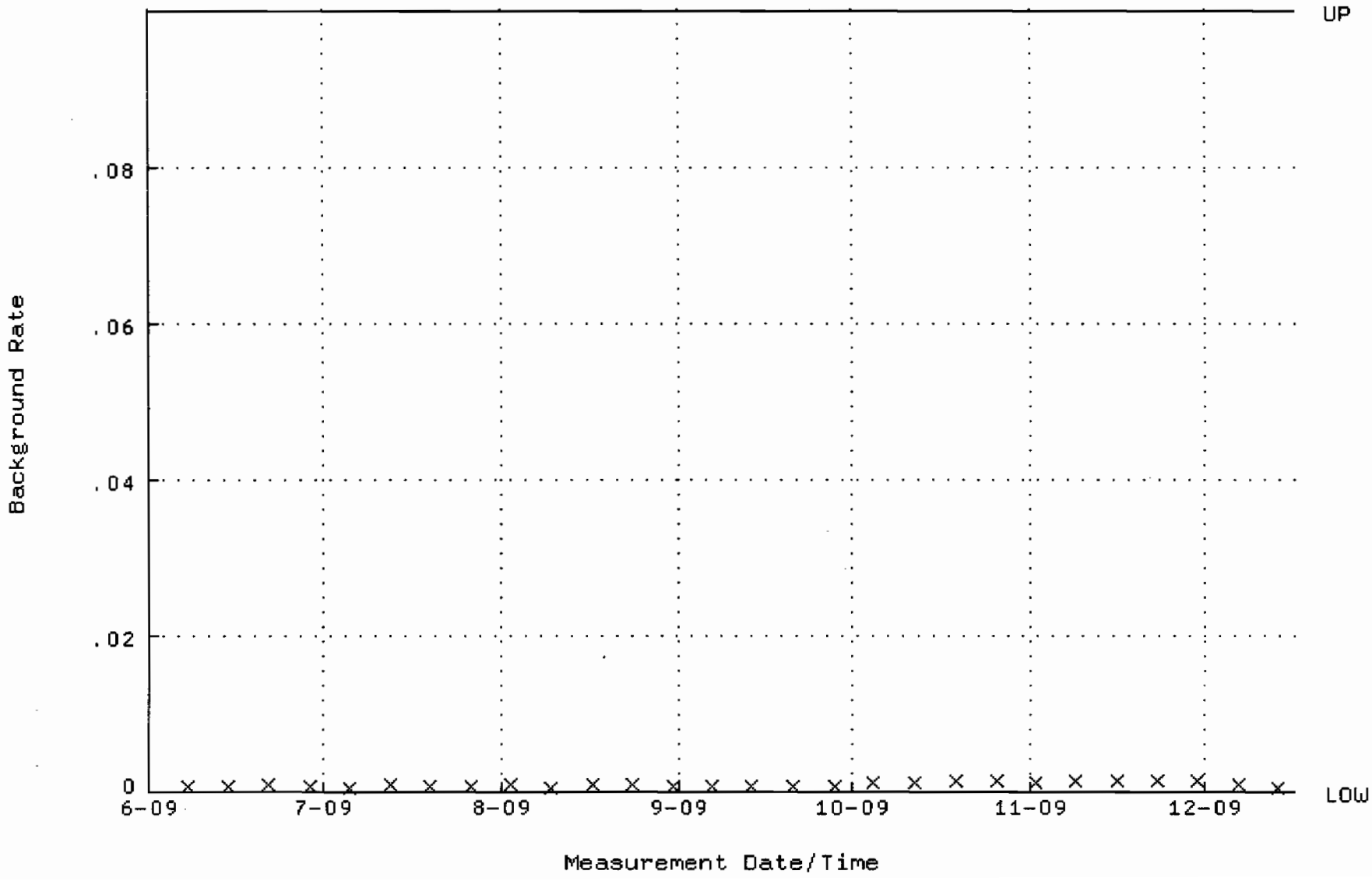
QA filename : DKA100:[ENV_ALPHA.QA.W]W157.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUN-2009 10:38:06 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.237137 through 0.257137



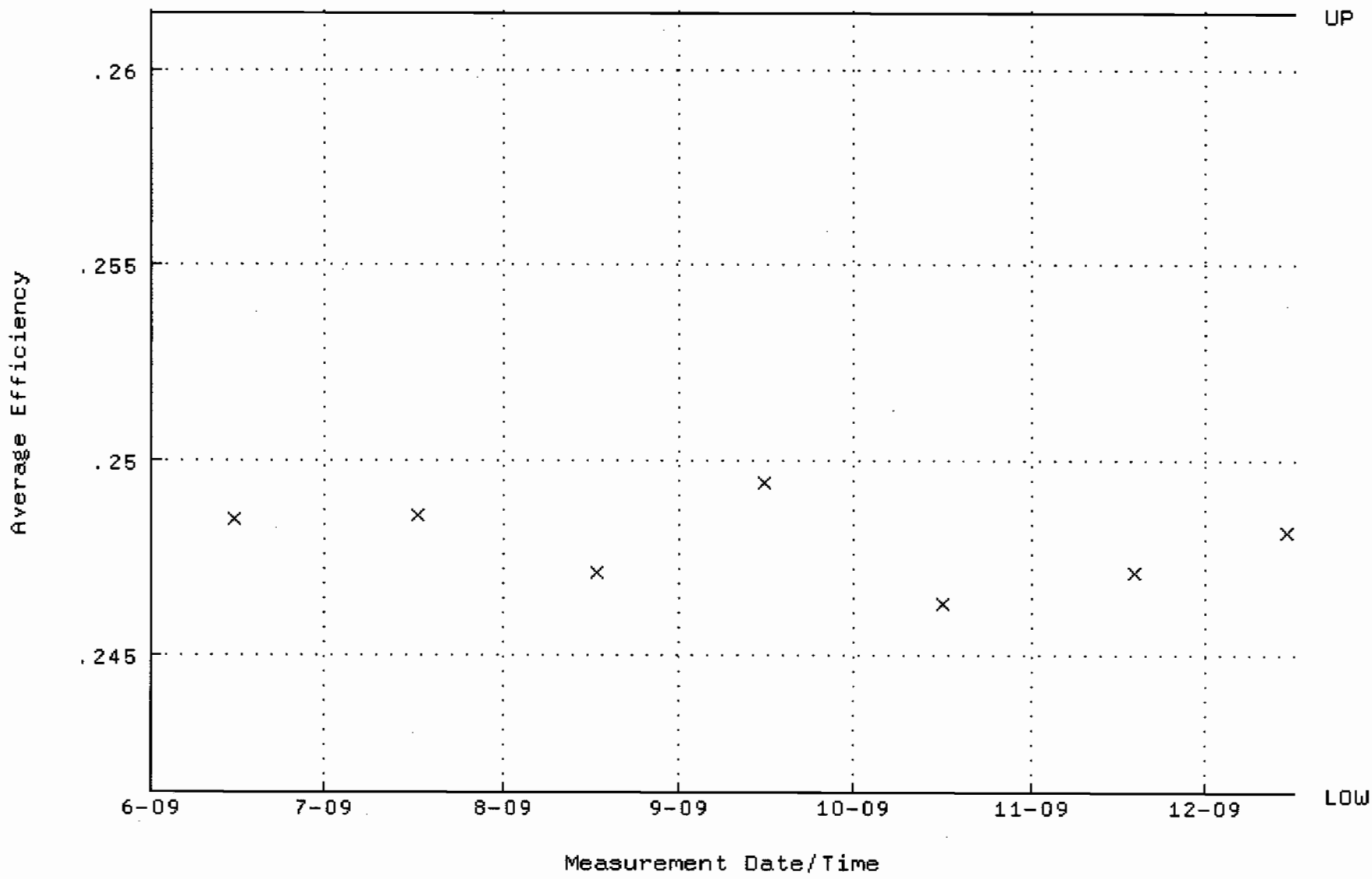
QA filename : DKA100:[ENV_ALPHA.QA.W]W157.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUN-2009 10:38:06 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 85.9292 through 94.9744



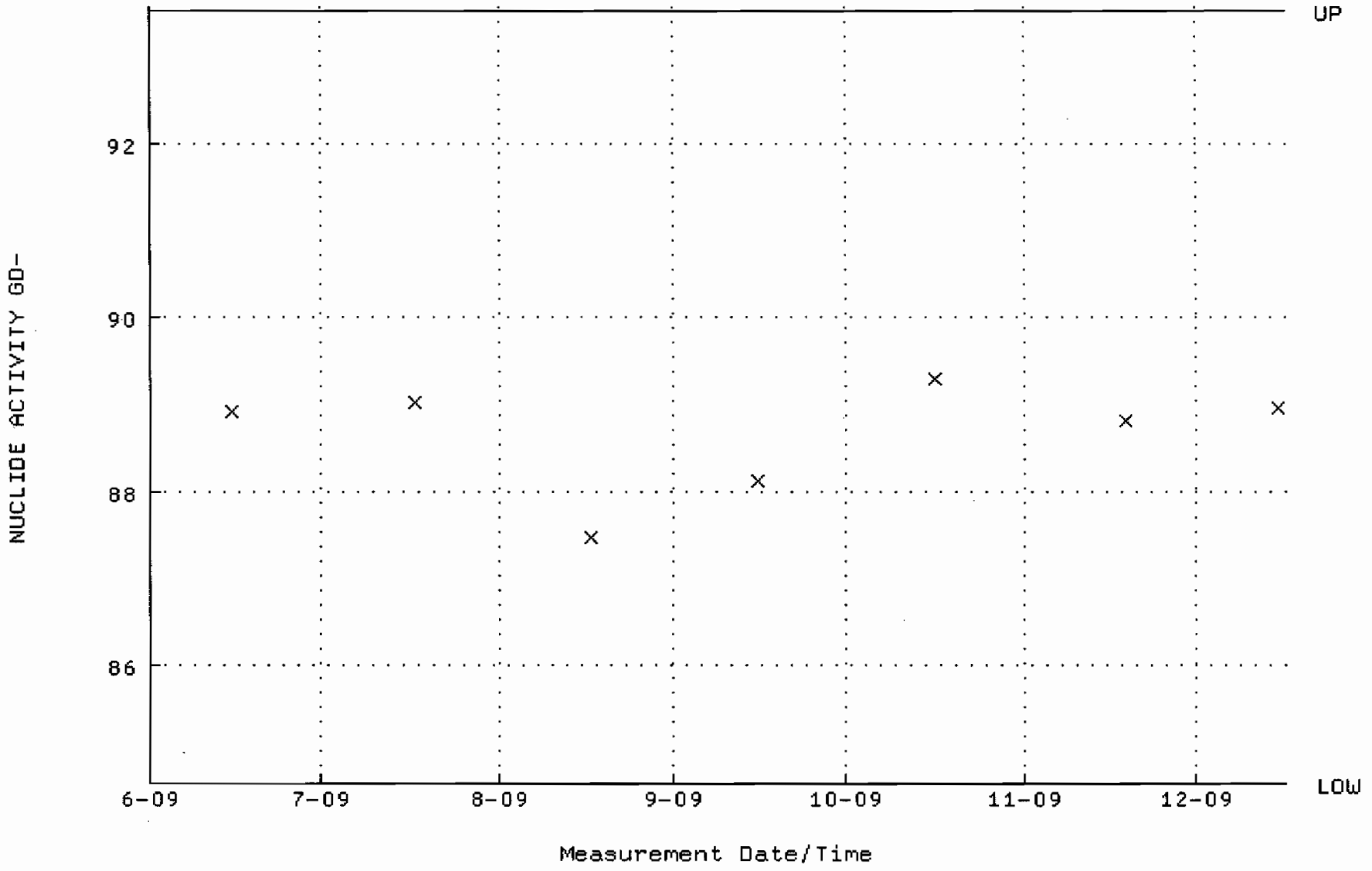
QA filename : DKA100:[ENV_ALPHA.QA.B]B157.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:11:45 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



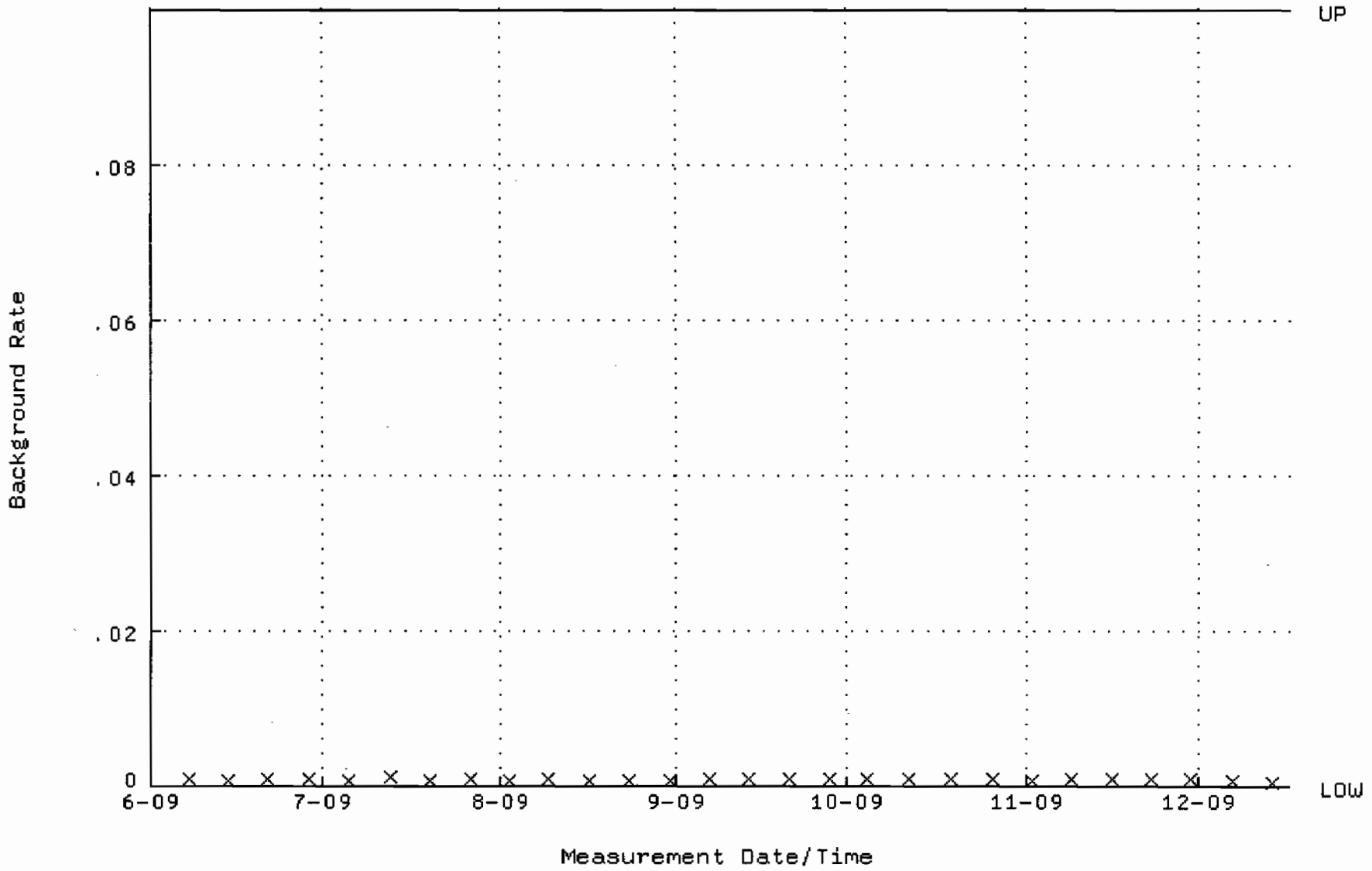
QA filename : DKA100:[ENV_ALPHA.QA.W]W158.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUN-2009 10:38:11 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.241466 through 0.261466



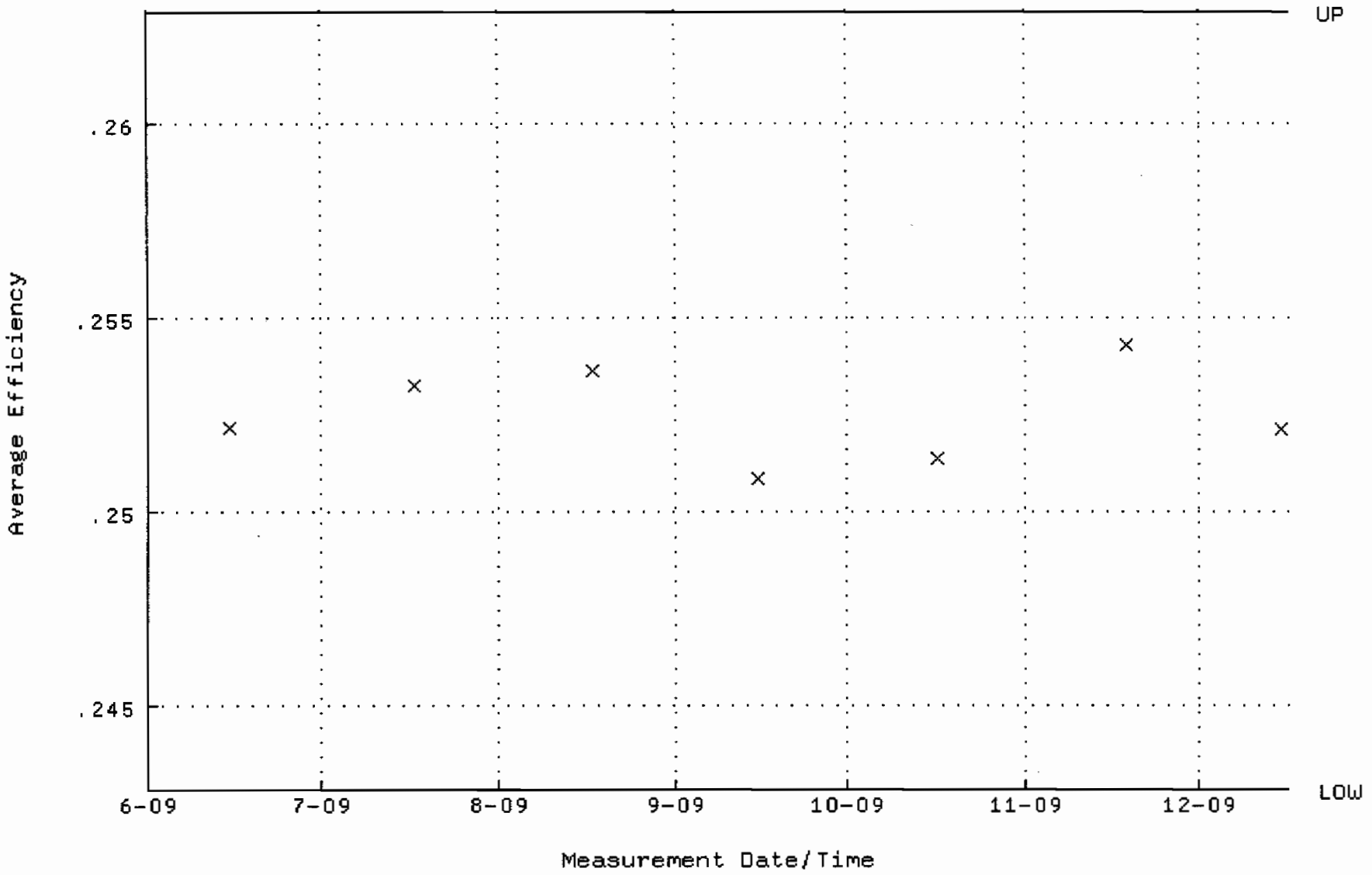
QA filename : DKA100:[ENV_ALPHA.QA.W]W158.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUN-2009 10:38:11 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 84.6414 through 93.5510



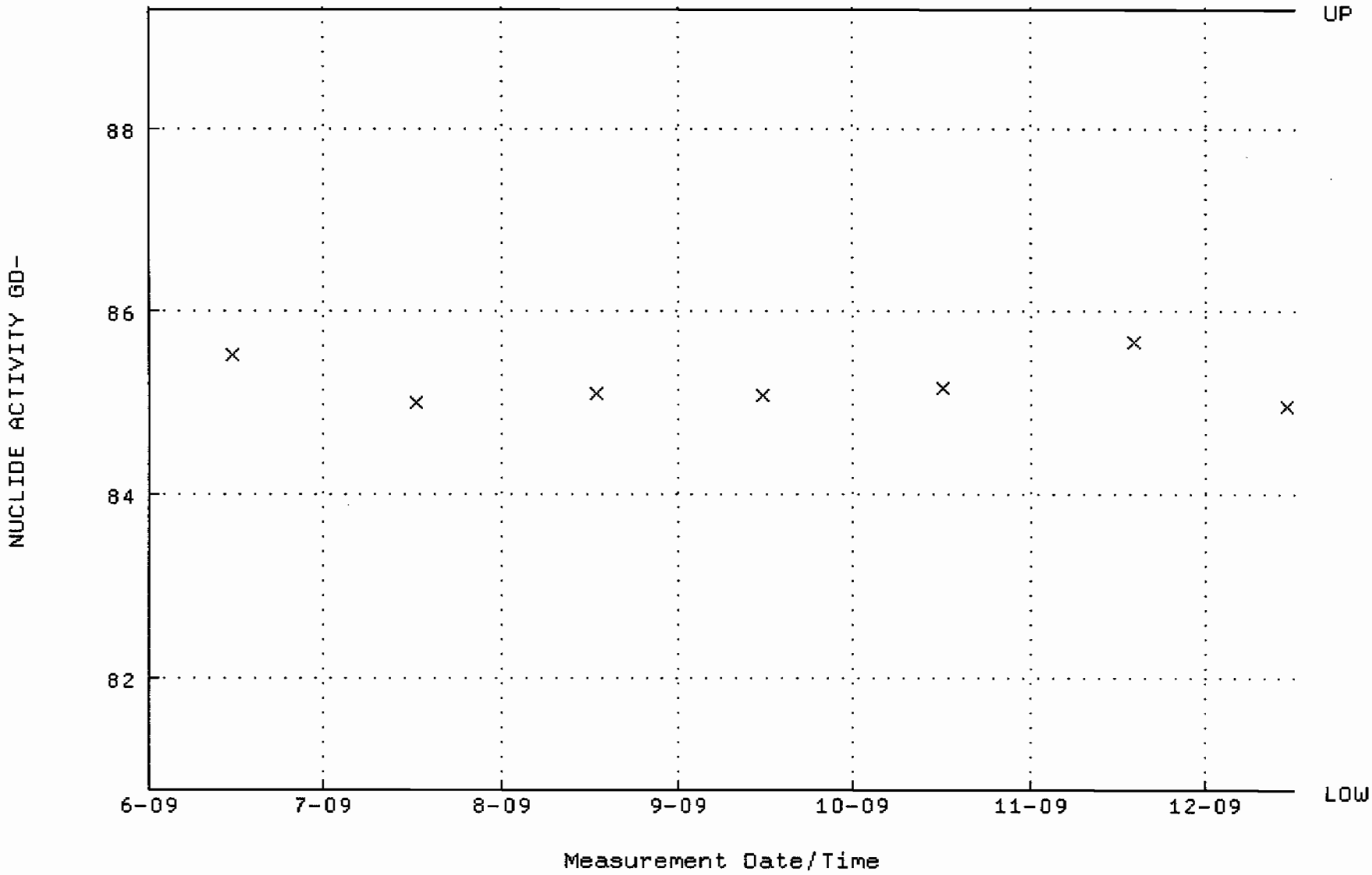
QA filename : DKA100:[ENV_ALPHA.QA.B]B158.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:11:49 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



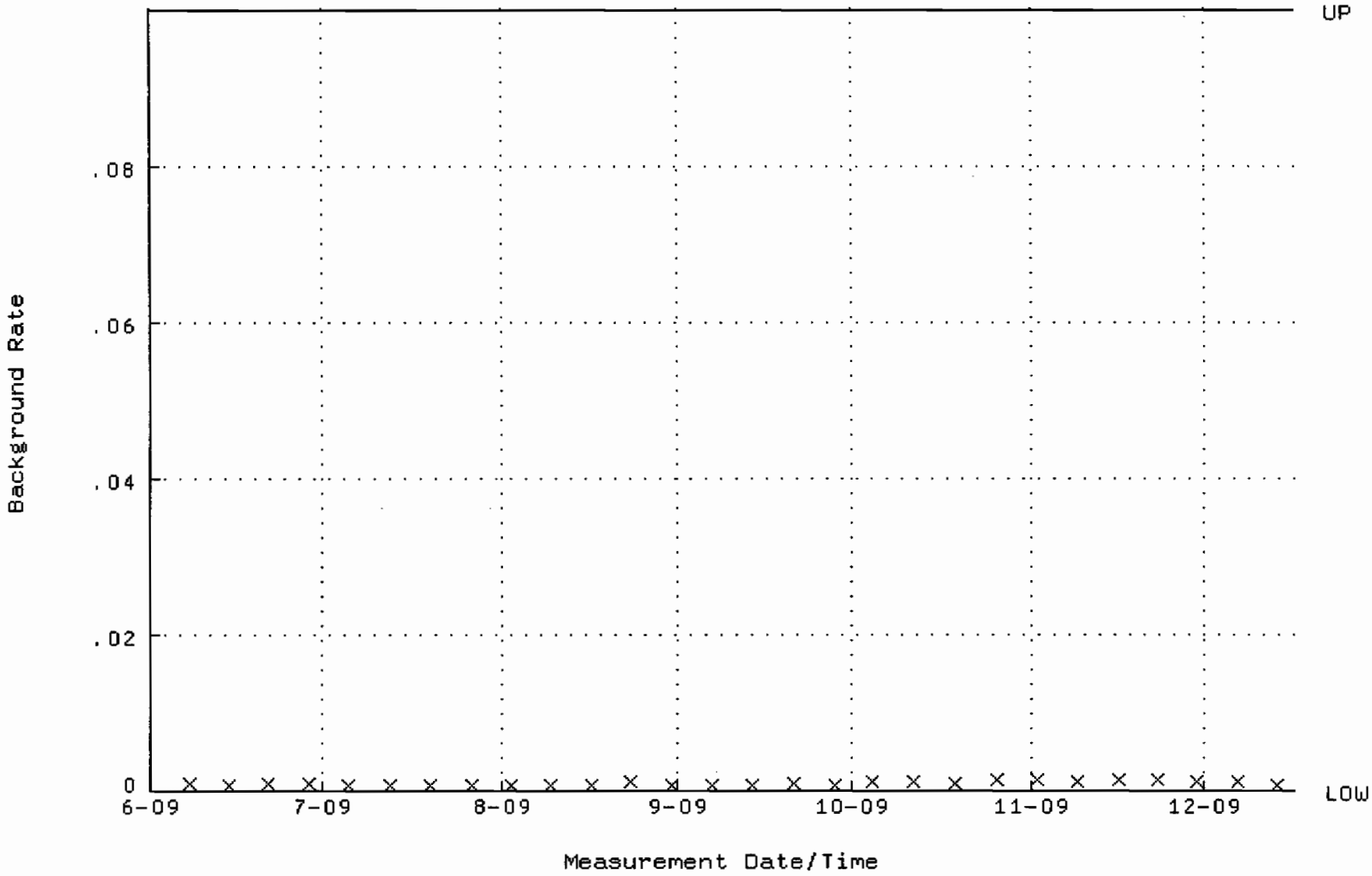
QA filename : DKA100:[ENV_ALPHA.QA.W]W159.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUN-2009 10:38:17 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.242851 through 0.262851



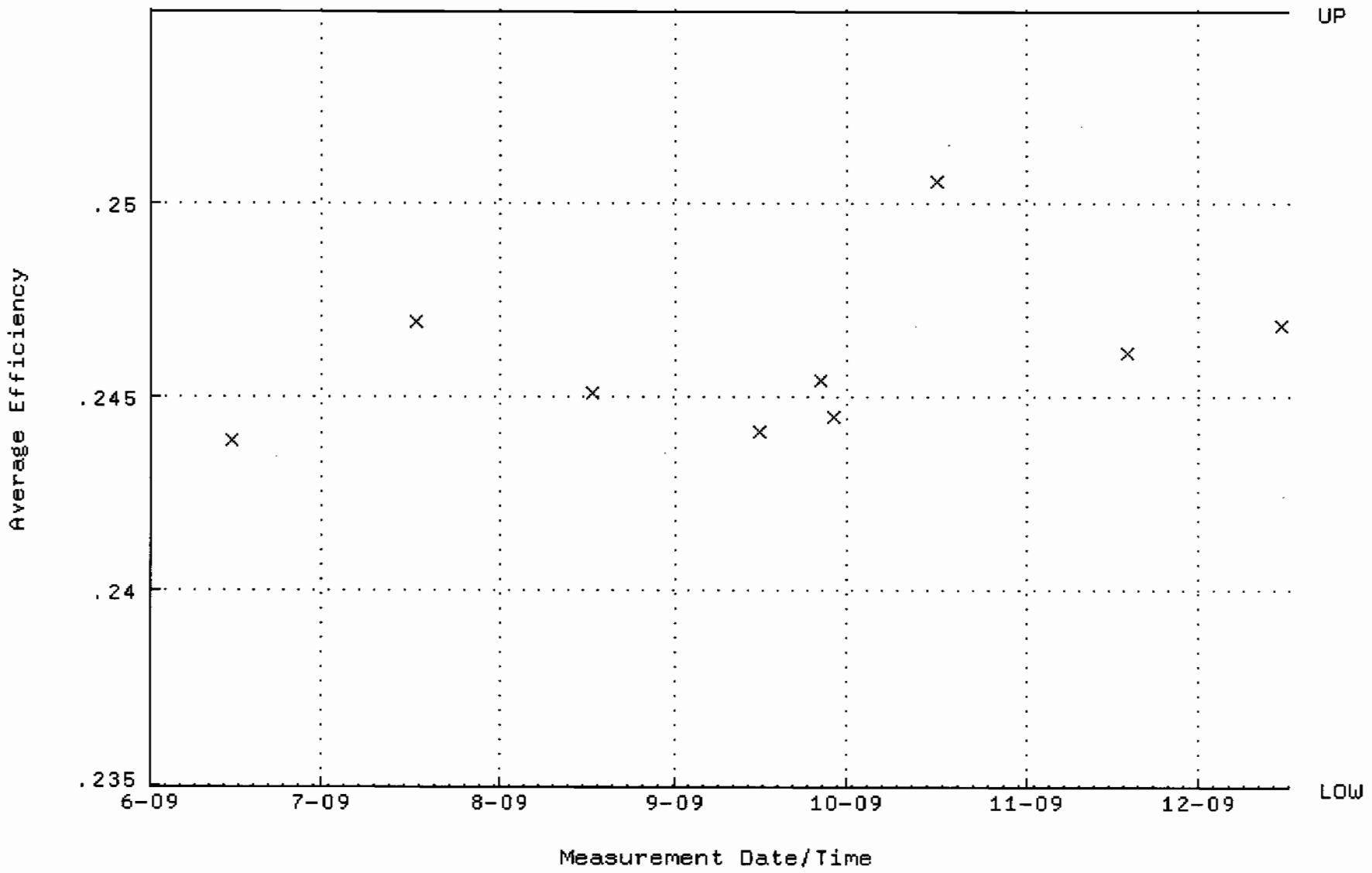
QA filename : DKA100:[ENV_ALPHA.QA.W]W159.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUN-2009 10:38:17 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 80.7870 through 89.2909



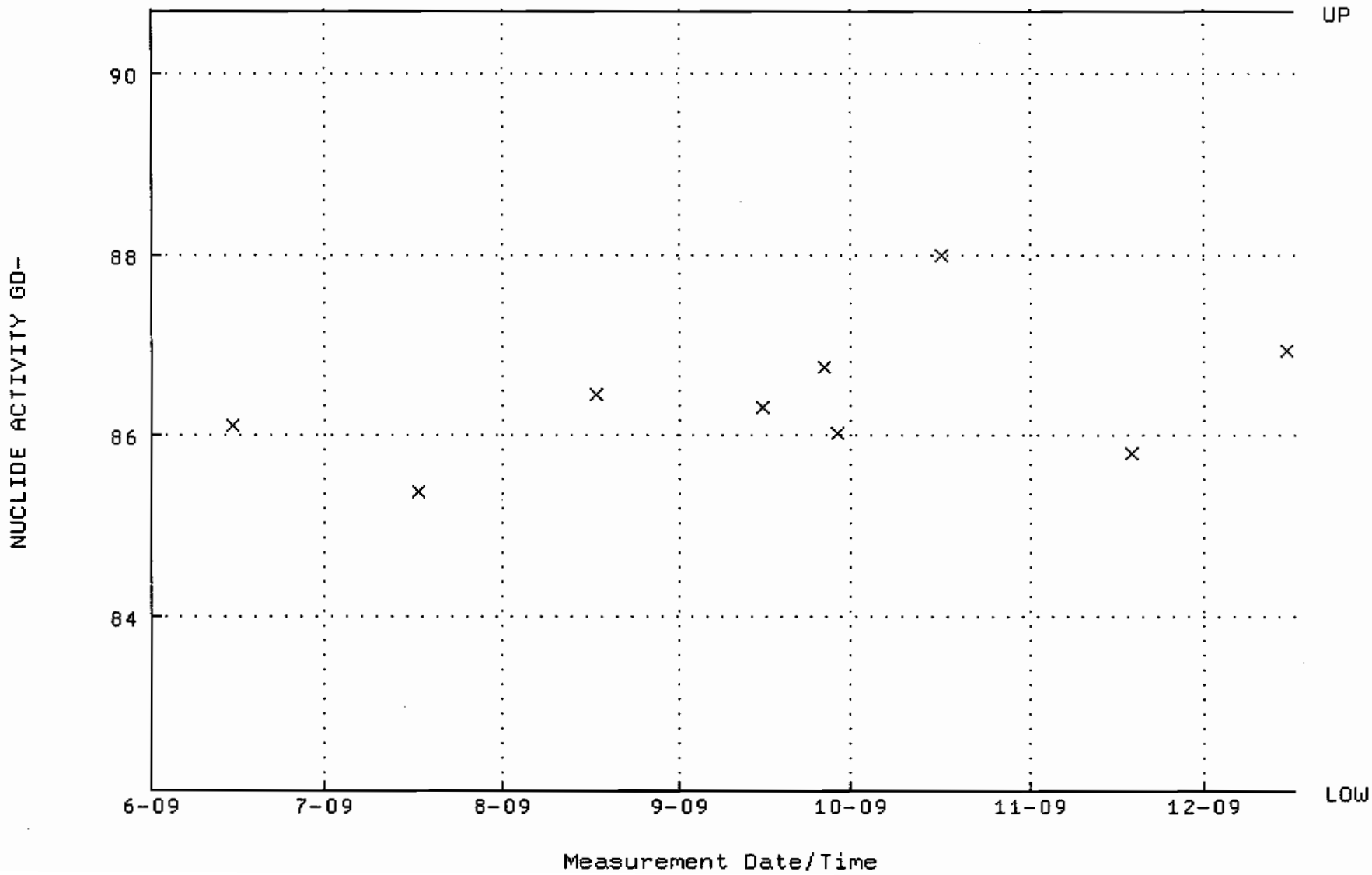
QA filename : DKA100:[ENV_ALPHA.QA.B]B159.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:11:53 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



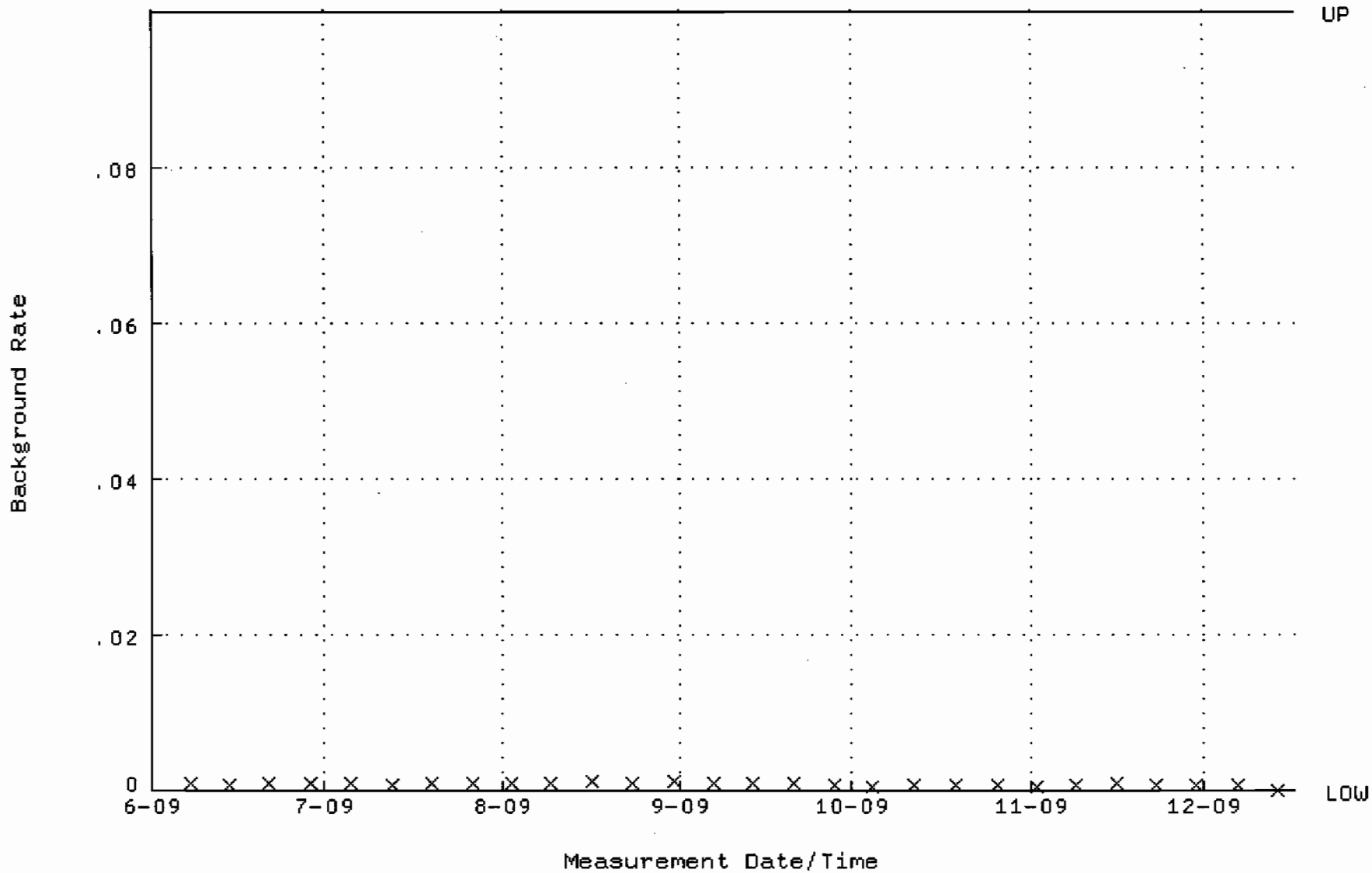
QA filename : DKA100:[ENV_ALPHA.QA.W]W160.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUN-2009 10:38:22 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.234941 through 0.254941



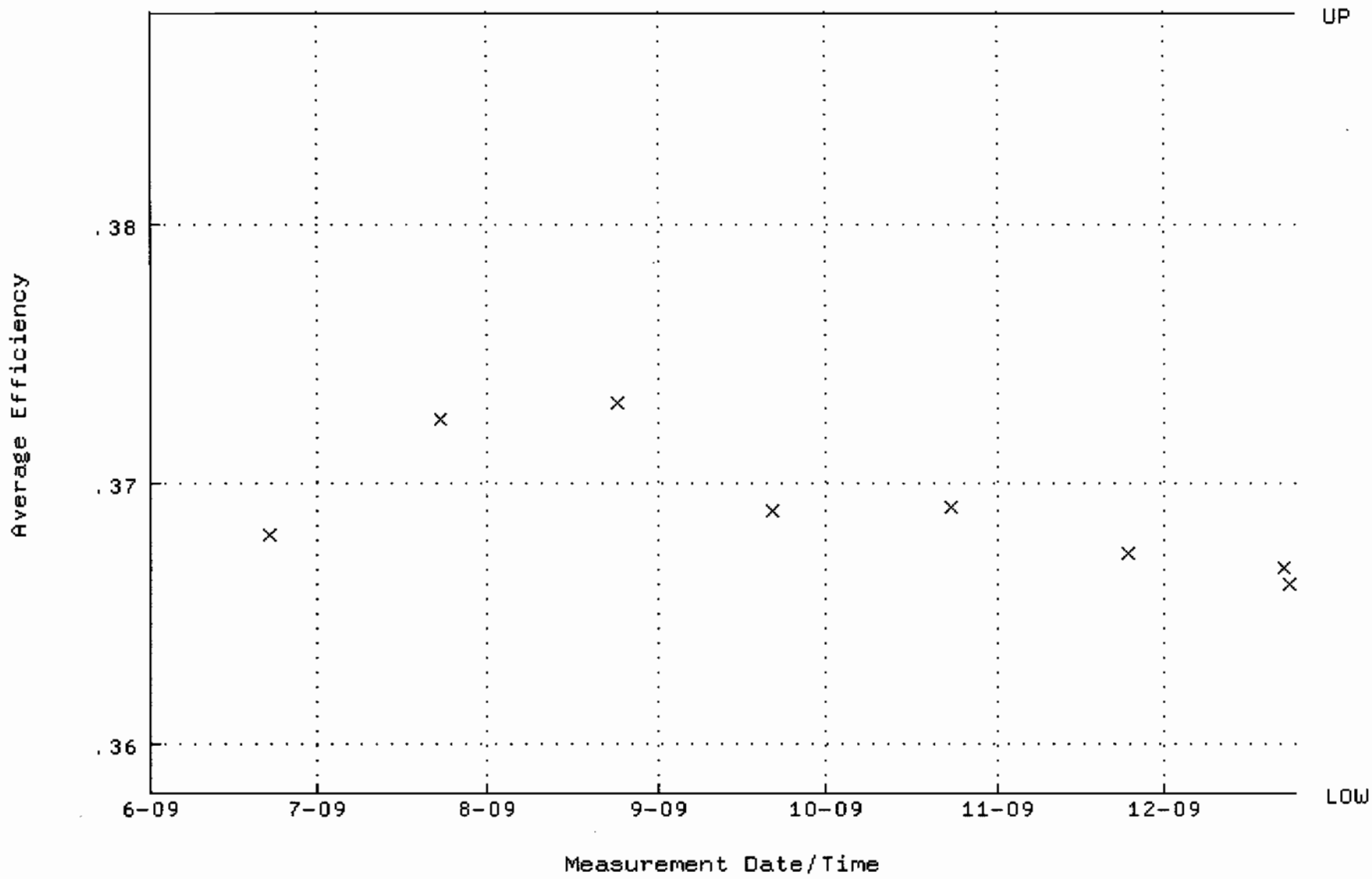
QA filename : DKA100:[ENV_ALPHA.QA.W]W160.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUN-2009 10:38:22 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 82.0594 through 90.6972



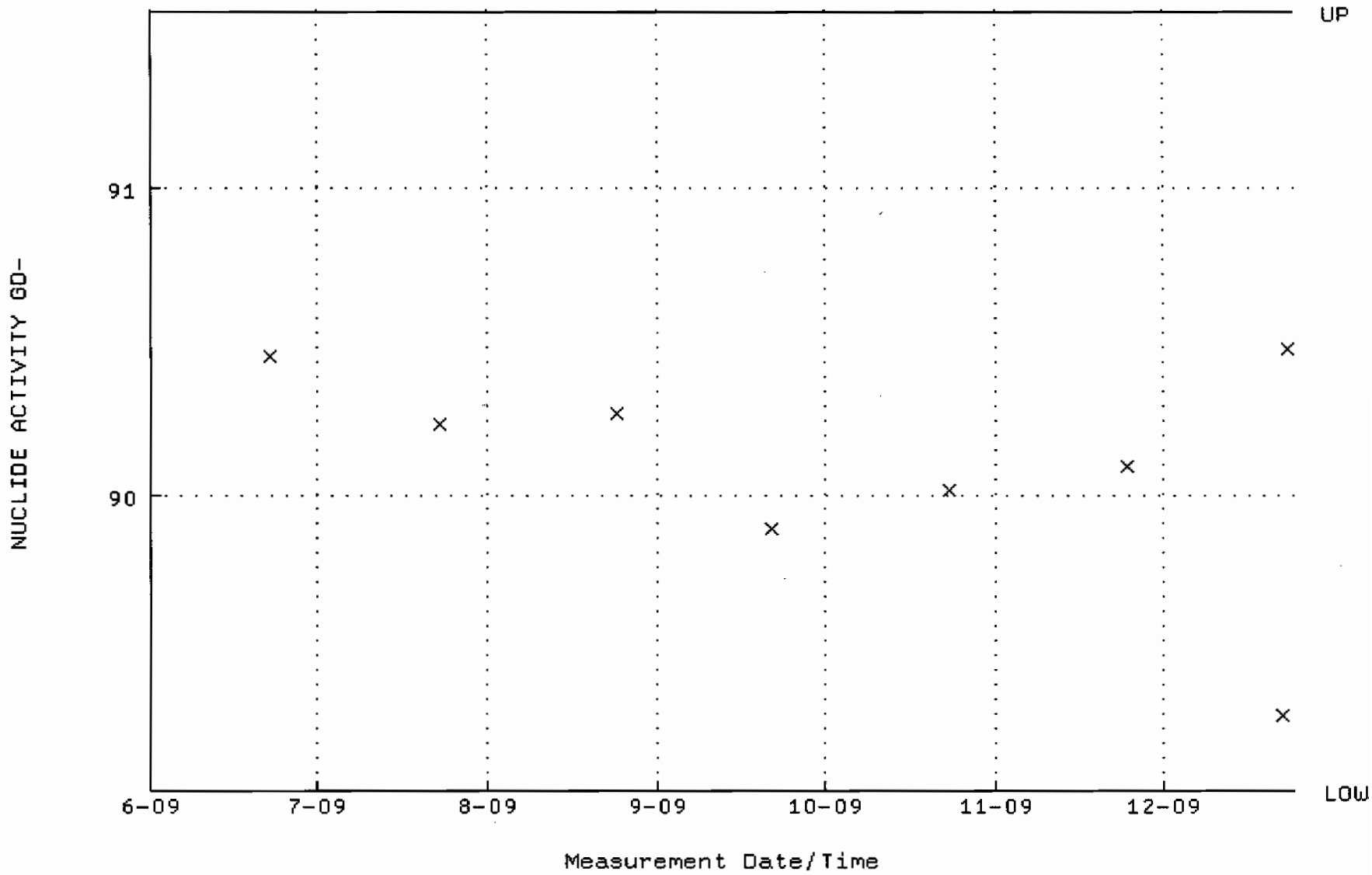
QA filename : DKA100:[ENV_ALPHA.QA.B]B160.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:11:57 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



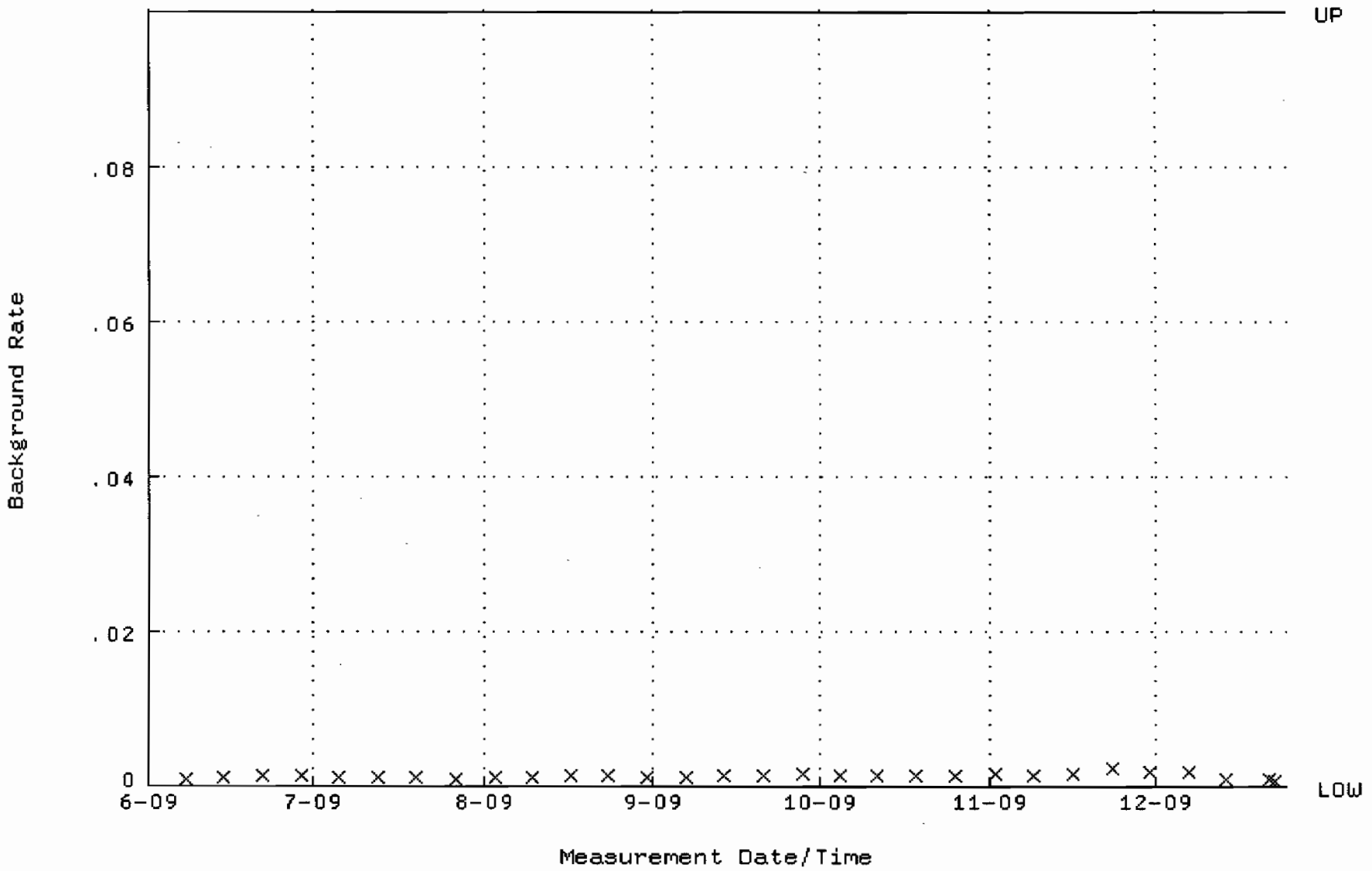
QA filename : DKA100:[ENV_ALPHA.QA.W]W161.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:48:54 through 24-DEC-2009 12:00:00
Lower/Upper Lmts: 0.358070 through 0.388144



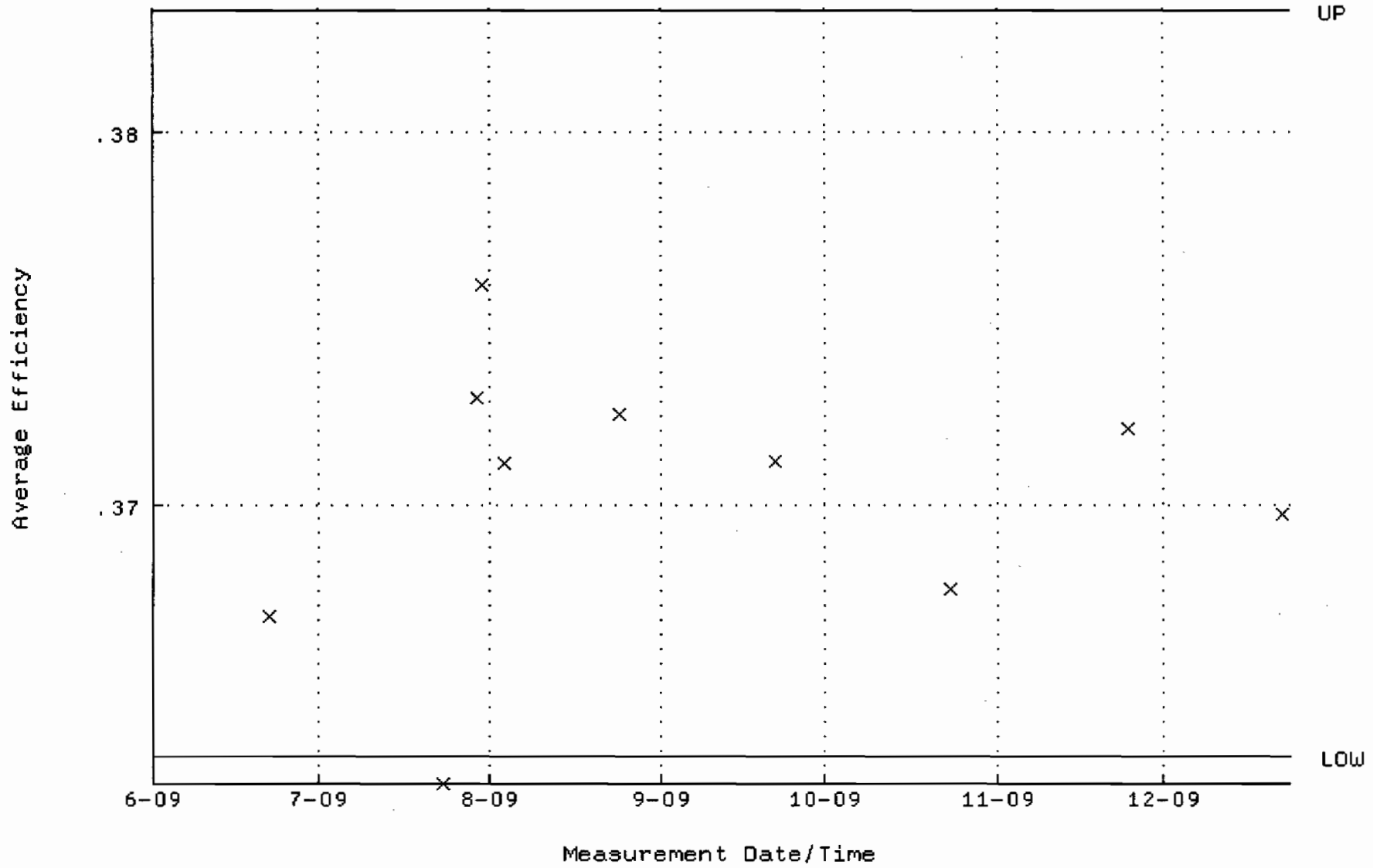
QA filename : DKA100:[ENV_ALPHA.QA.W]W161.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:48:54 through 24-DEC-2009 12:00:00
Lower/Upper Lmts: 89.0418 through 91.5702



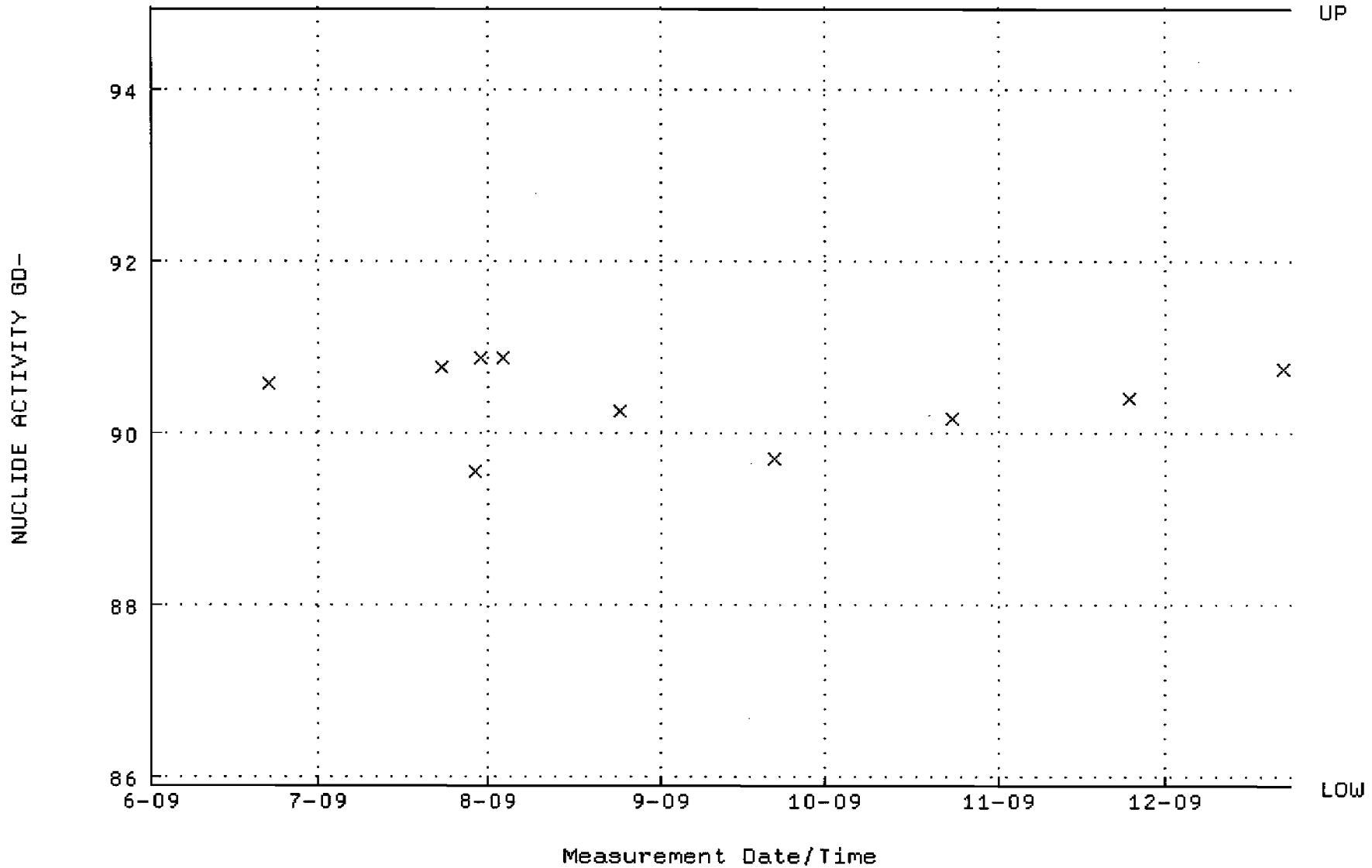
QA filename : DKA100:[ENV_ALPHA.QA.B]B161.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:00 through 24-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



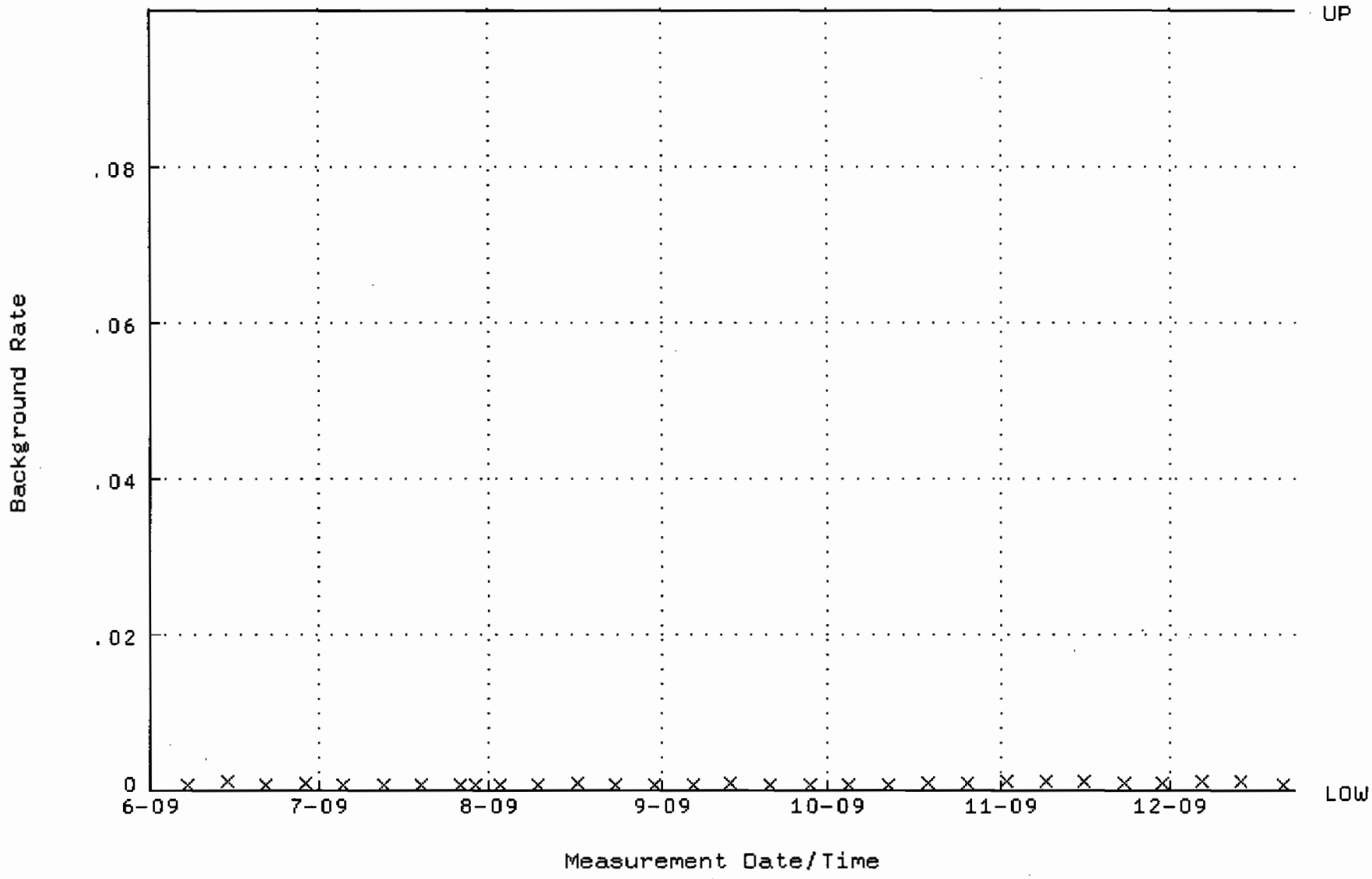
QA filename : DKA100:[ENV_ALPHA.QA.W]W162.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:01 through 23-DEC-2009 12:00:00
Lower/Upper Lmts: 0.363287 through 0.383287



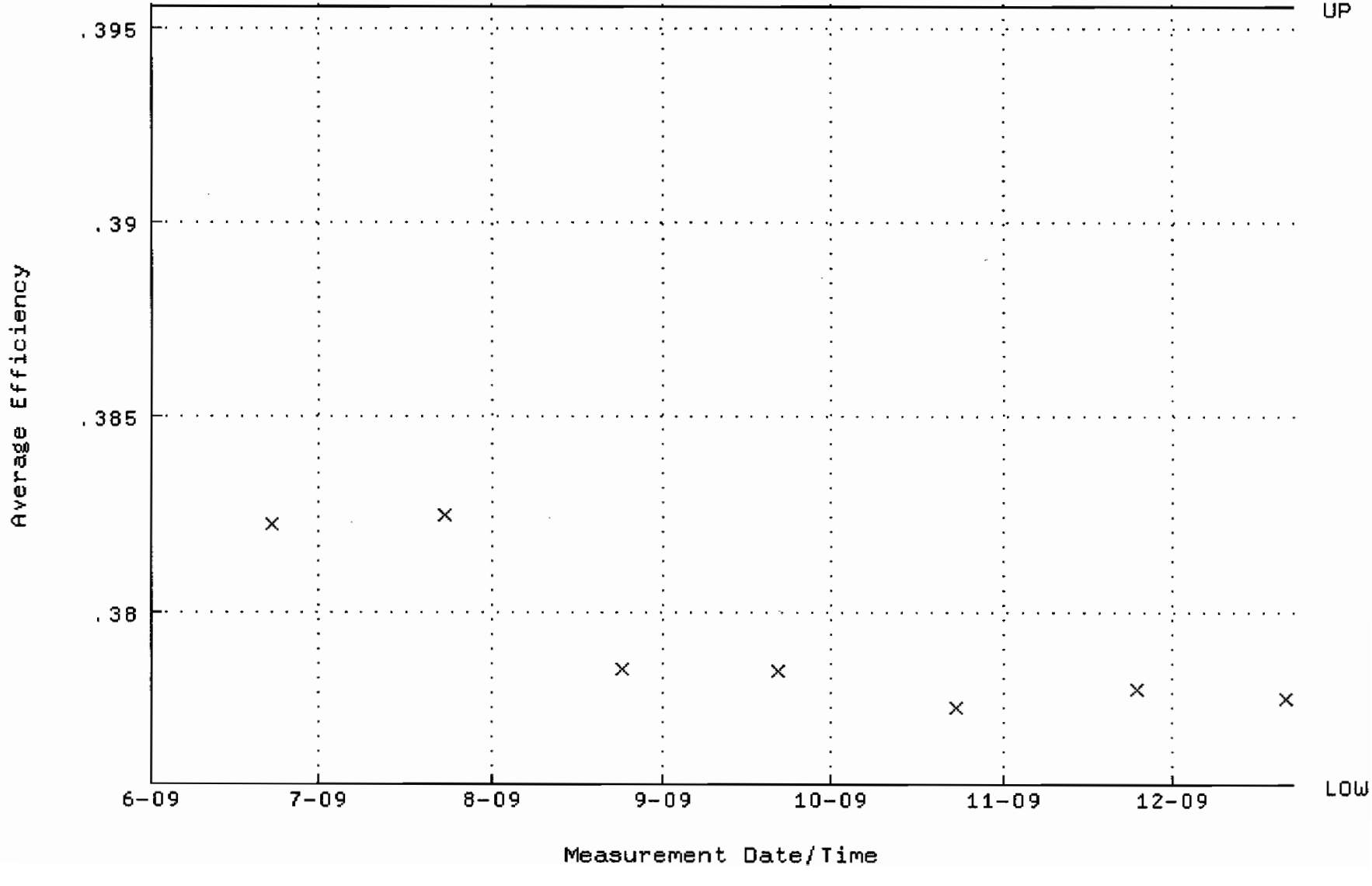
QA filename : DKA100:[ENV_ALPHA.QA.W]W162.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:01 through 23-DEC-2009 12:00:00
Lower/Upper Lmts: 85.8969 through 94.9387



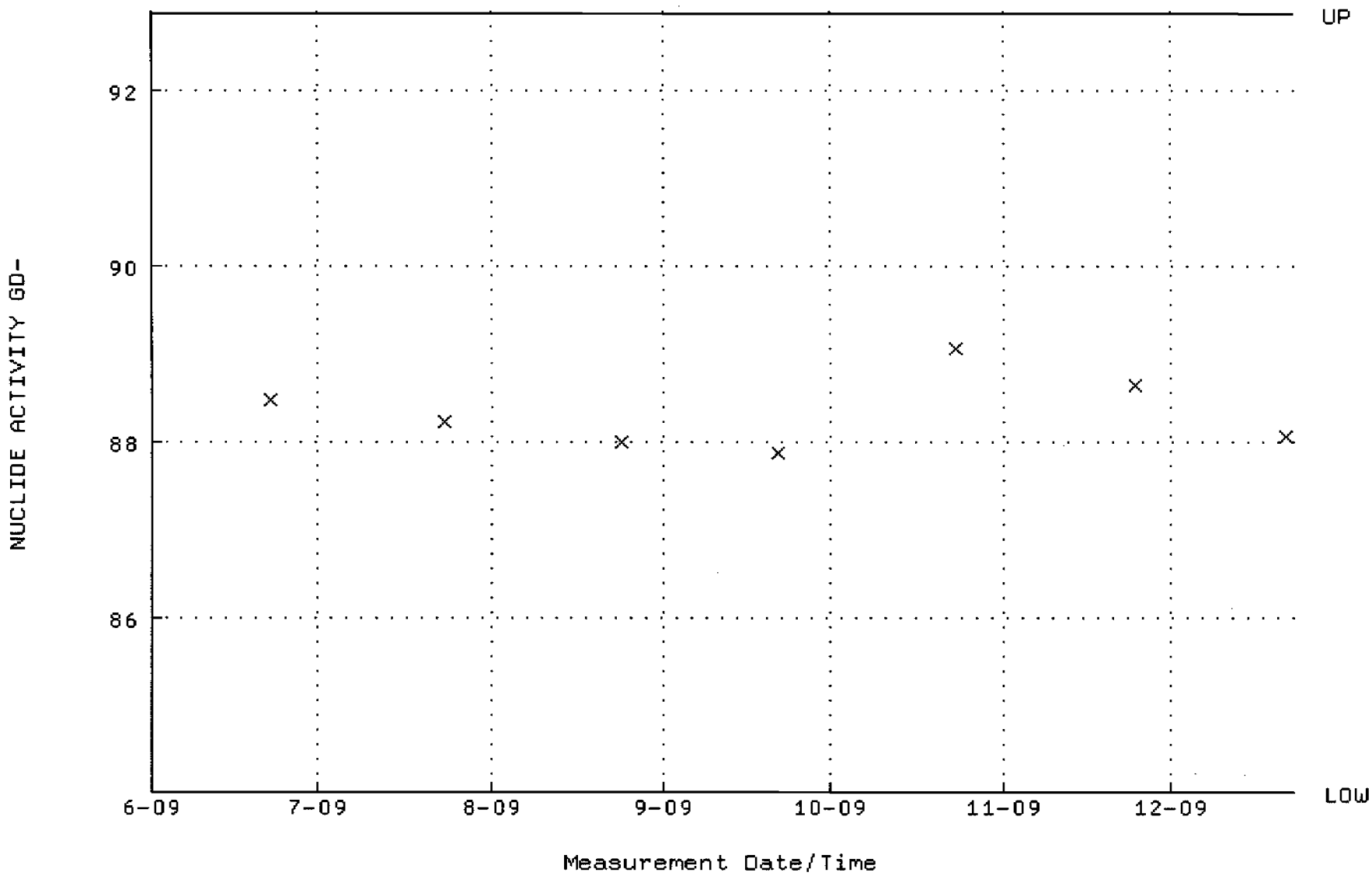
QA filename : DKA100:[ENV_ALPHA.QA.B]B162.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:04 through 23-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



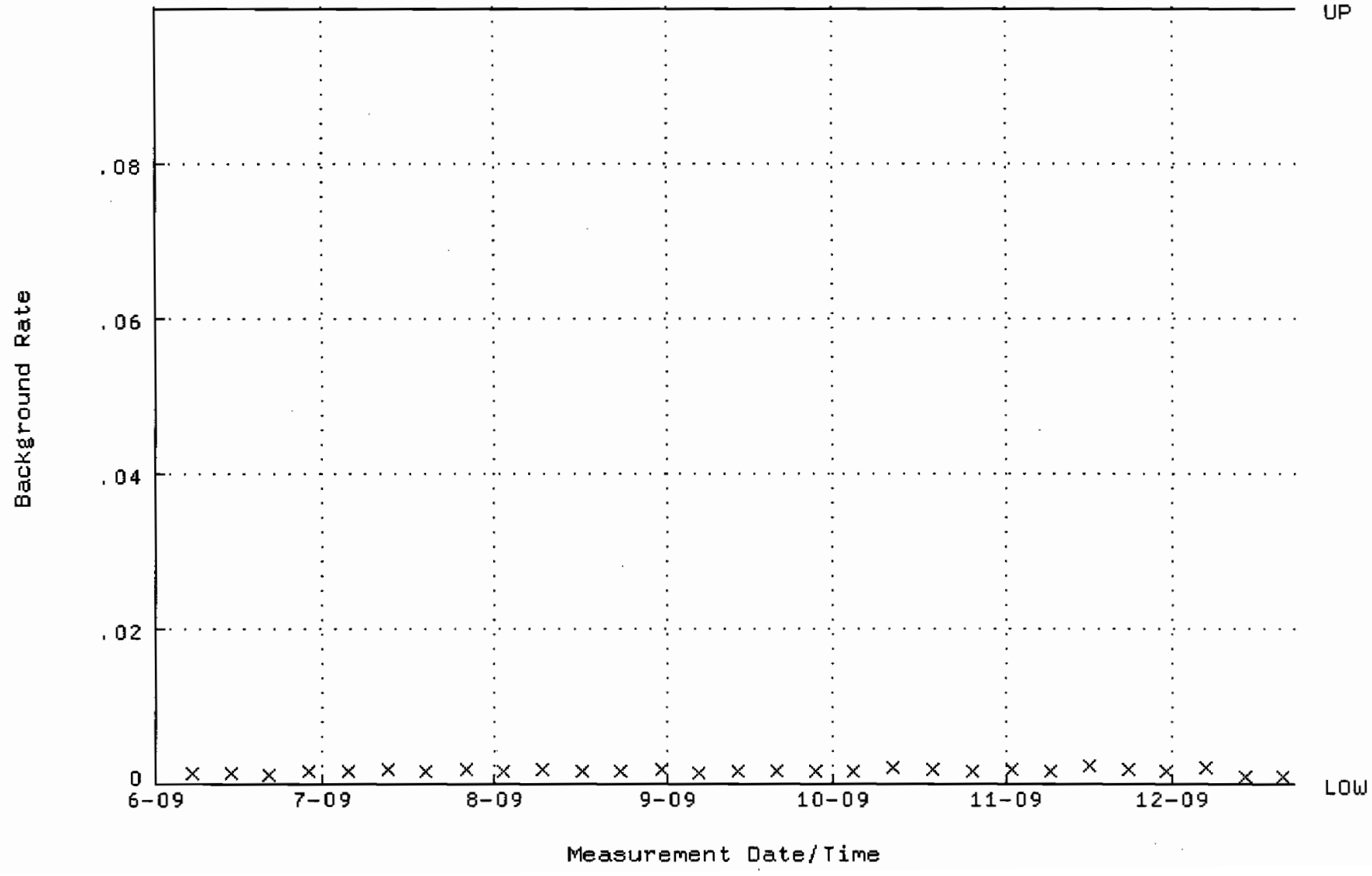
QA filename : DKA100:[ENV_ALPHA.QA.W]W163.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:05 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.375557 through 0.395557



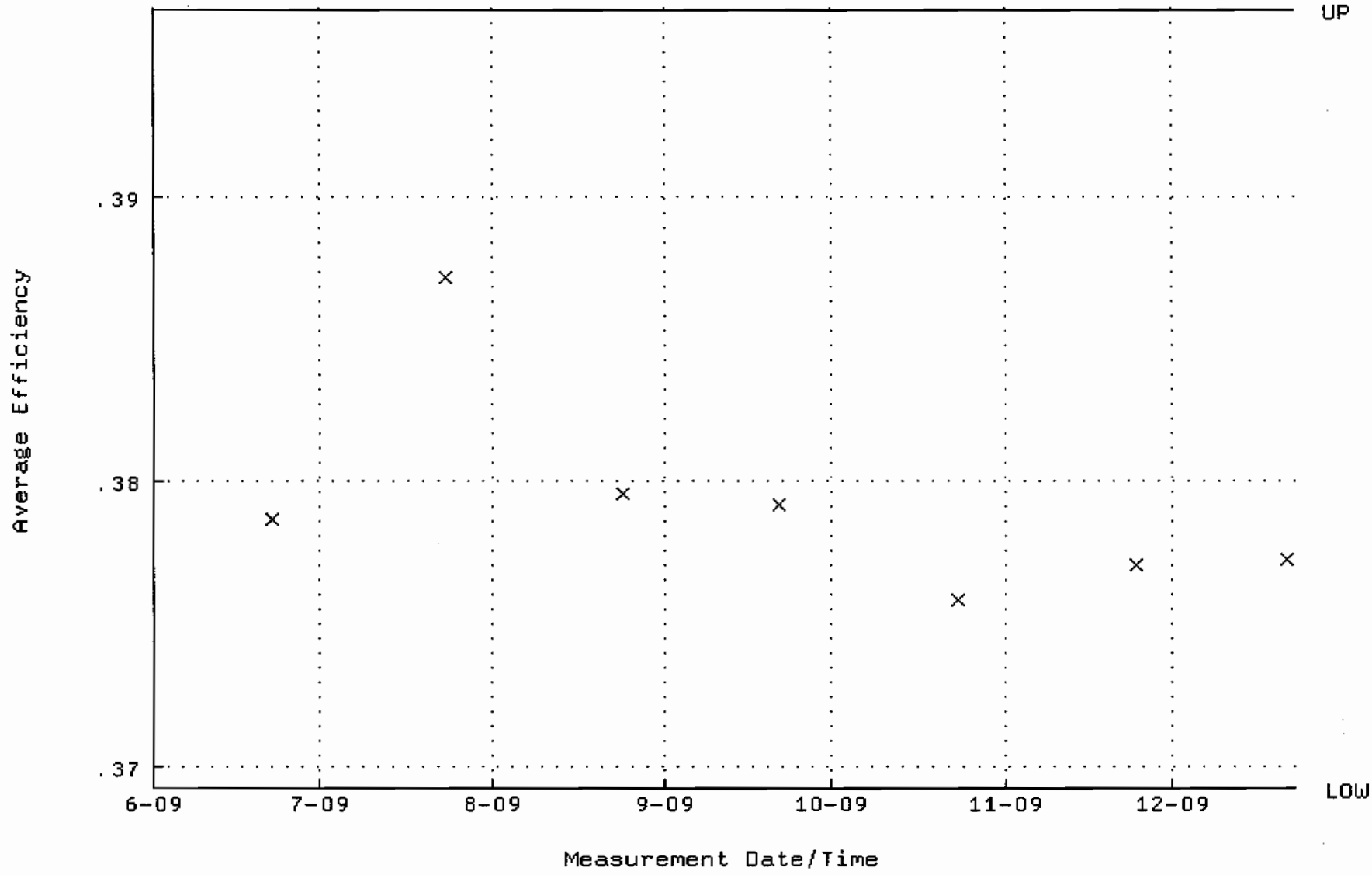
QA filename : DKA100:[ENV_ALPHA.QA.W]W163.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:05 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 84.0322 through 92.8777



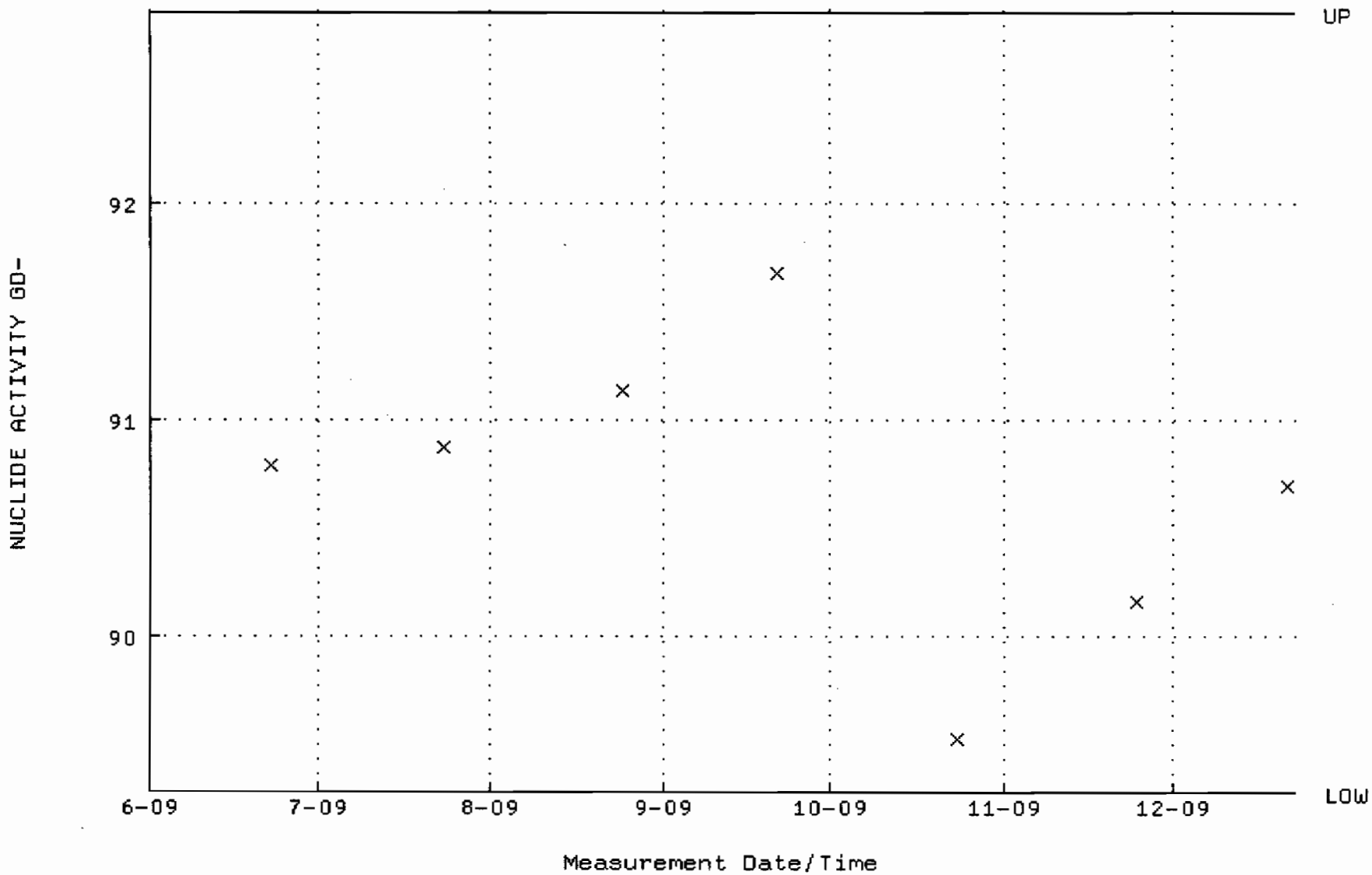
QA filename : DKA100:[ENV_ALPHA.QA.B]B163.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:08 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



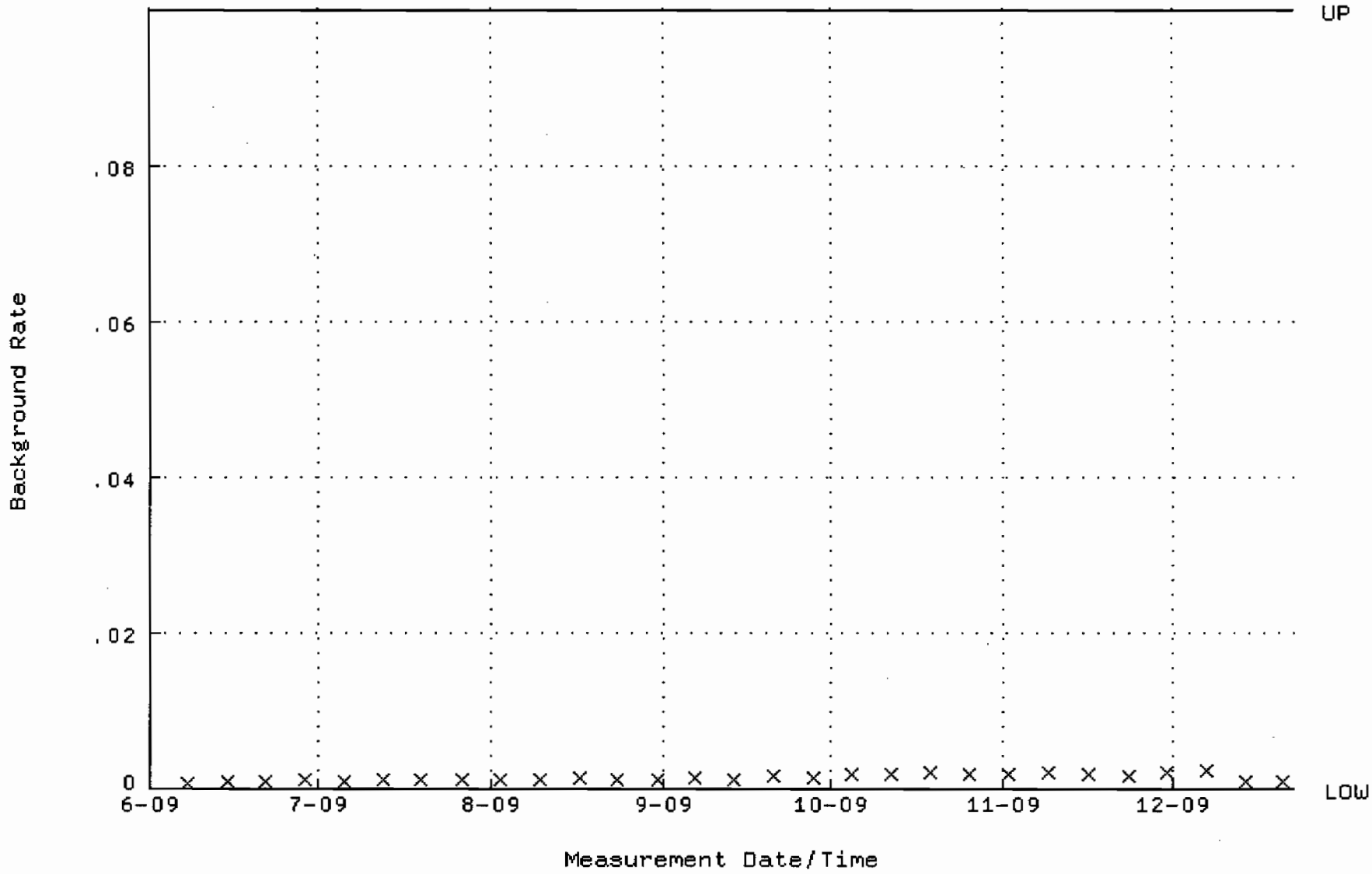
QA filename : DKA100:[ENV_ALPHA.QA.W]W164.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:10 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.369199 through 0.396555



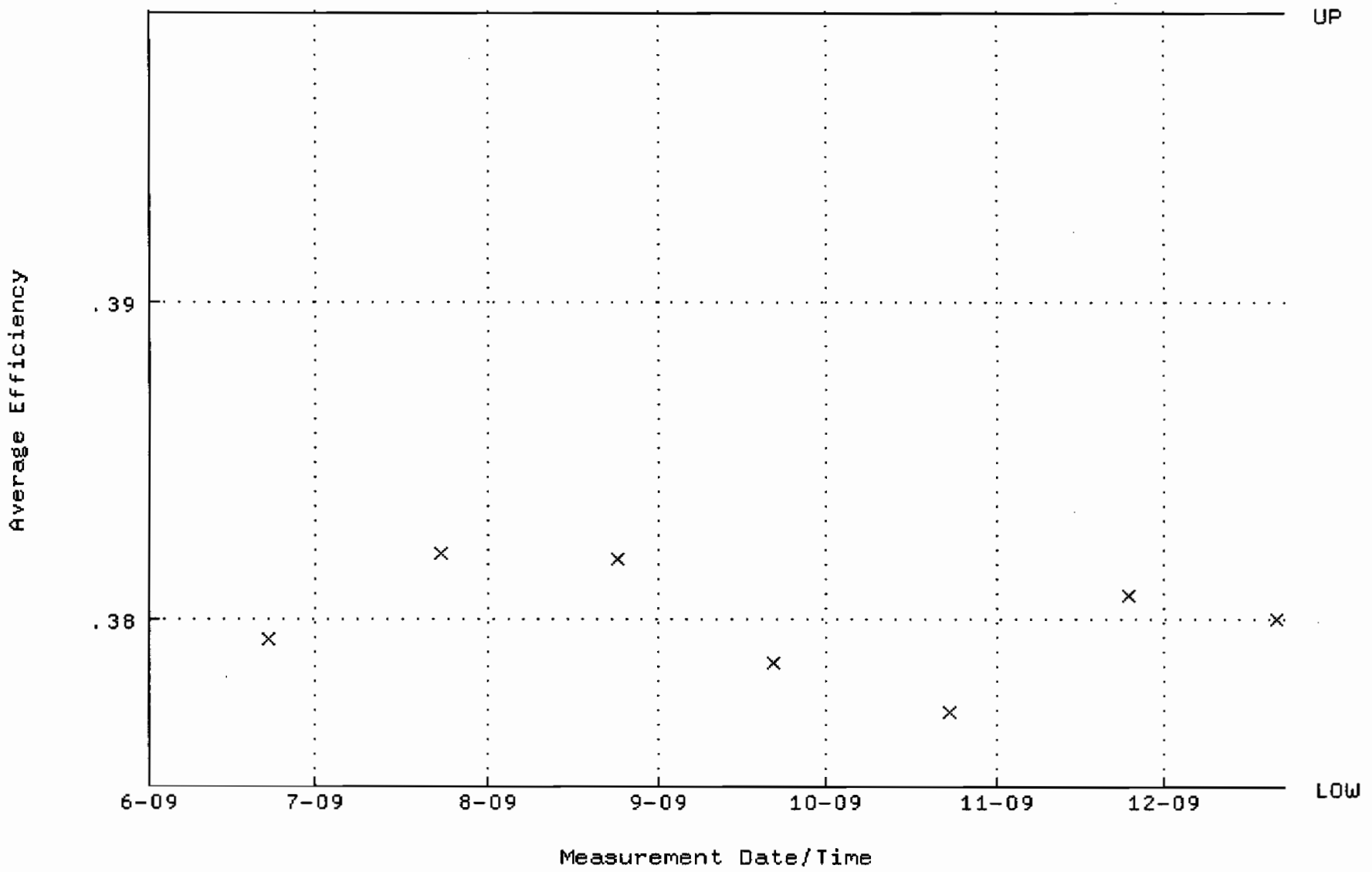
QA filename : DKA100:[ENV_ALPHA.QA.W]W164.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:10 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 89.2764 through 92.8786



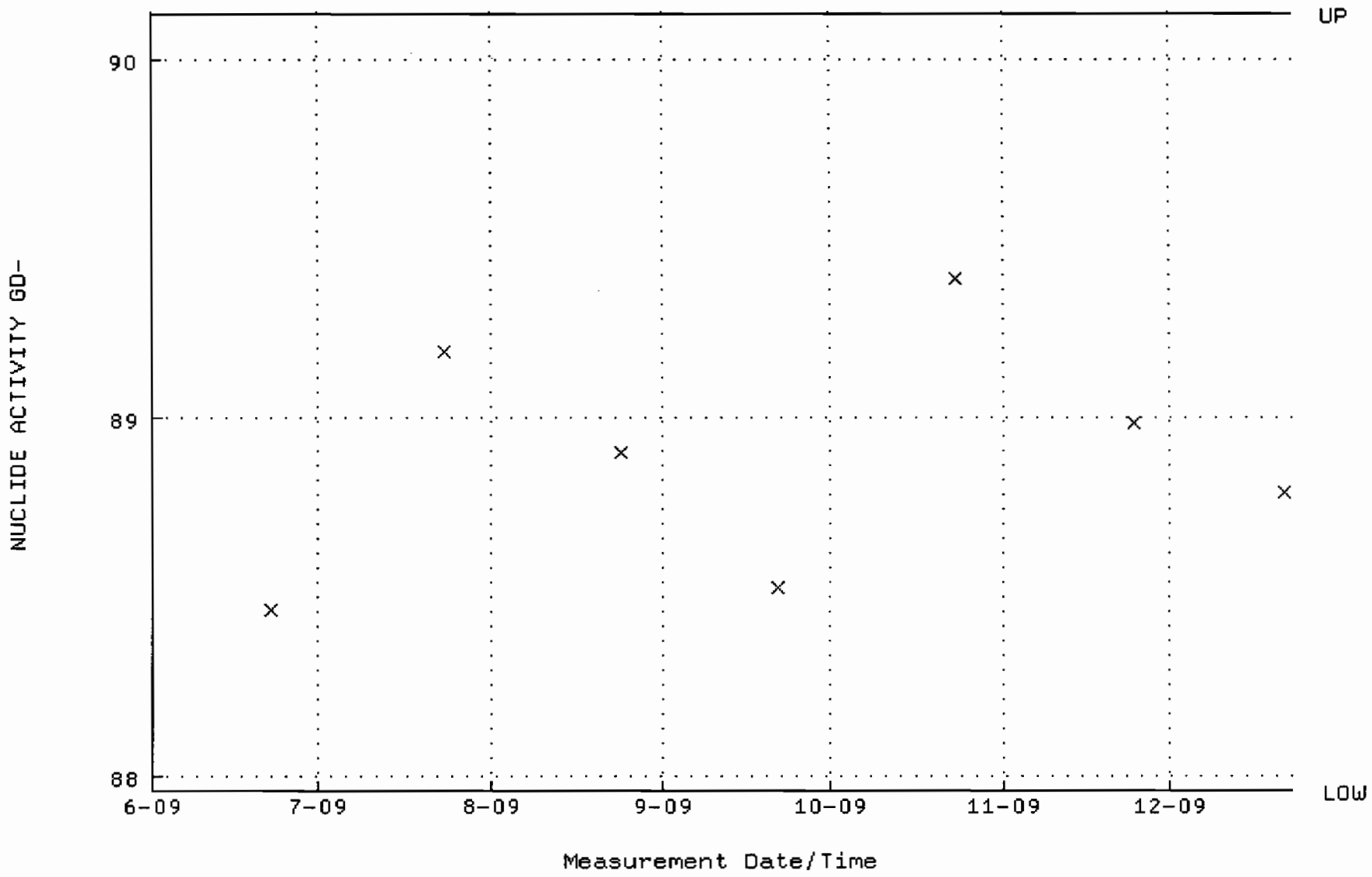
QA filename : DKA100:[ENV_ALPHA.QA.B]B164.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:13 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



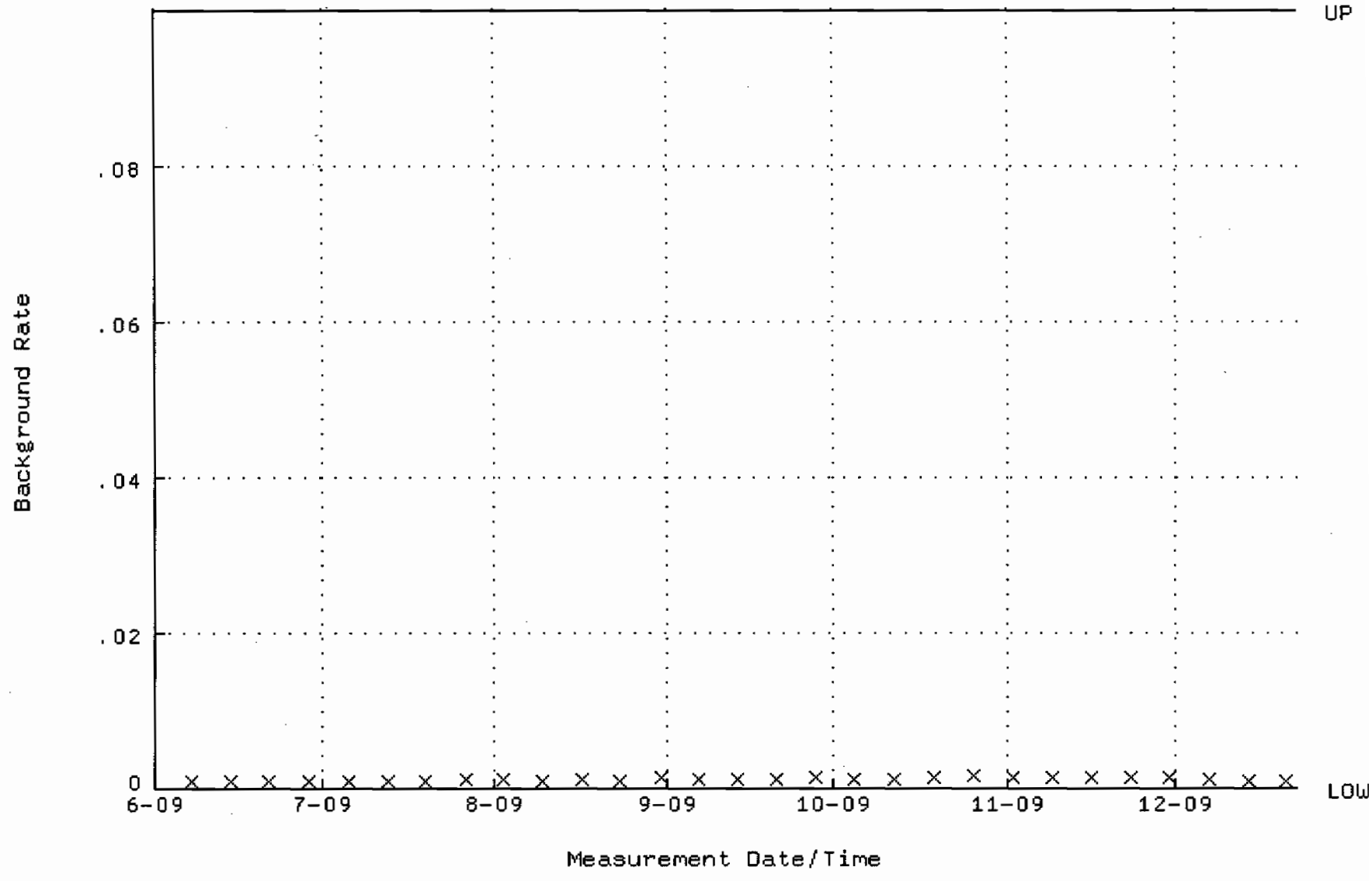
QA filename : DKA100:[ENV_ALPHA.QA.W]W165.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:16 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.374689 through 0.399127



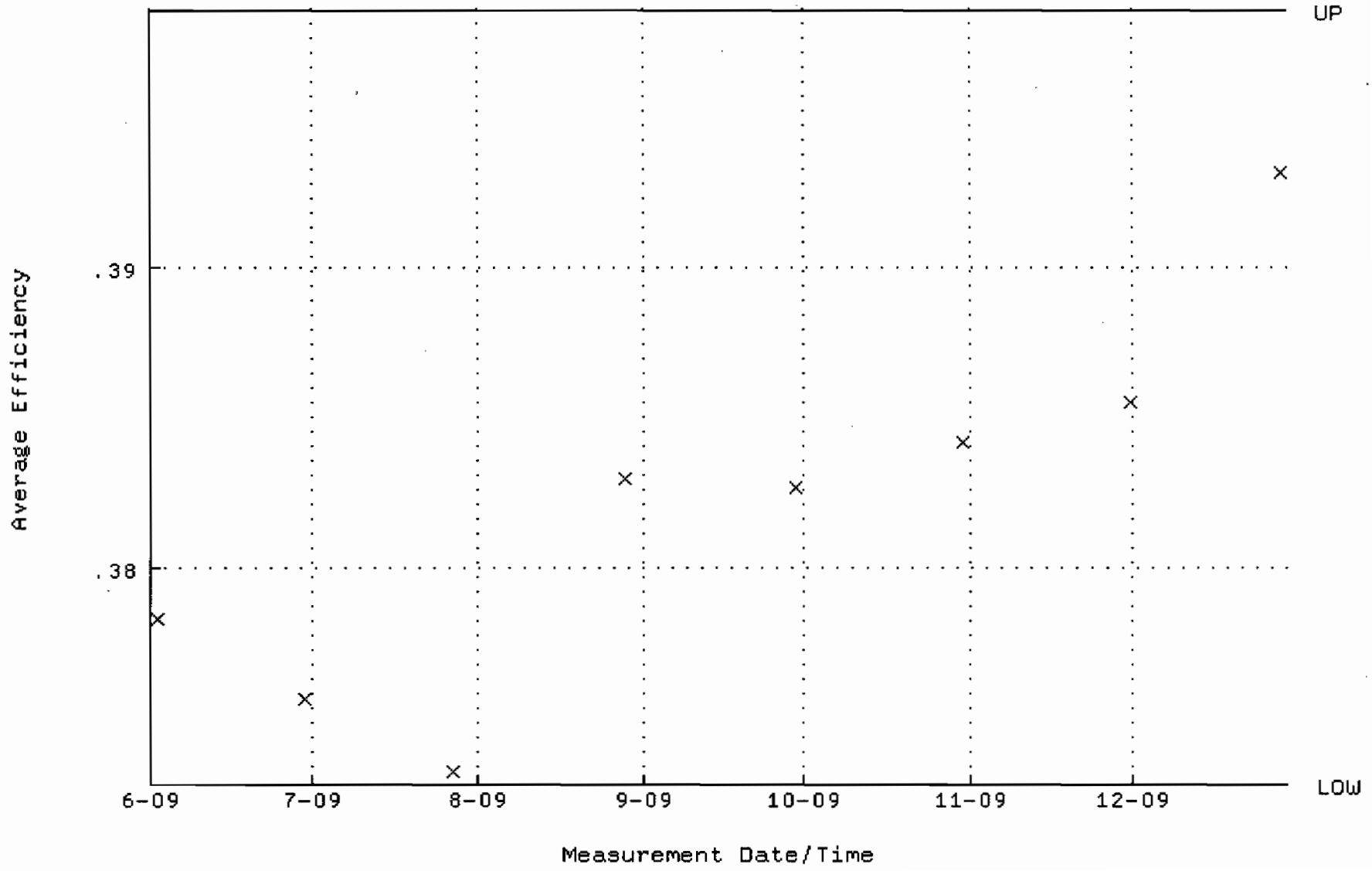
QA filename : DKA100:[ENV_ALPHA.QA.W]W165.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:16 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 87.9613 through 90.1269



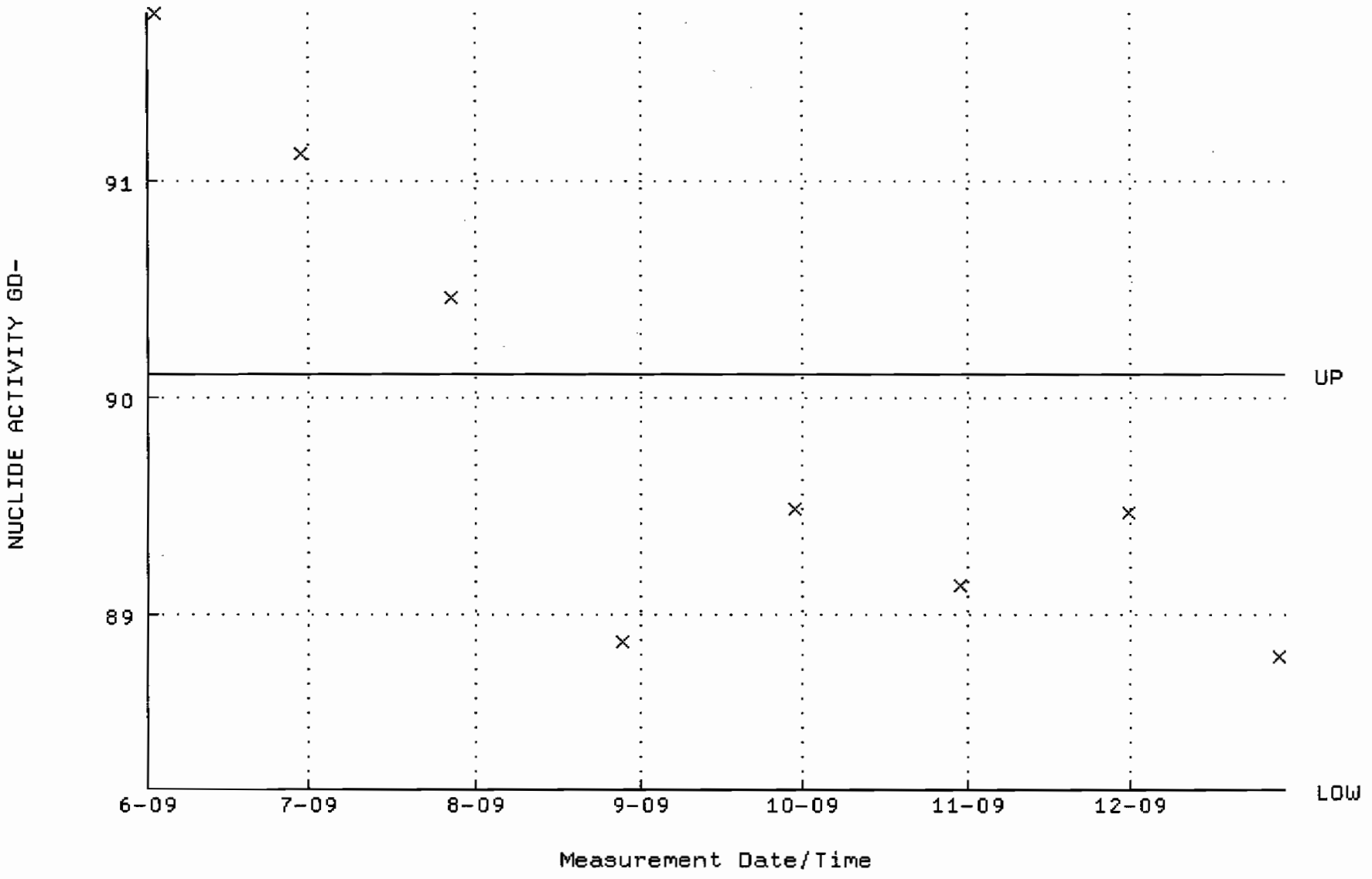
QA filename : DKA100:[ENV_ALPHA.QA.B]B165.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:17 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



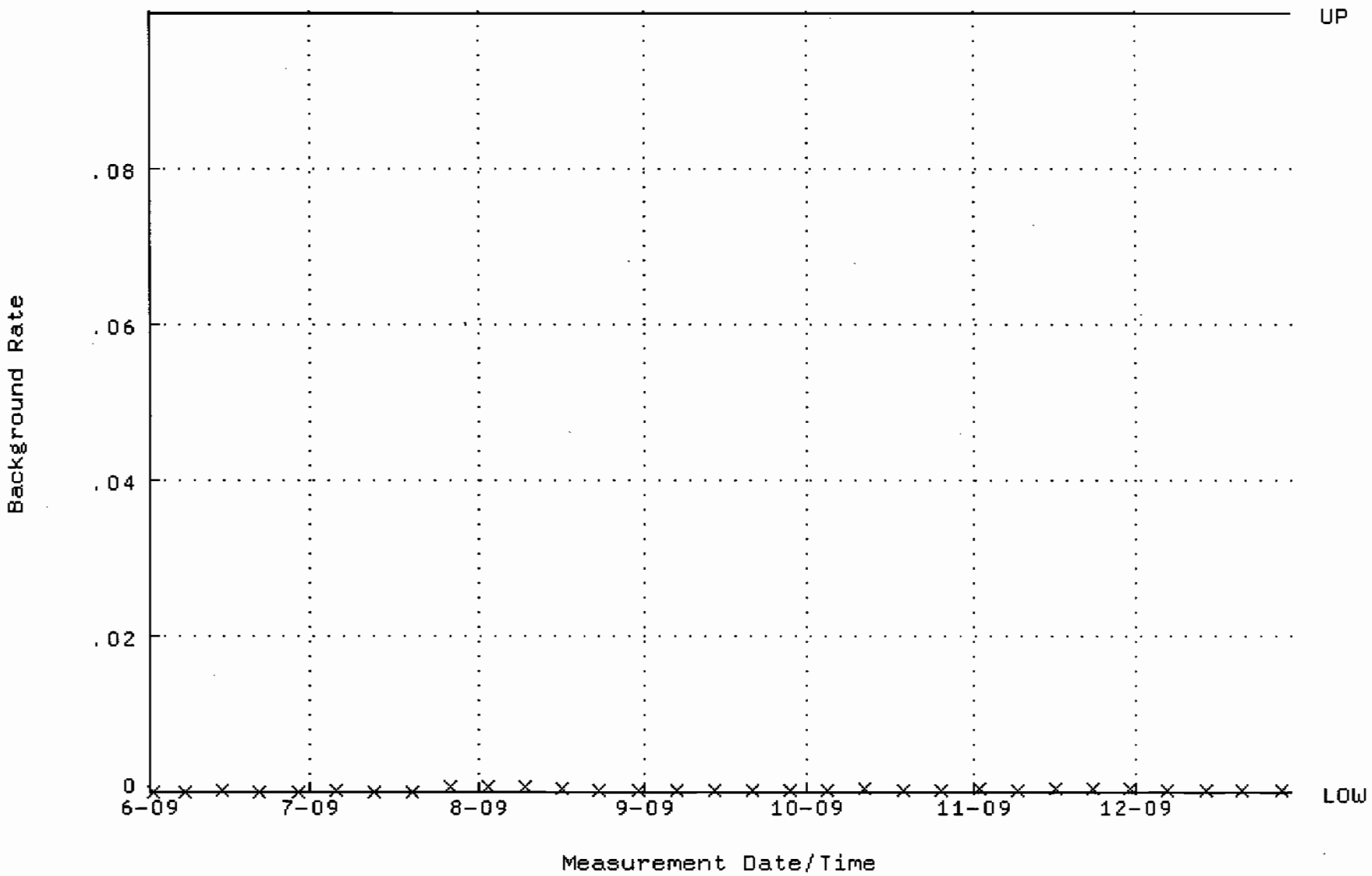
QA filename : DKA100:[ENV_ALPHA.QA.W]W216.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:17:43 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.372749 through 0.398591



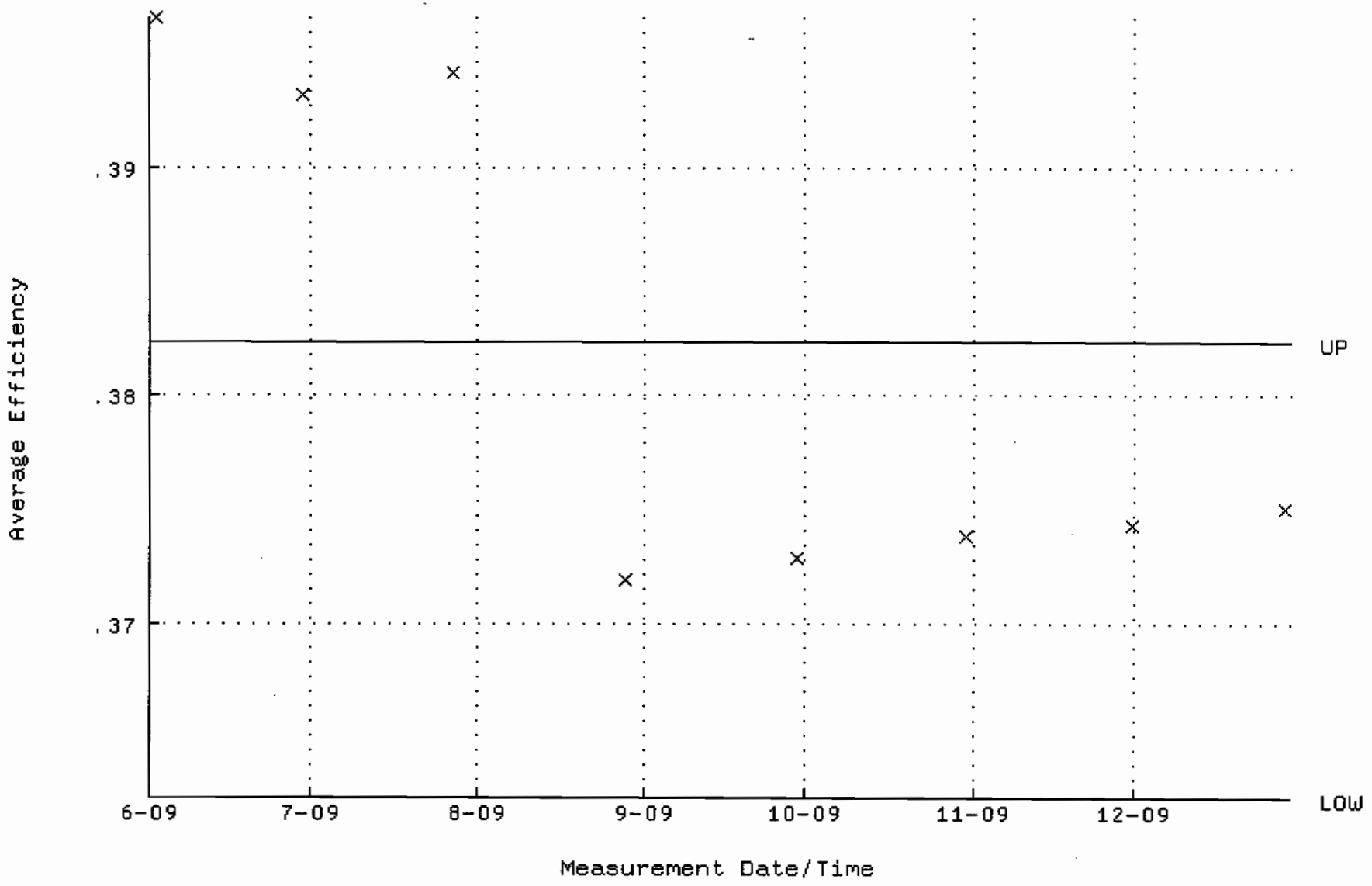
QA filename : DKA100:[ENV_ALPHA.QA.W]W216.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:17:43 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 88.1955 through 90.1147



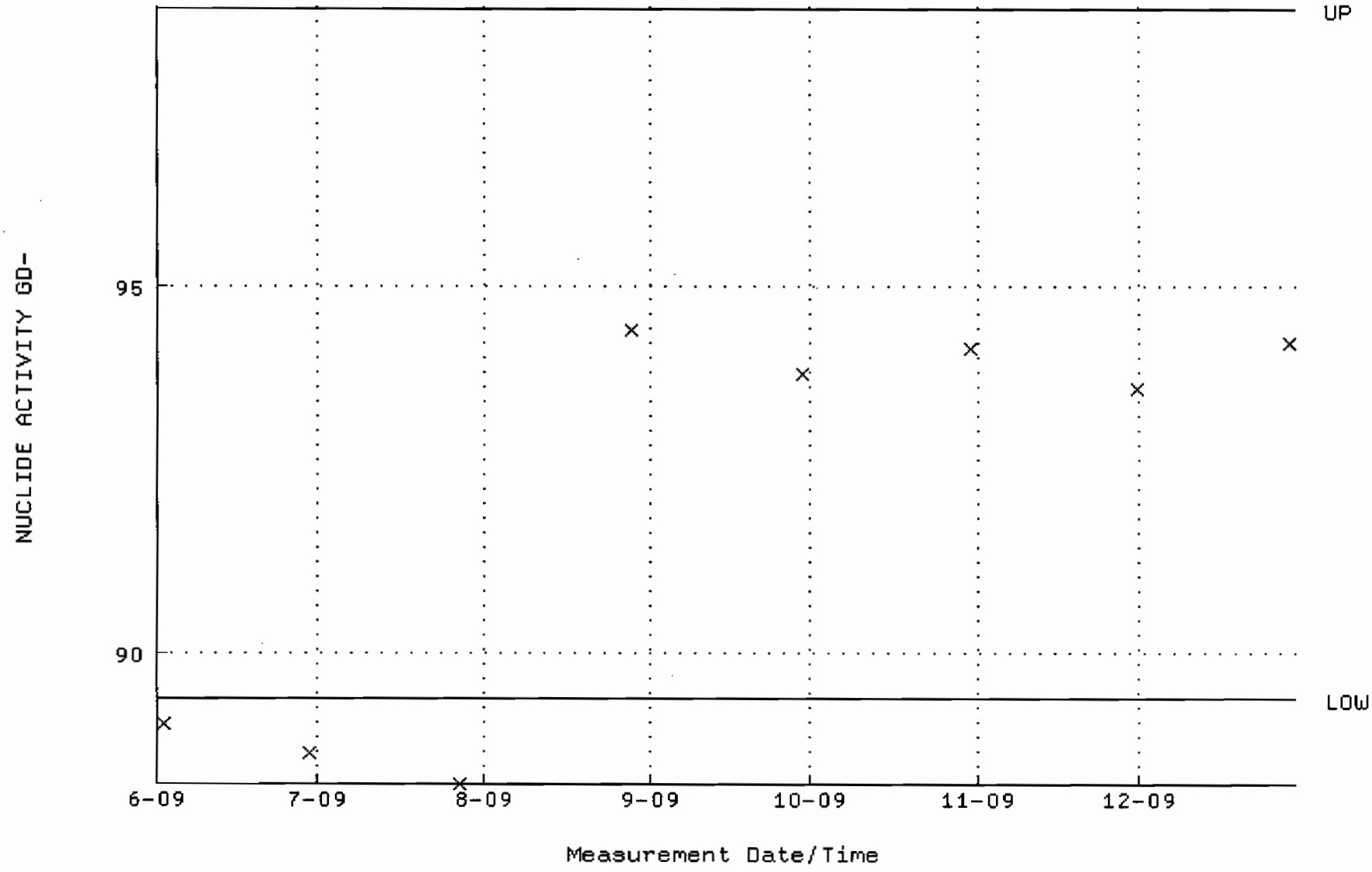
QA filename : DKA100:[ENV_ALPHA.QA.B]B216.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:02 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



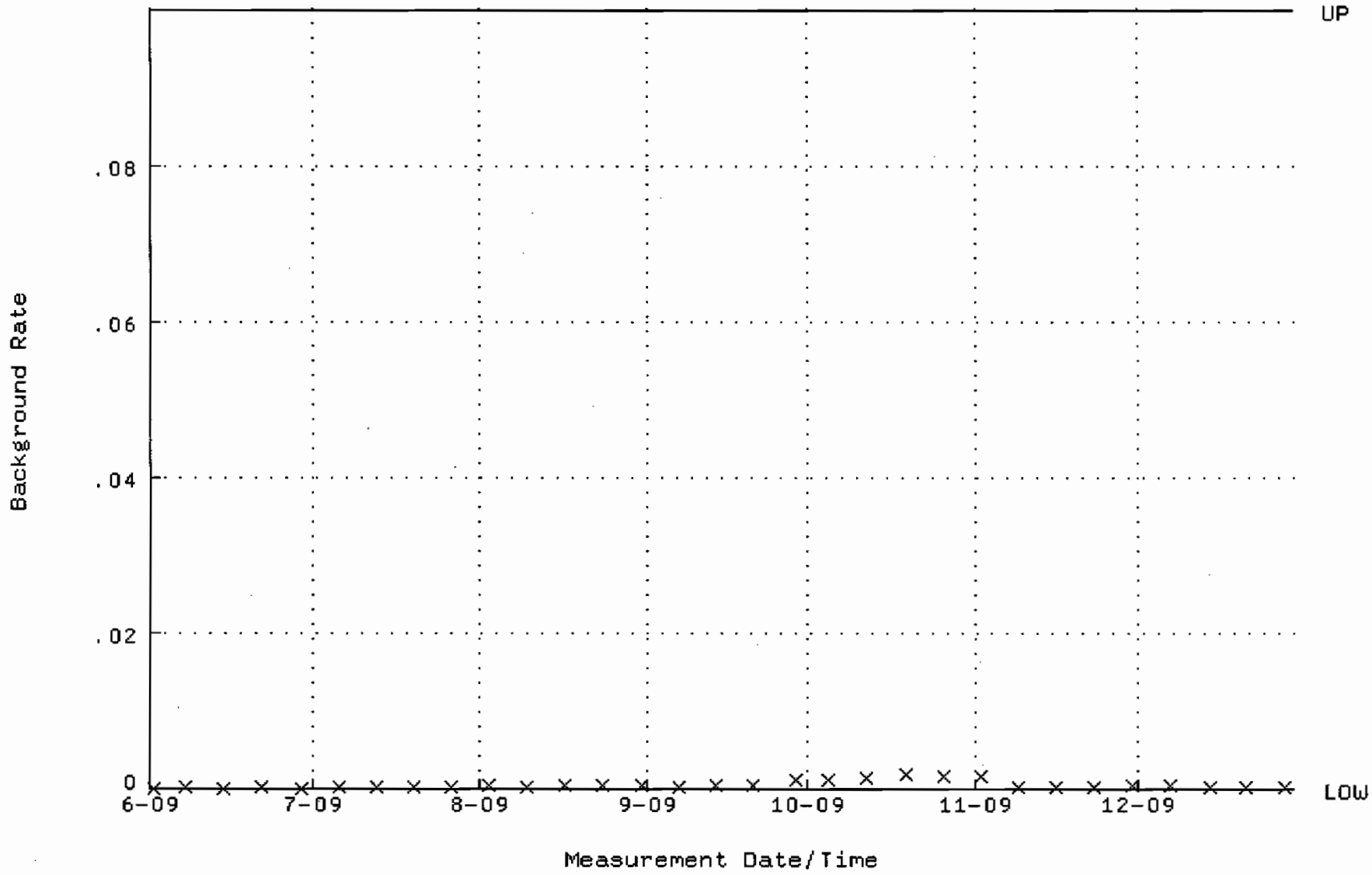
QA filename : DKA100:[ENV_ALPHA.QA.W]W218.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:17:54 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.362380 through 0.382380



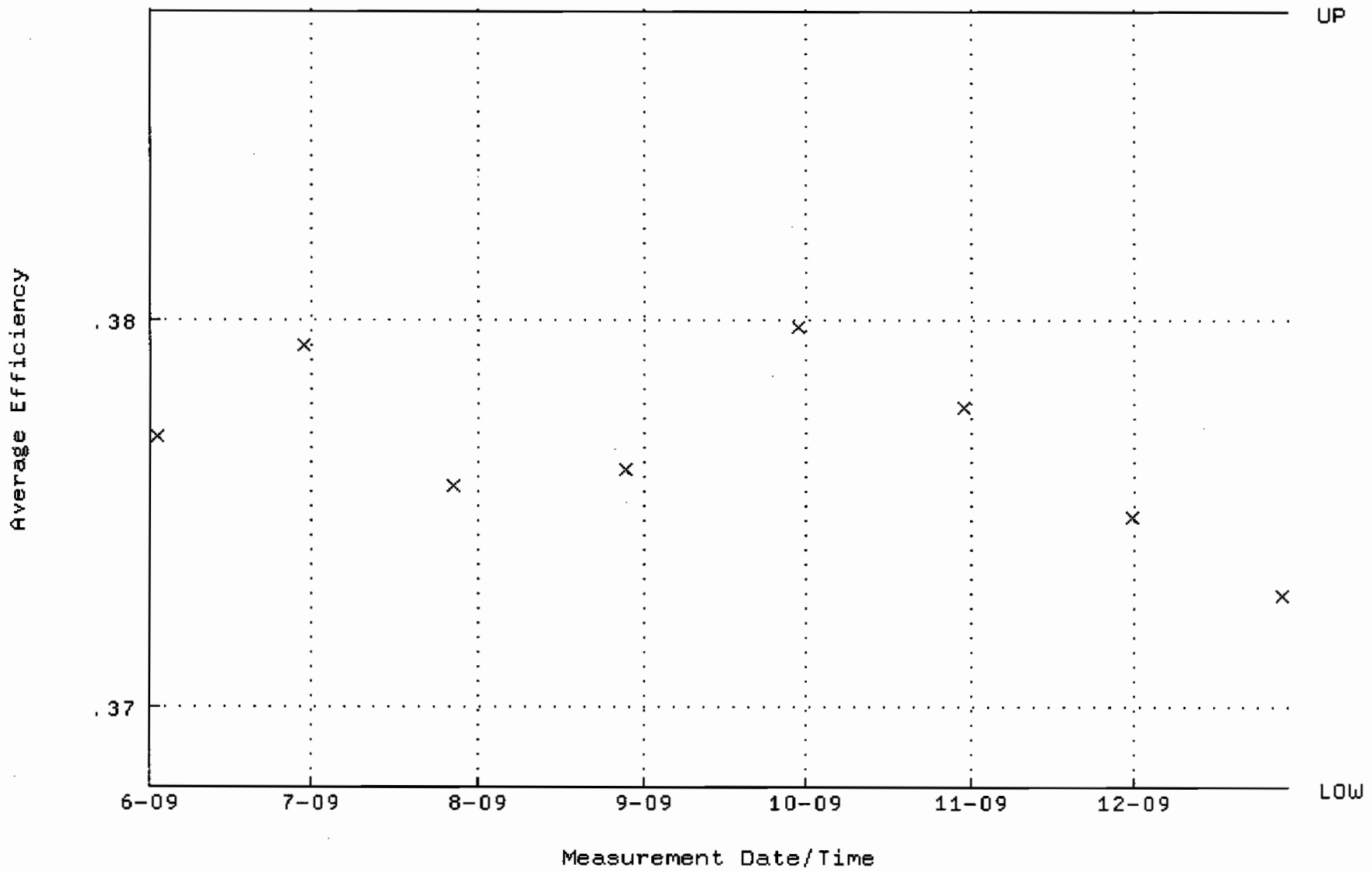
QA filename : DKA100:[ENV_ALPHA.QA.W]W218.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:17:54 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 89.3892 through 98.7986



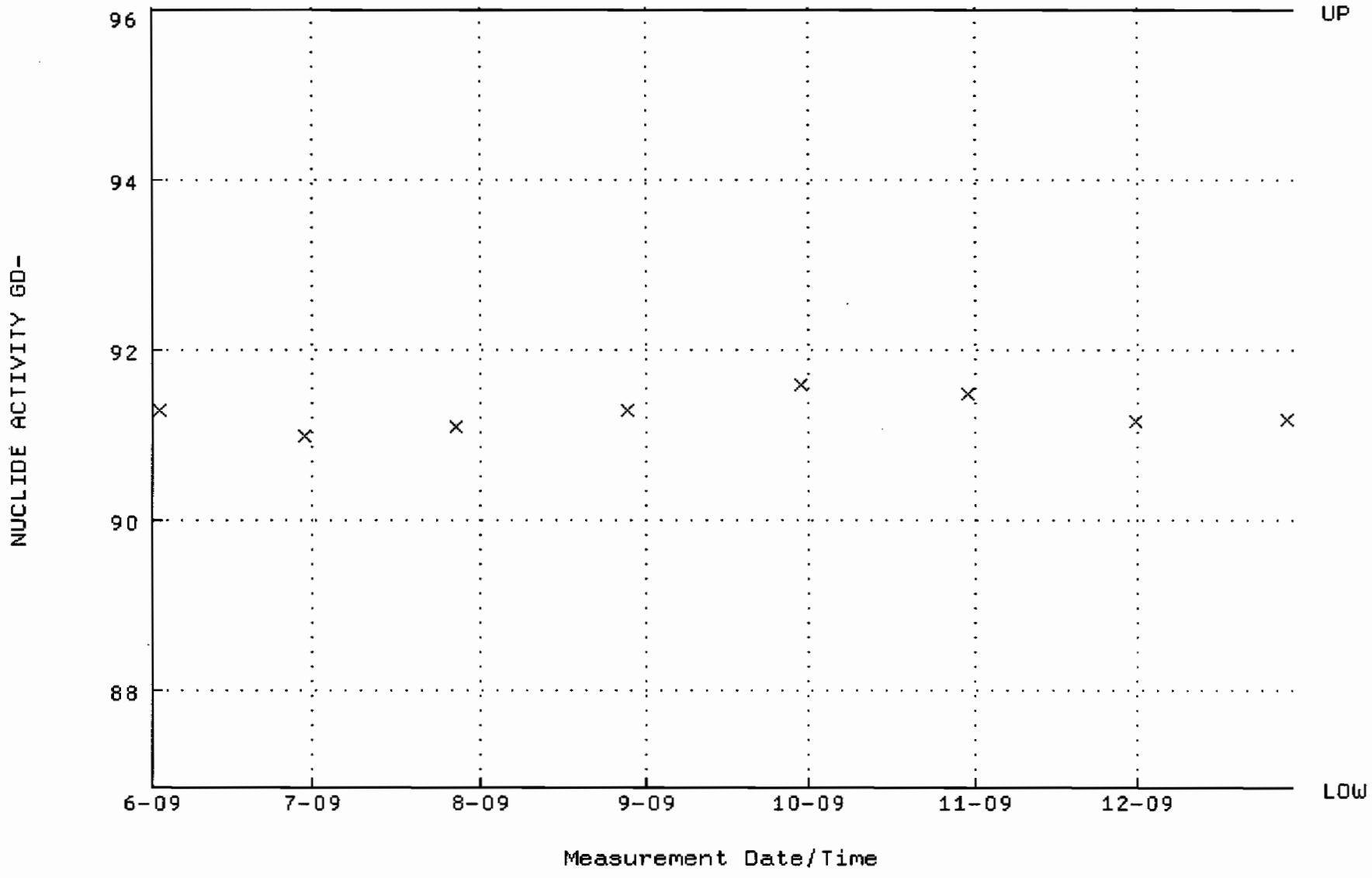
QA filename : DKA100:[ENV_ALPHA.QA.B]B218.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:11 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



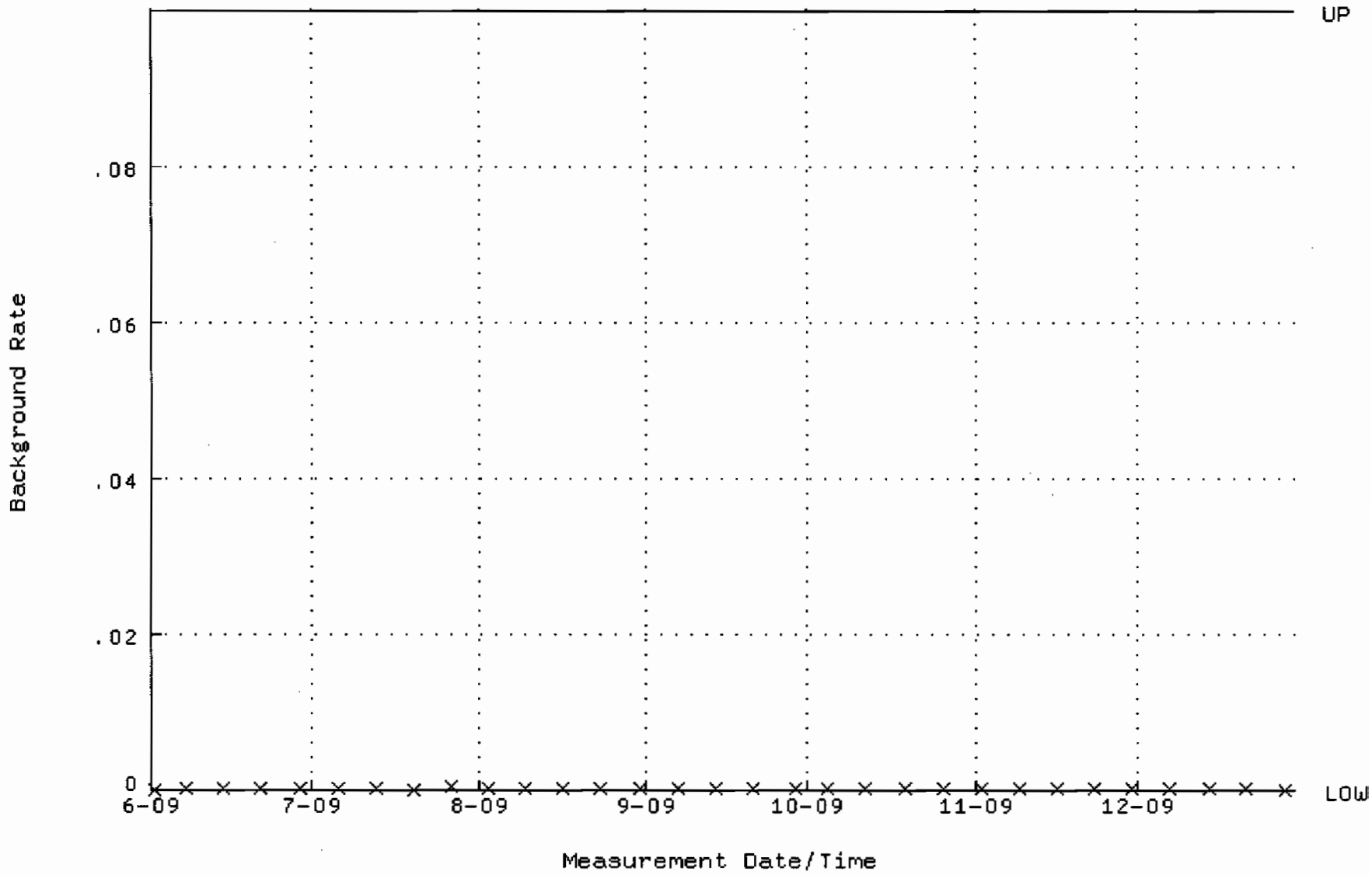
QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:18:10 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.367948 through 0.387948



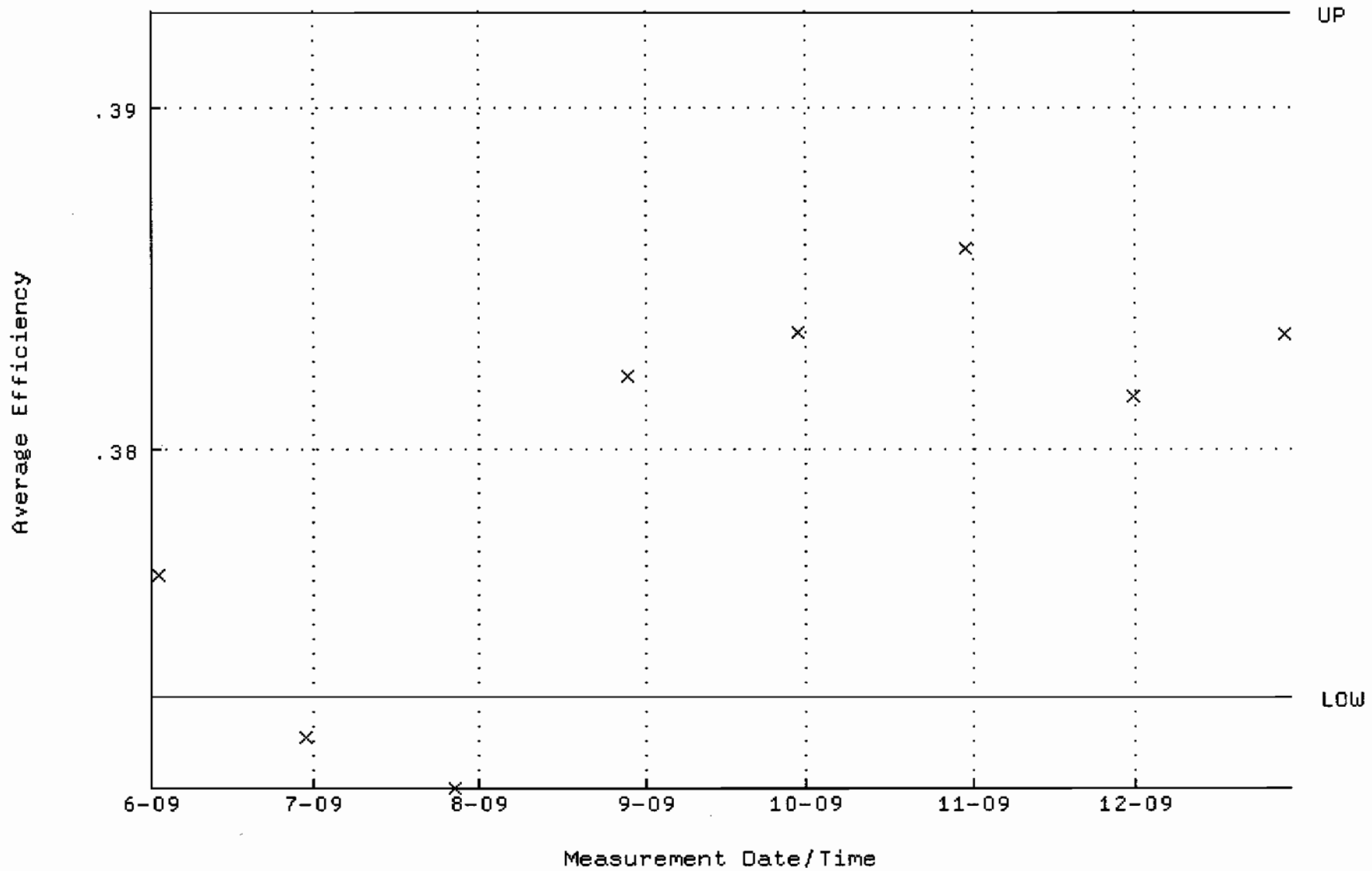
QA filename : DKA100:[ENV_ALPHA.QA.W]W221.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:18:10 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 86.8591 through 96.0021



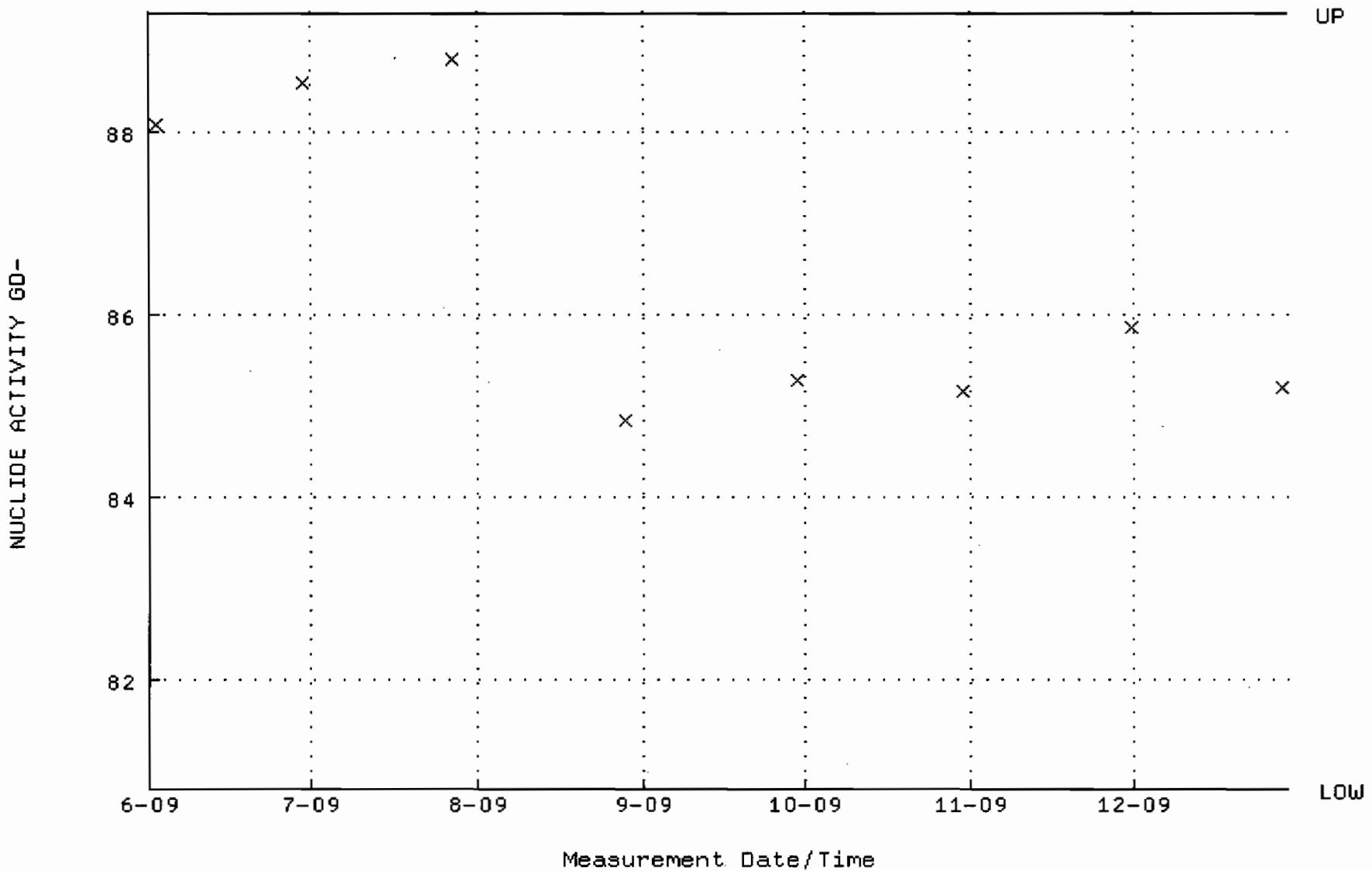
QA filename : DKA100:[ENV_ALPHA.QA.B]B221.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:44:25 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



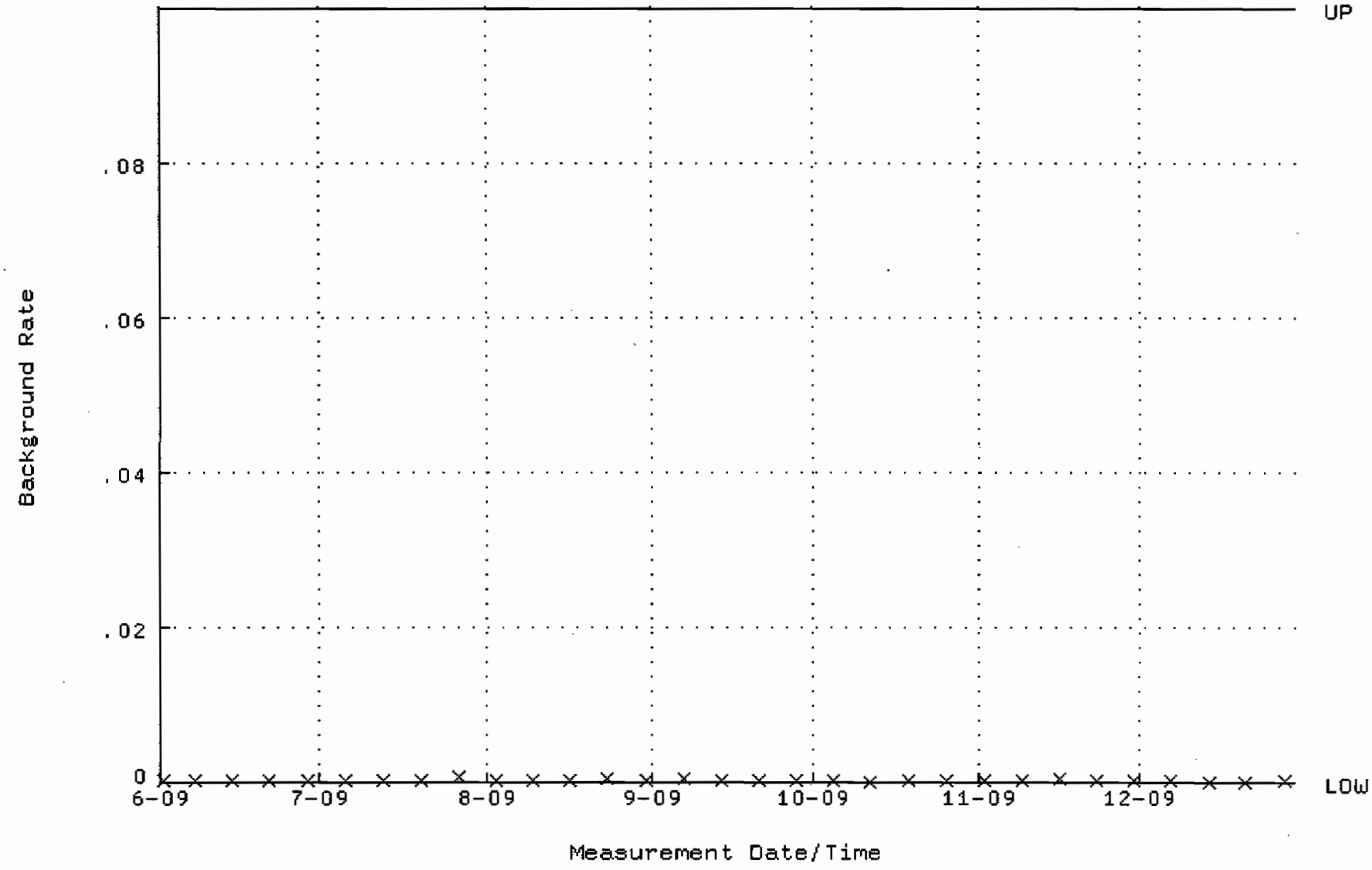
QA filename : DKA100:[ENV_ALPHA.QA.W]W234.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:19:19 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.372763 through 0.392763



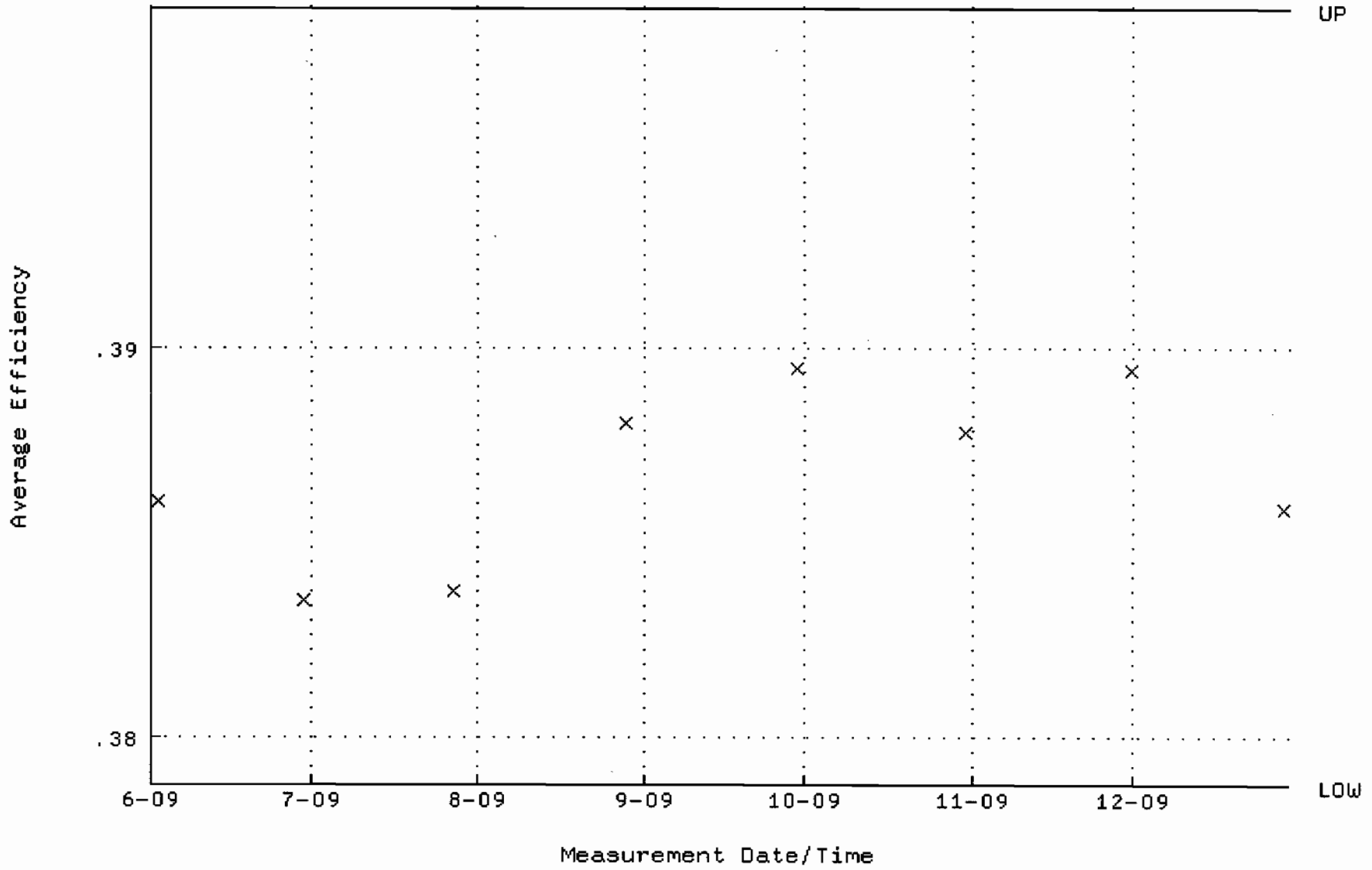
QA filename : DKA100:[ENV_ALPHA.QA.W]W234.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:19:19 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 80.7996 through 89.3048



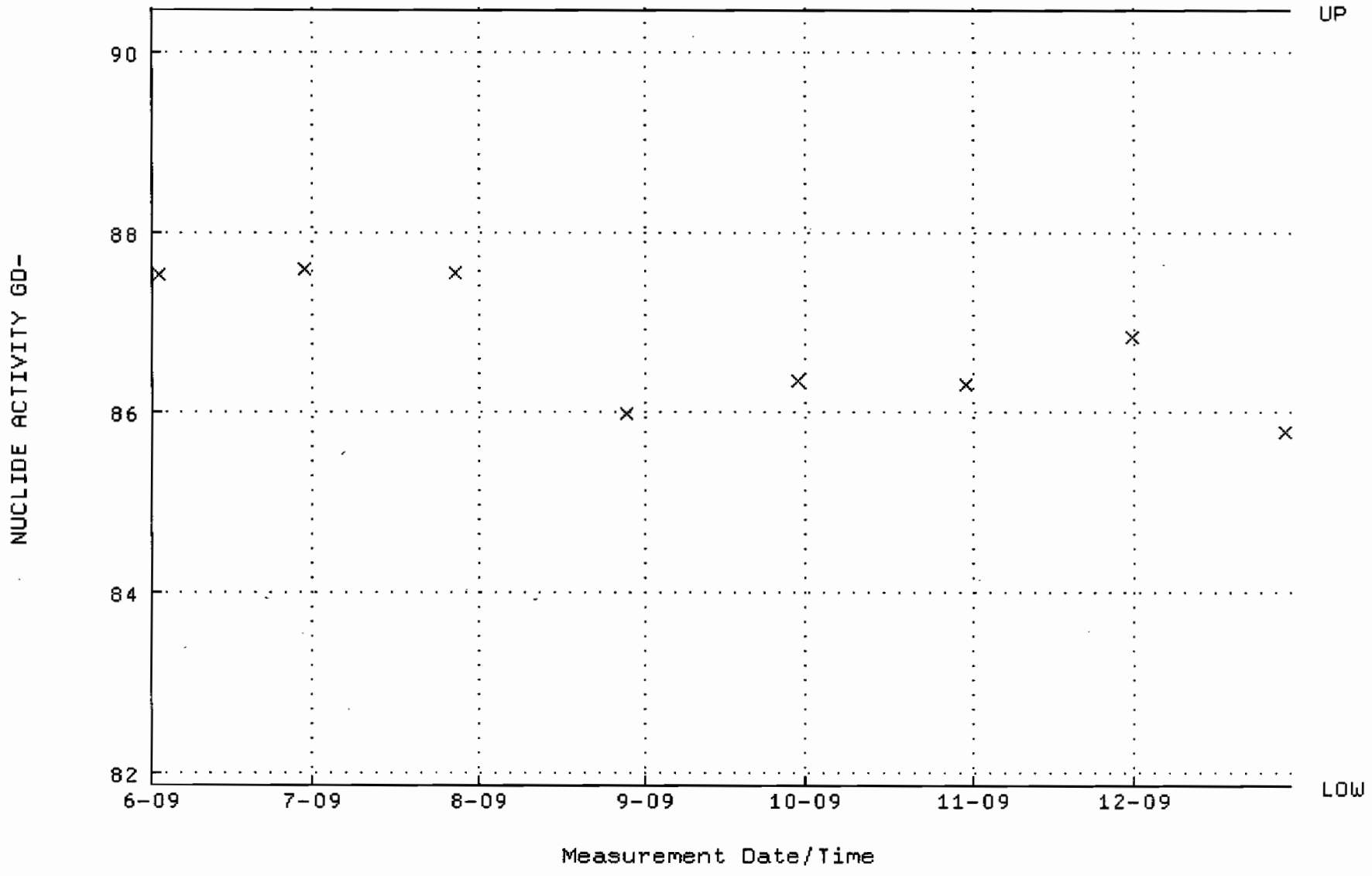
QA filename : DKA100:[ENV_ALPHA.QA.B]B234.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:35 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



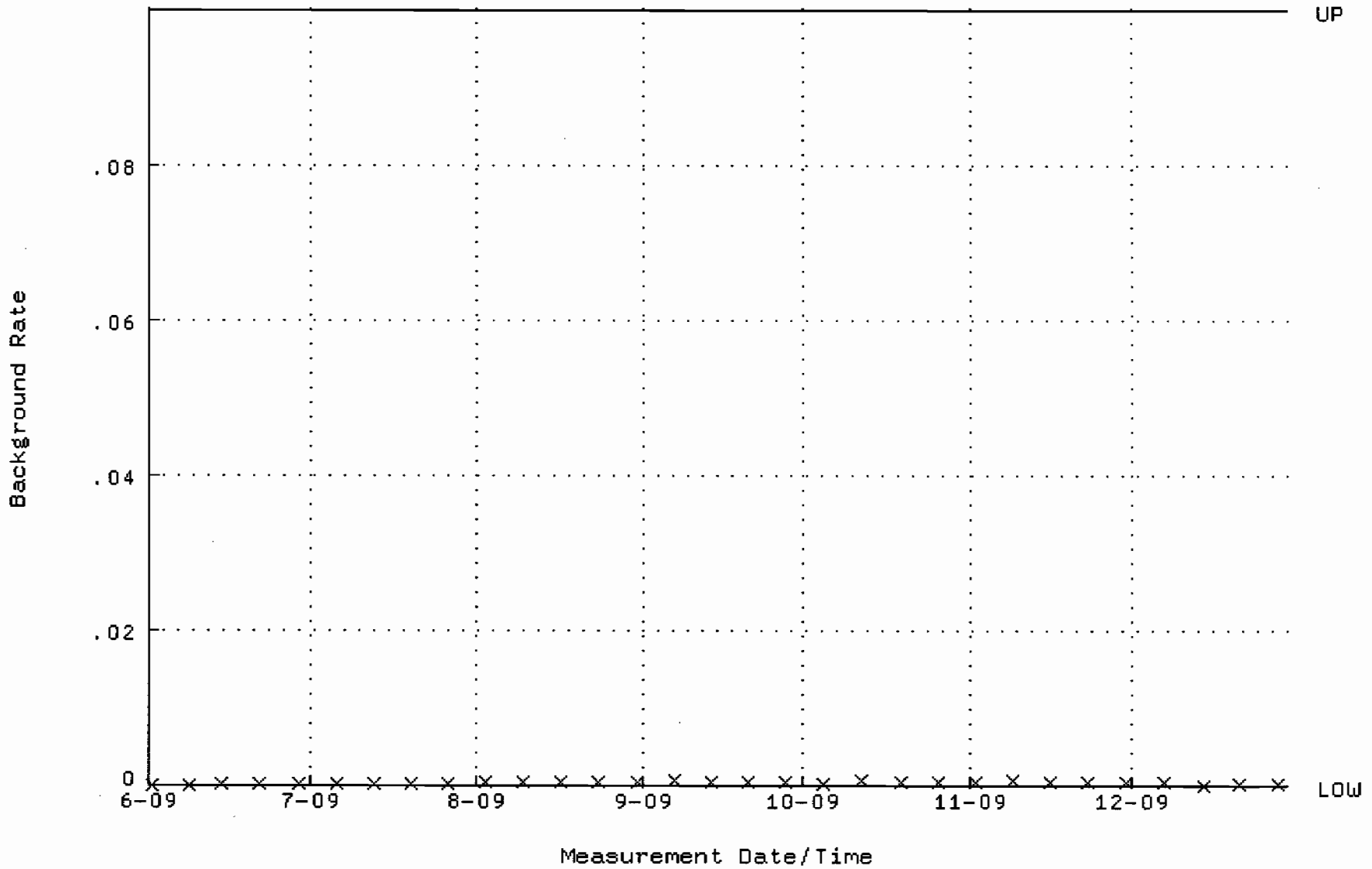
QA filename : DKA100:[ENV_ALPHA.QA.W]W236.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:19:29 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.378766 through 0.398766



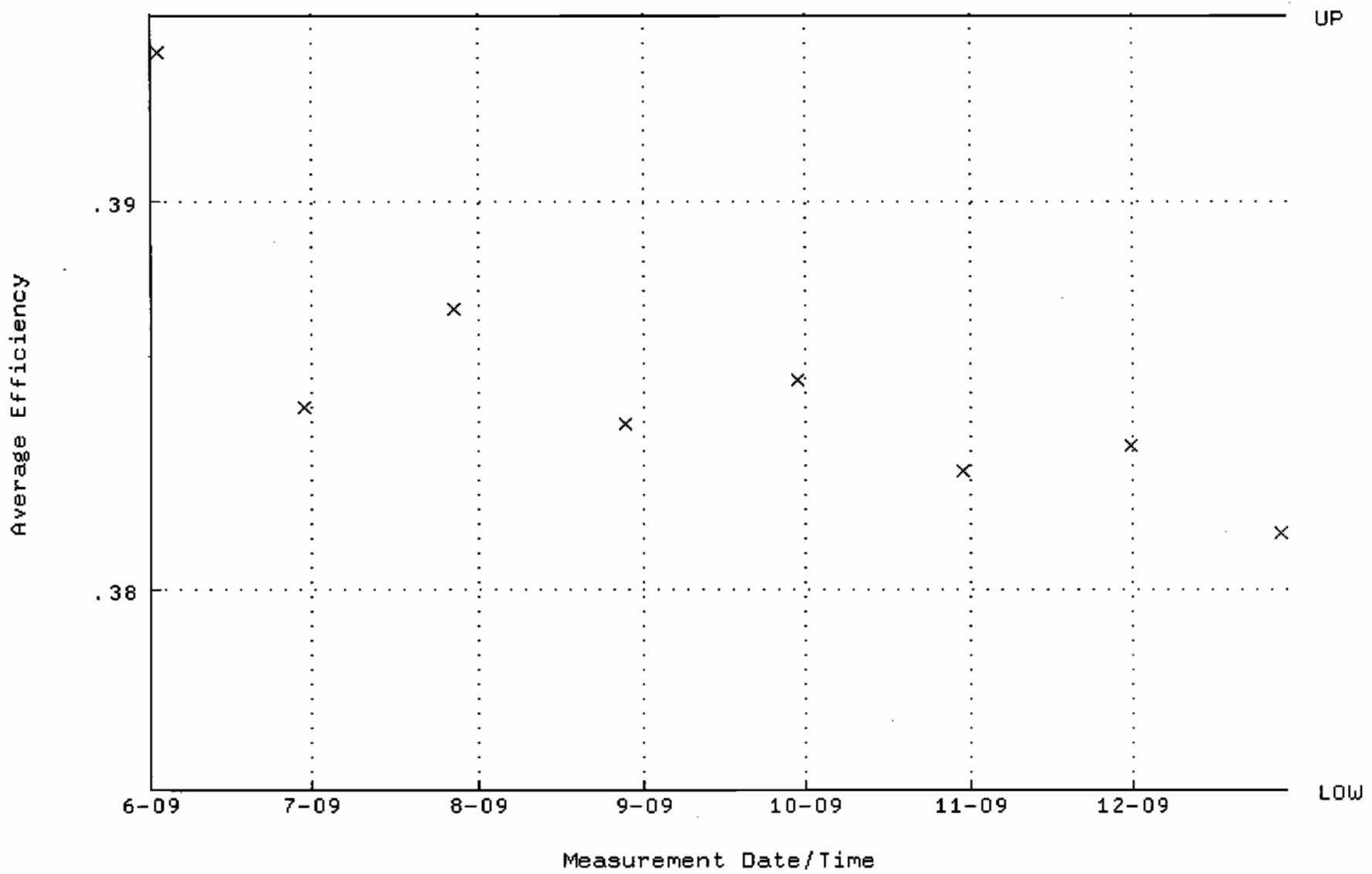
QA filename : DKA100:[ENV_ALPHA.QA.W]W236.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:19:29 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 81.8490 through 90.4646



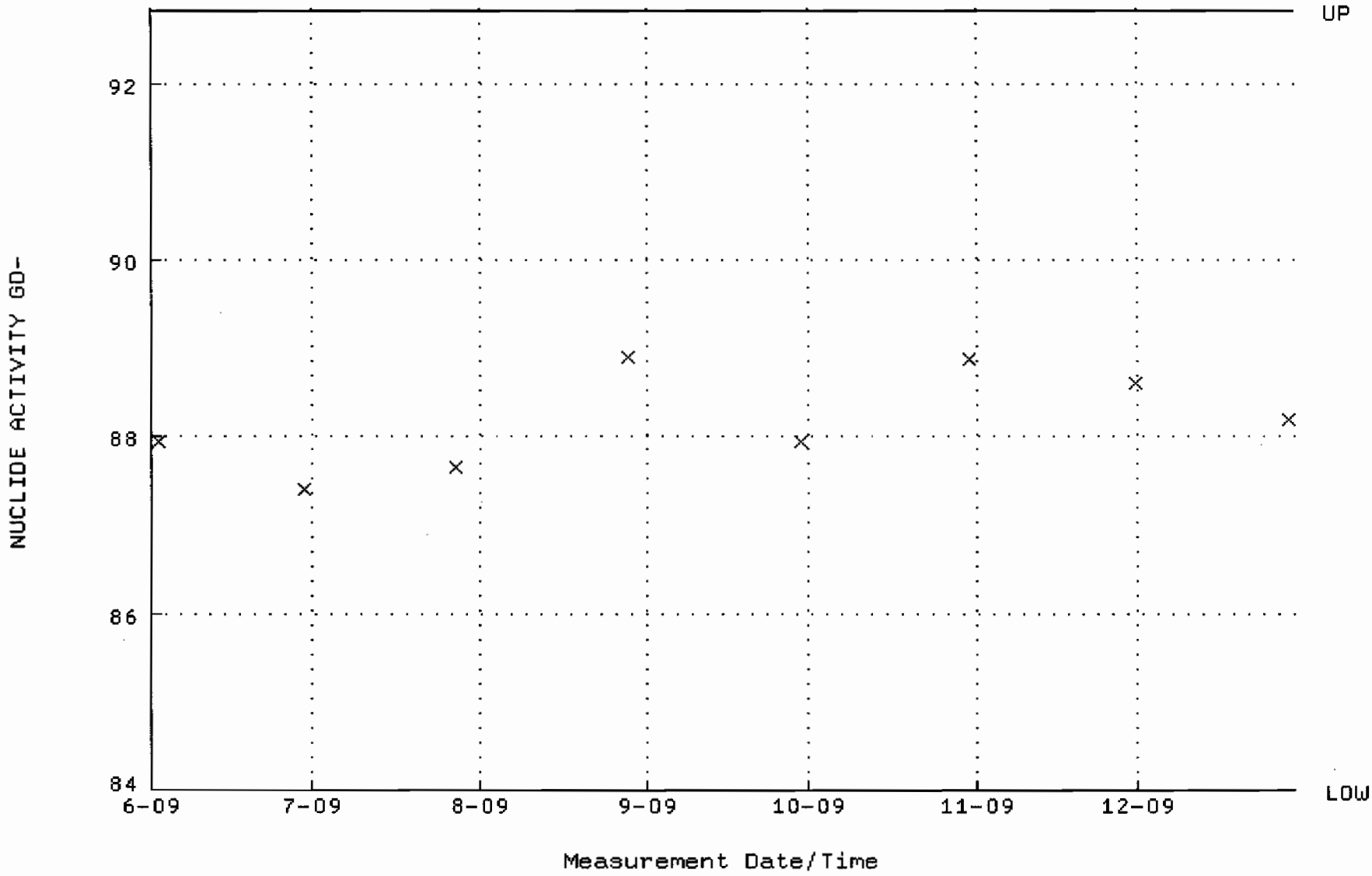
QA filename : DKA100:[ENV_ALPHA.QA.B]B236.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:45:52 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



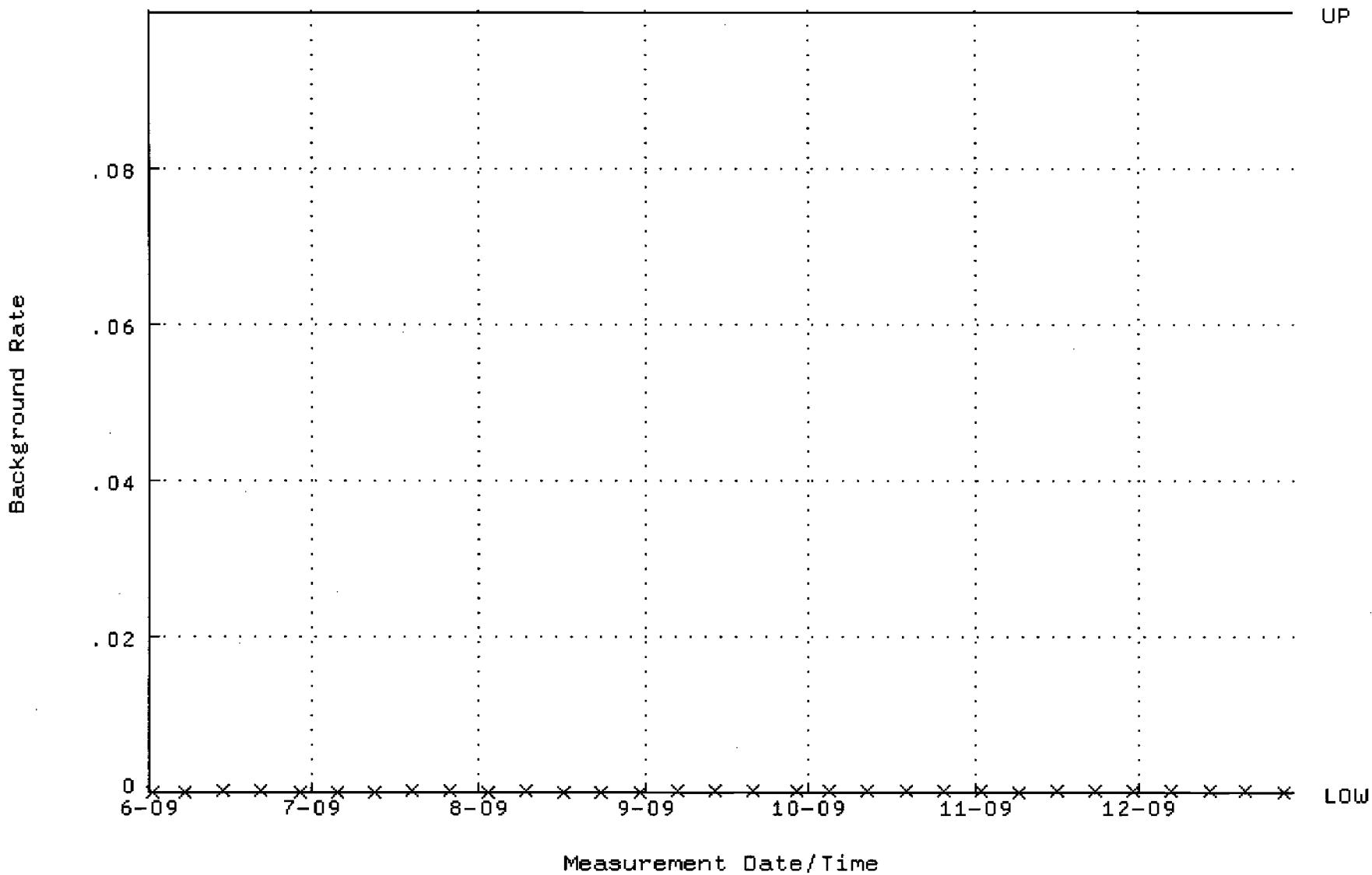
QA filename : DKA100:[ENV_ALPHA.QA.W]W242.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:19:56 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.374815 through 0.394815



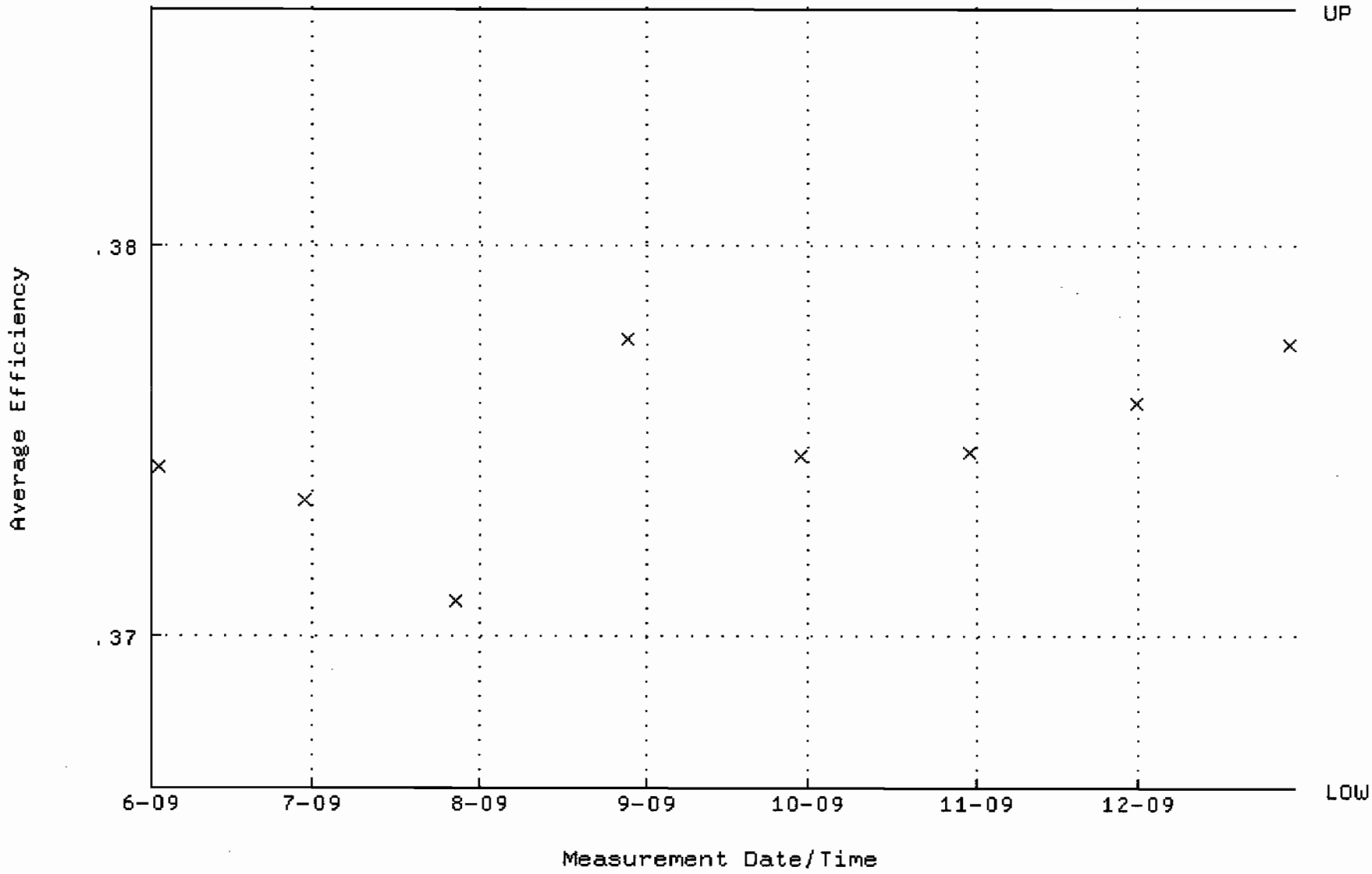
QA filename : DKA100:[ENV_ALPHA.QA.W]W242.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:19:56 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 83.9949 through 92.8365



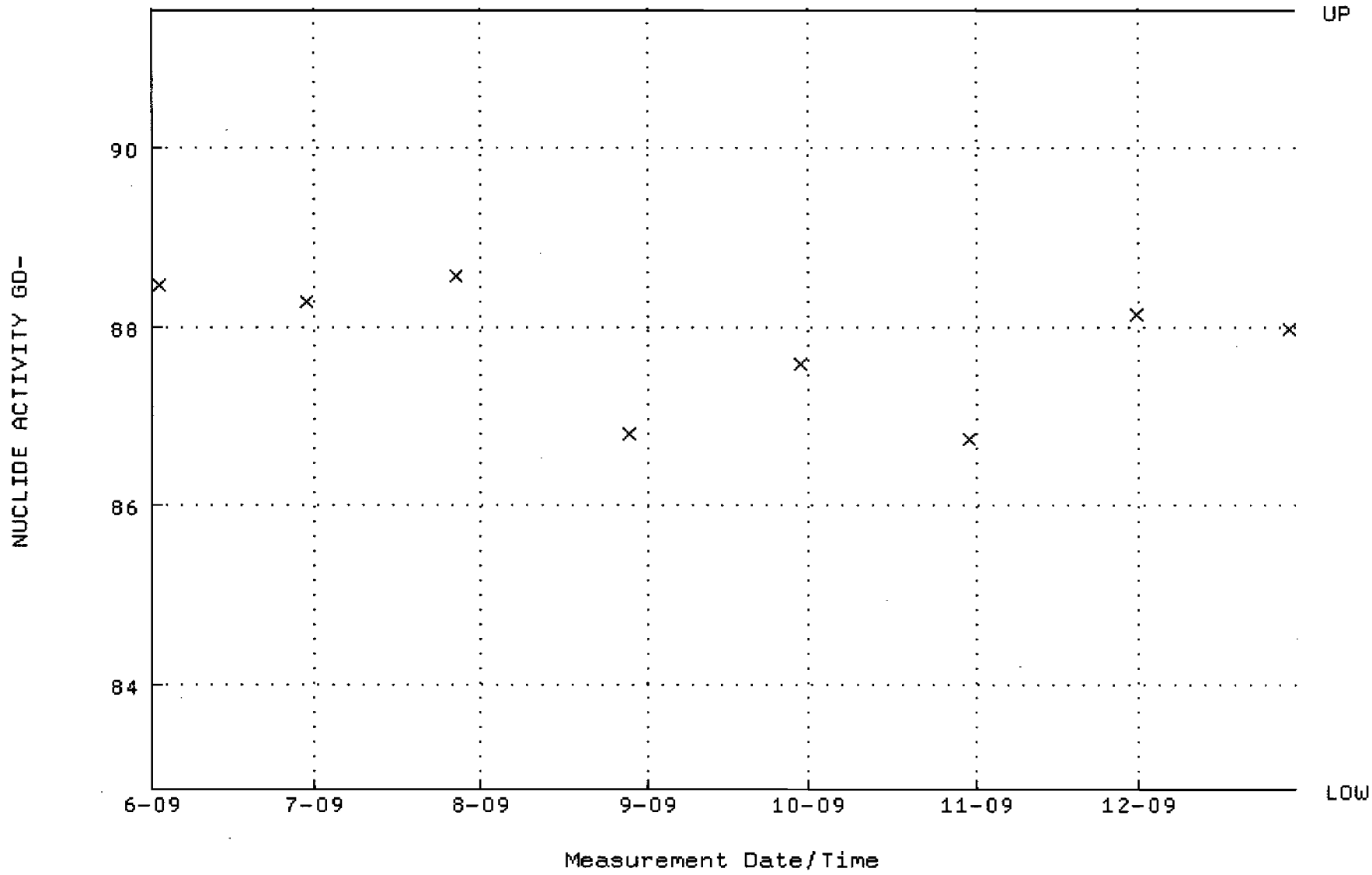
QA filename : DKA100:[ENV_ALPHA.QA.B]B242.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:46:32 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



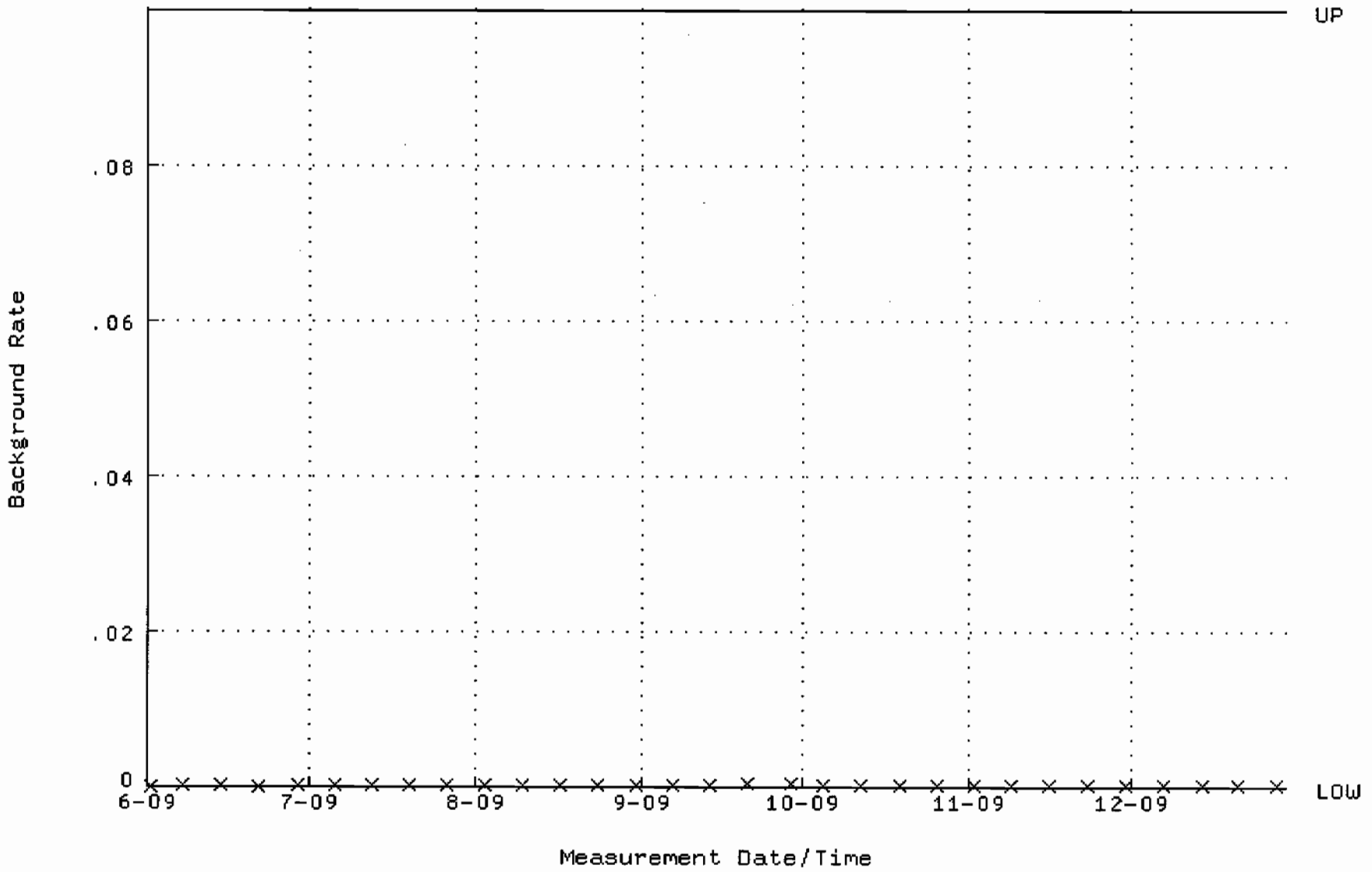
QA filename : DKA100:[ENV_ALPHA.QA.W]W246.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:20:15 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.366080 through 0.386080



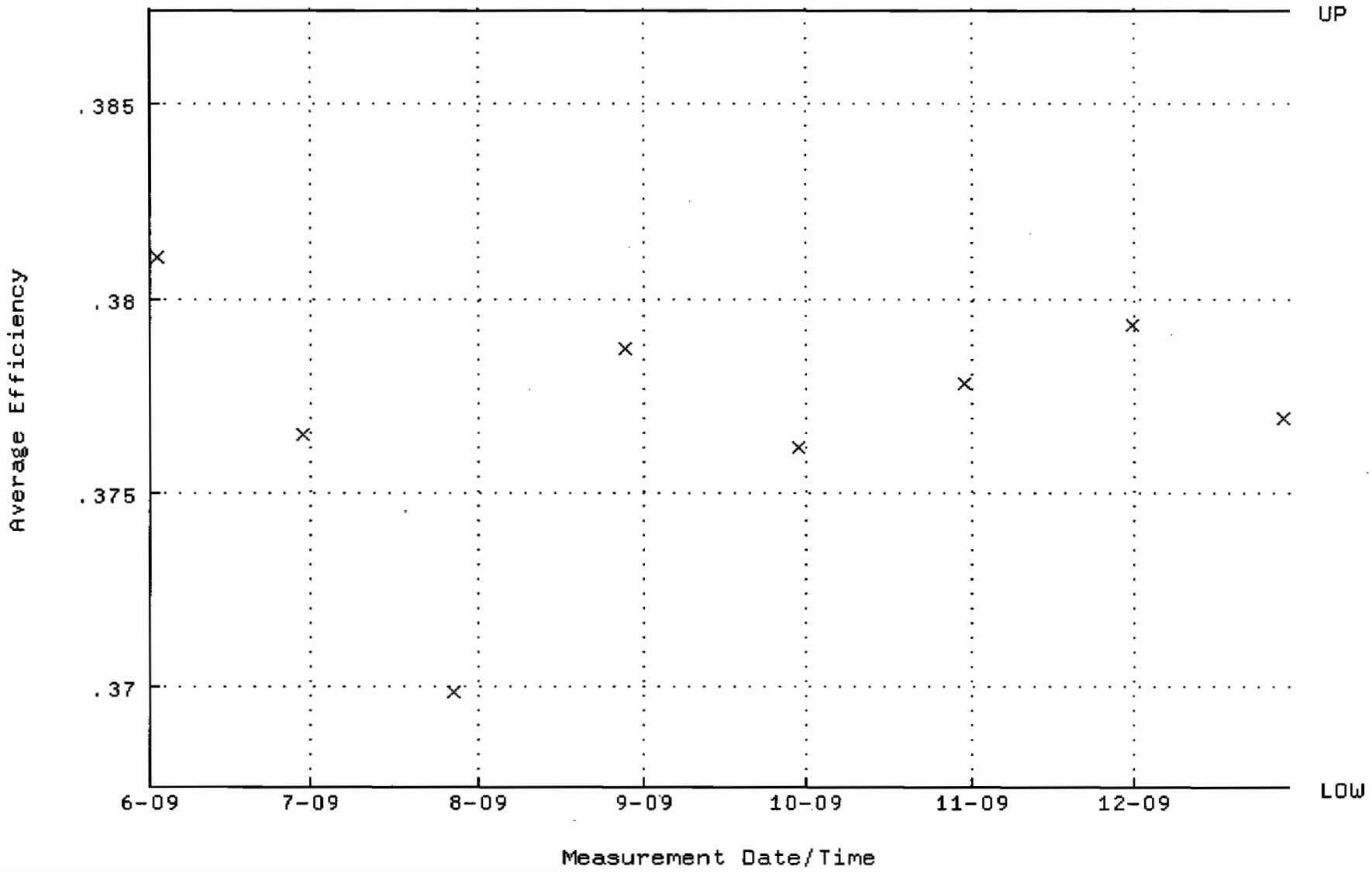
QA filename : DKA100:[ENV_ALPHA.QA.W]W246.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:20:15 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 82.8267 through 91.5453



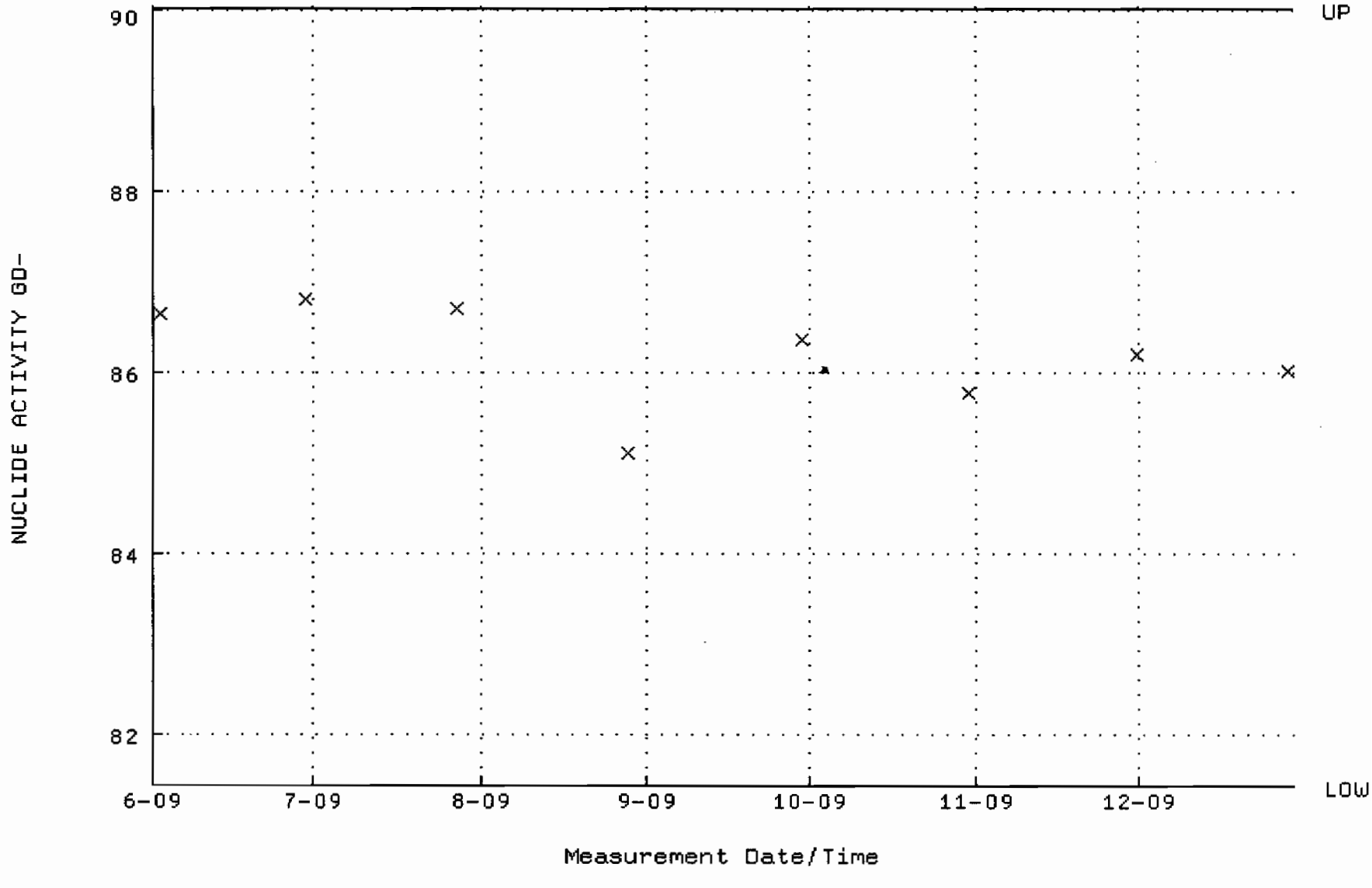
QA filename : DKA100:[ENV_ALPHA.QA.B]B246.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:46:56 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



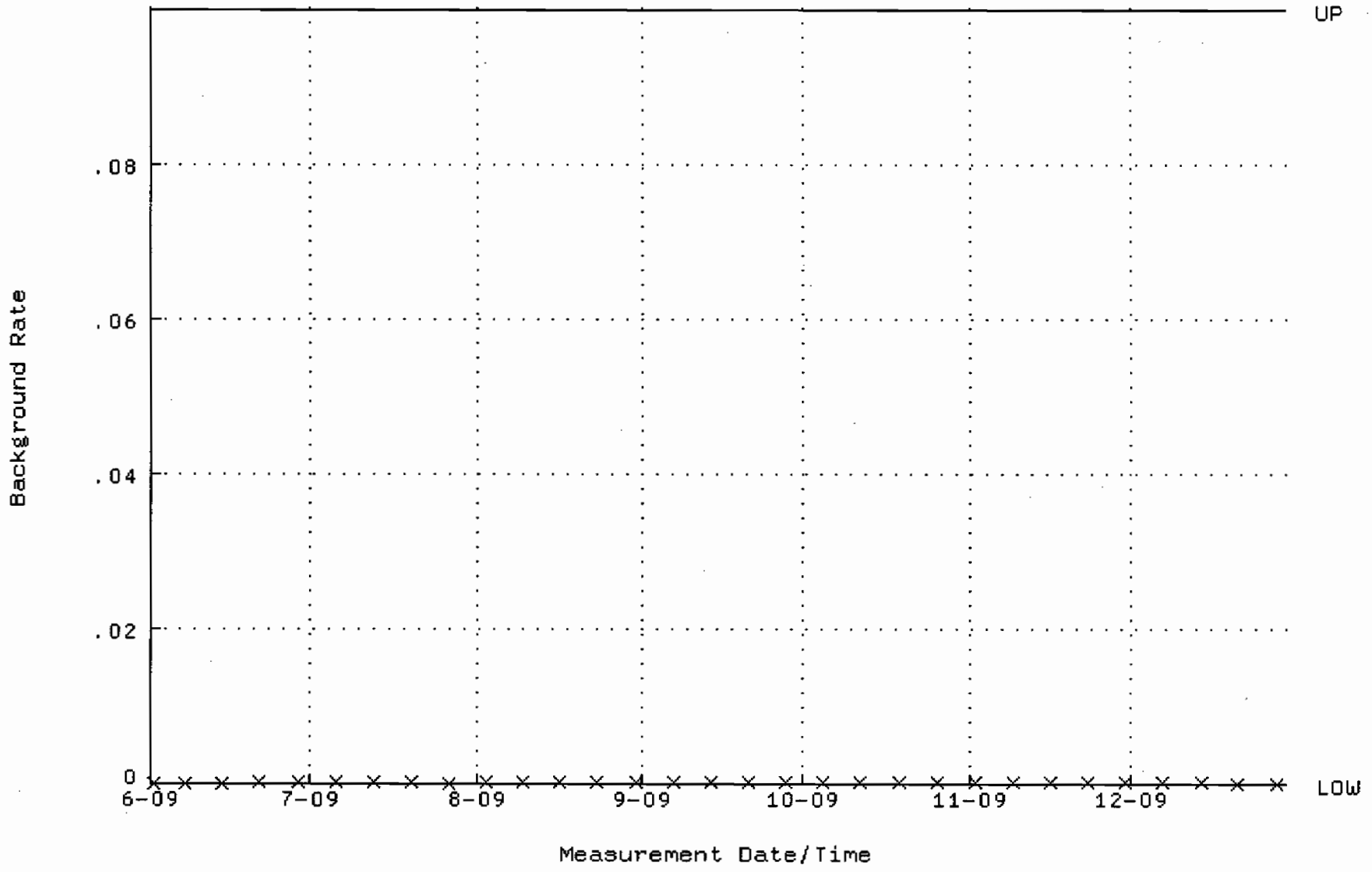
QA filename : DKA100:[ENV_ALPHA.QA.W]W252.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:20:44 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.367415 through 0.387415



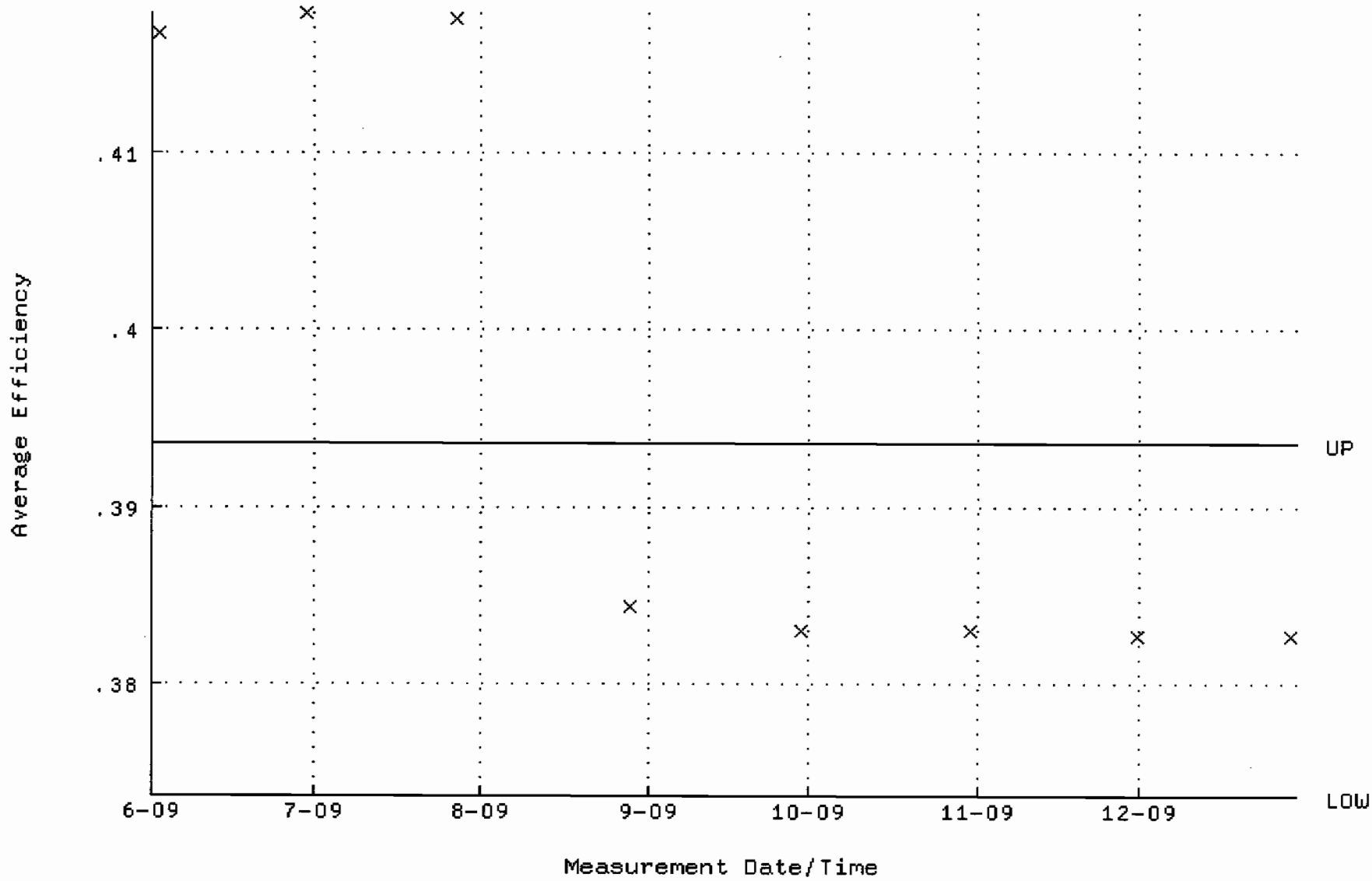
QA filename : DKA100:[ENV_ALPHA.QA.W]W252.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:20:44 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 81.4437 through 90.0167



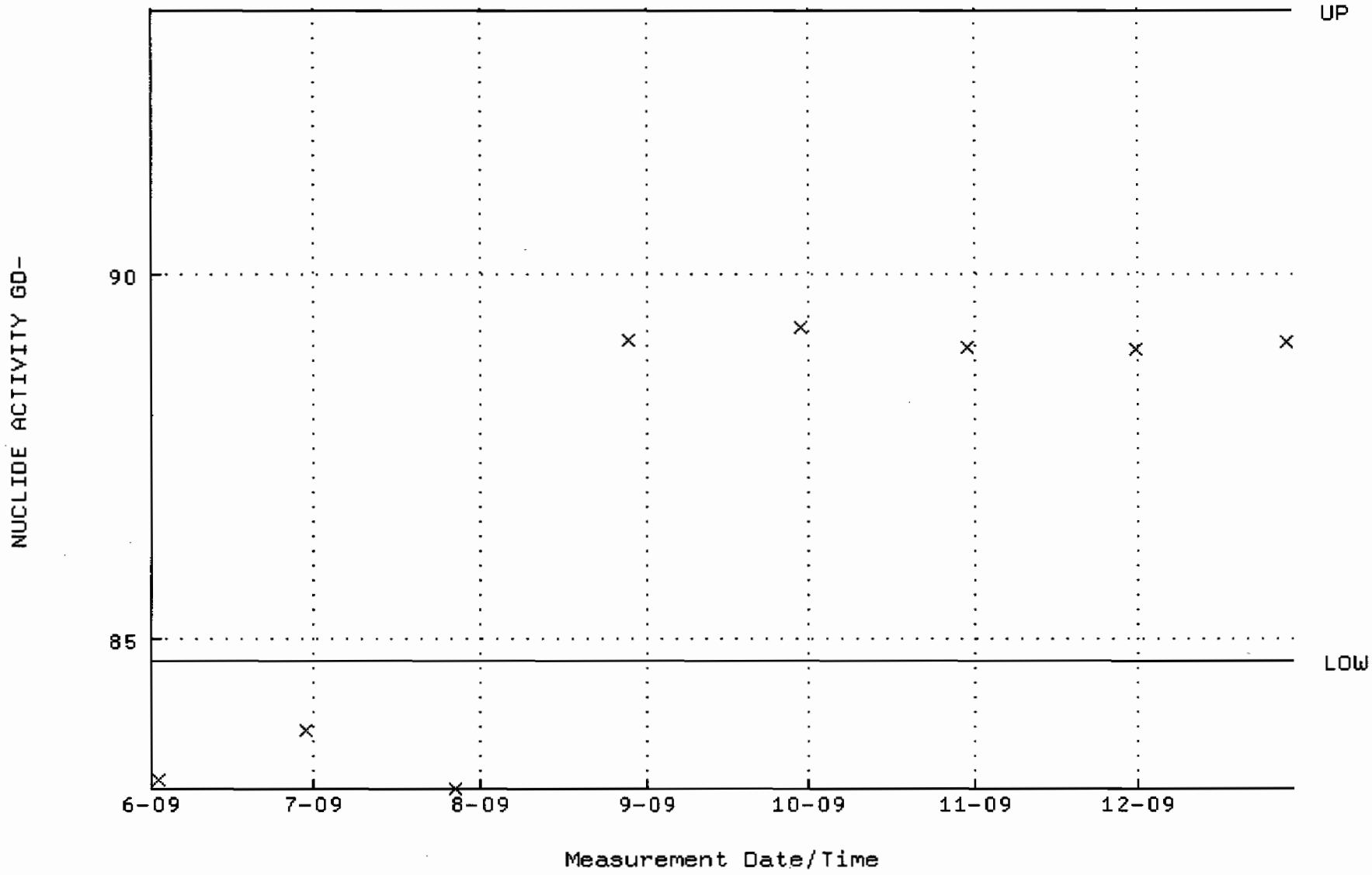
QA filename : DKA100:[ENV_ALPHA.QA.B]B252.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:47:29 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



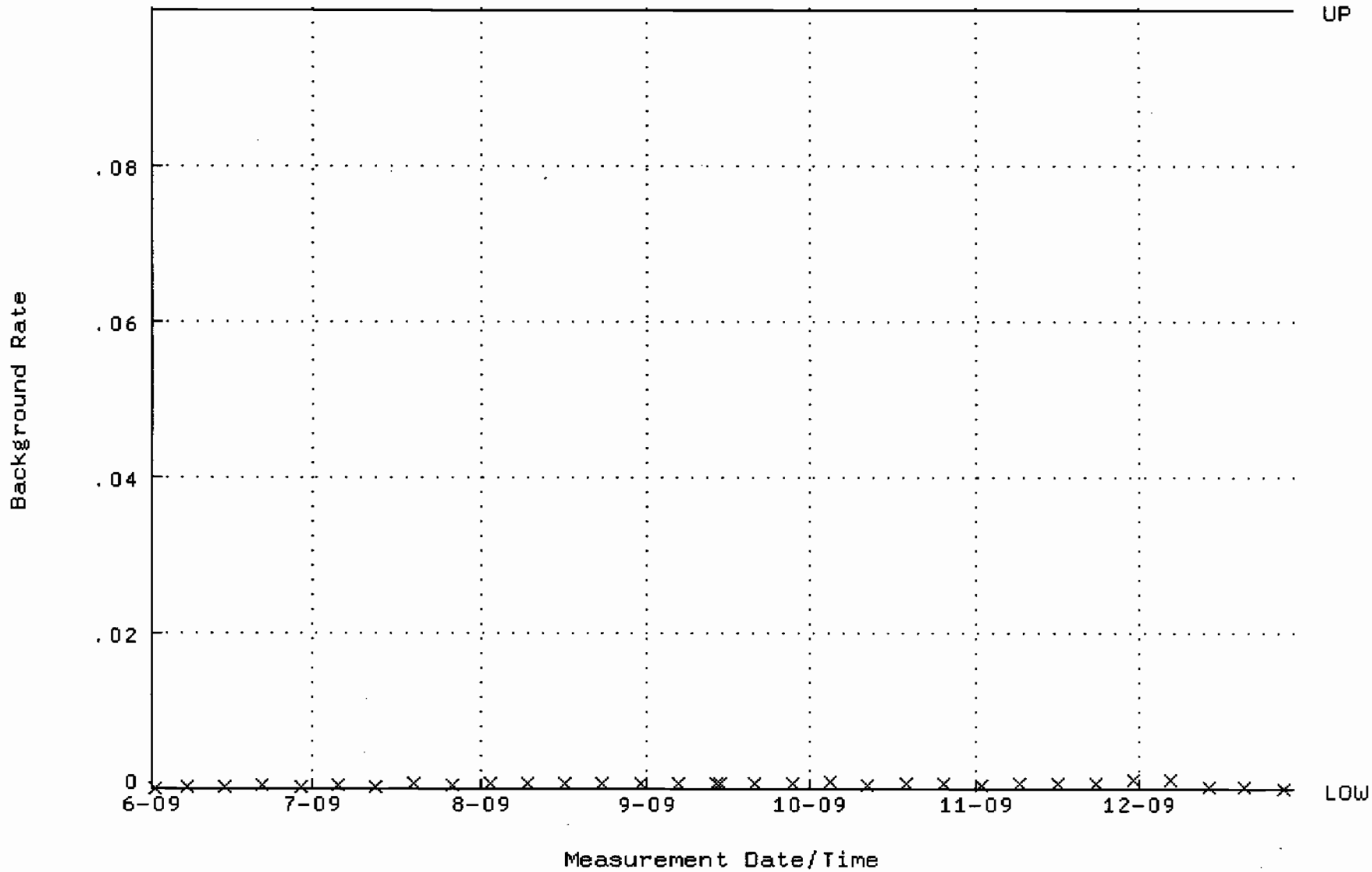
QA filename : DKA100:[ENV_ALPHA.QA.W]W253.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUN-2009 11:20:48 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.373633 through 0.393633



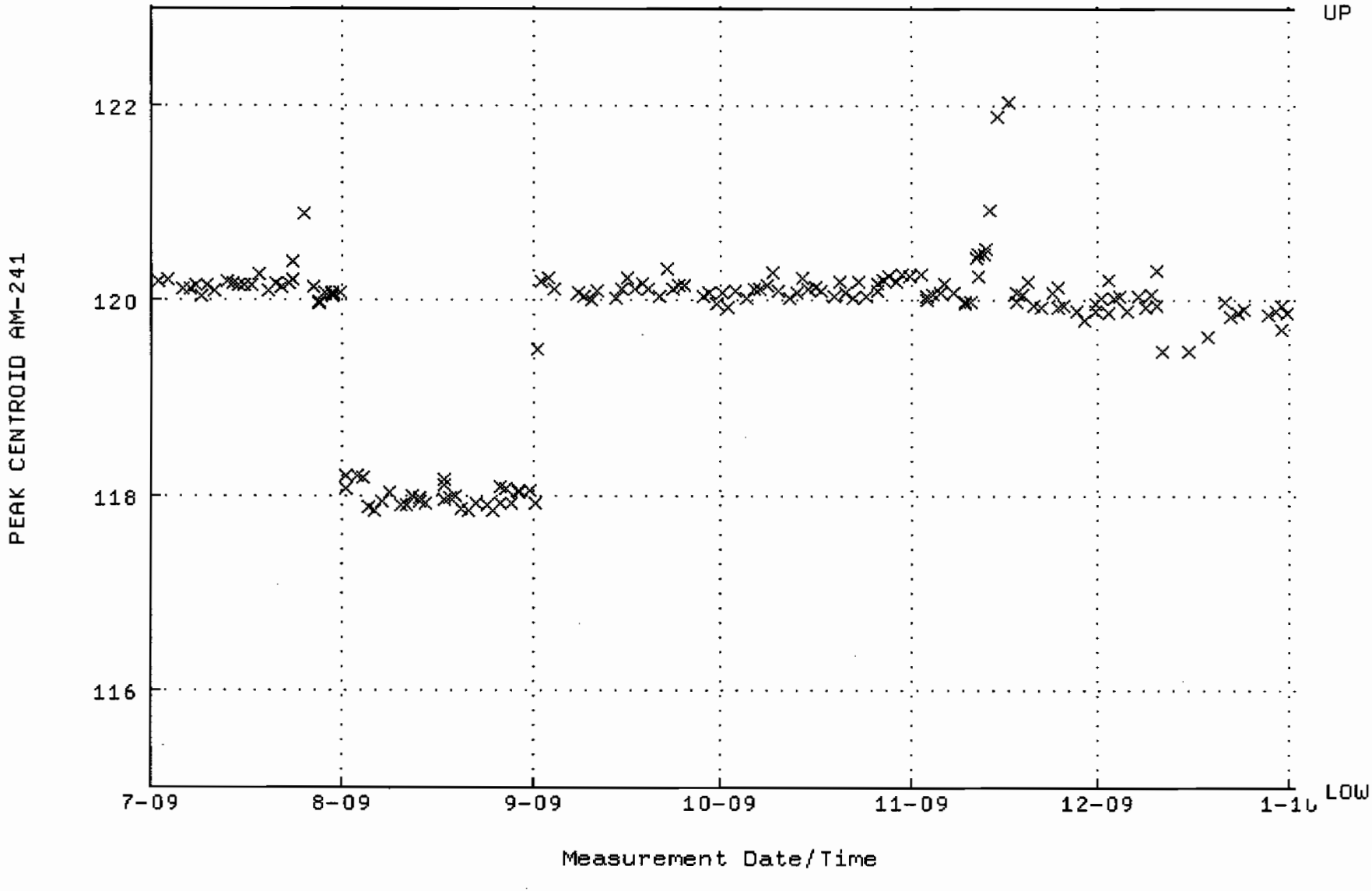
QA filename : DKA100:[ENV_ALPHA.QA.W]W253.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUN-2009 11:20:48 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 84.7115 through 93.6285



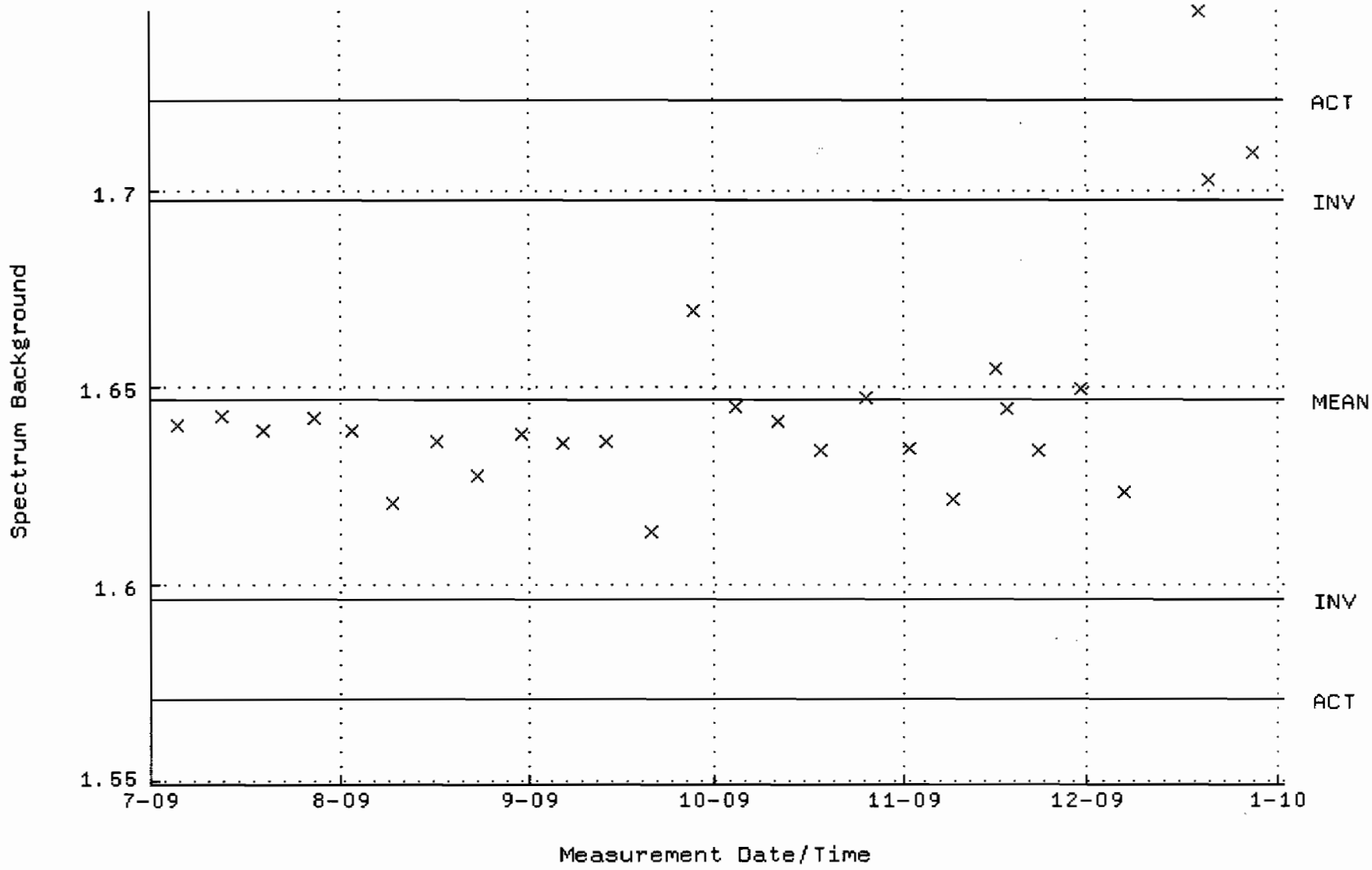
QA filename : DKA100:[ENV_ALPHA.QA.B]B253.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUN-2009 17:47:34 through 29-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



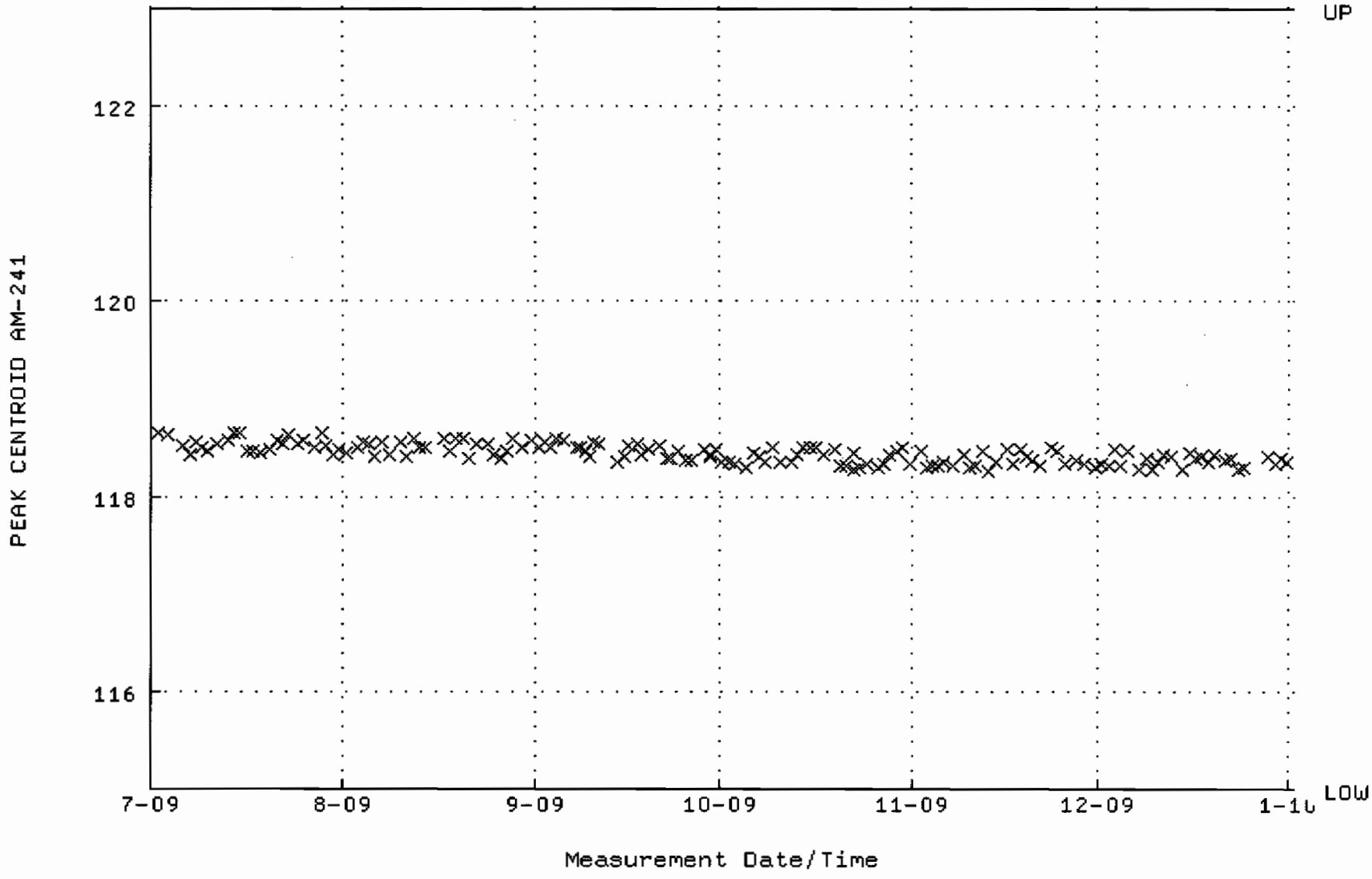
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM05_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:59:08 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



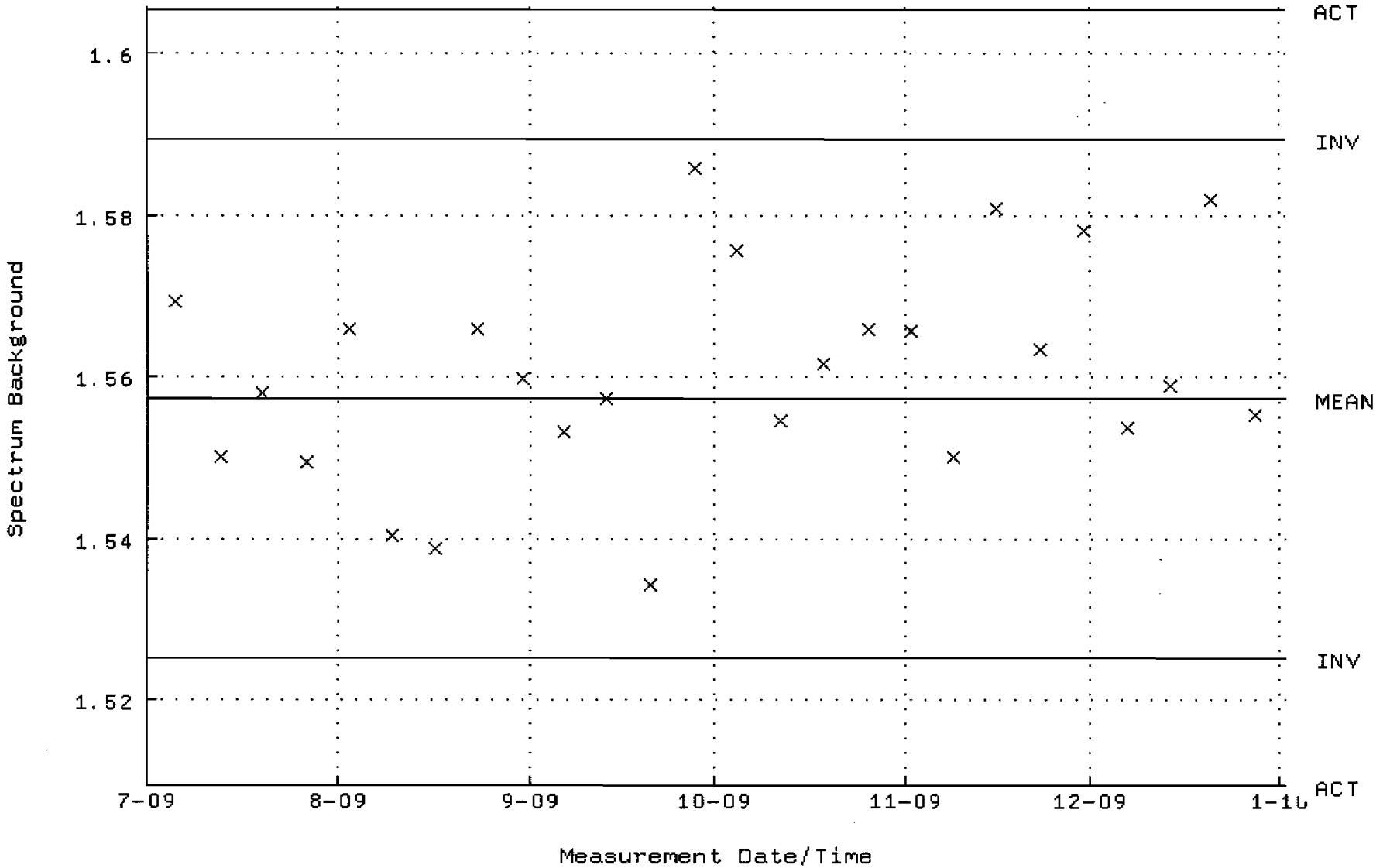
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM05.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:50:04 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.64719 +- 2.547087E-02 (1.55 %)



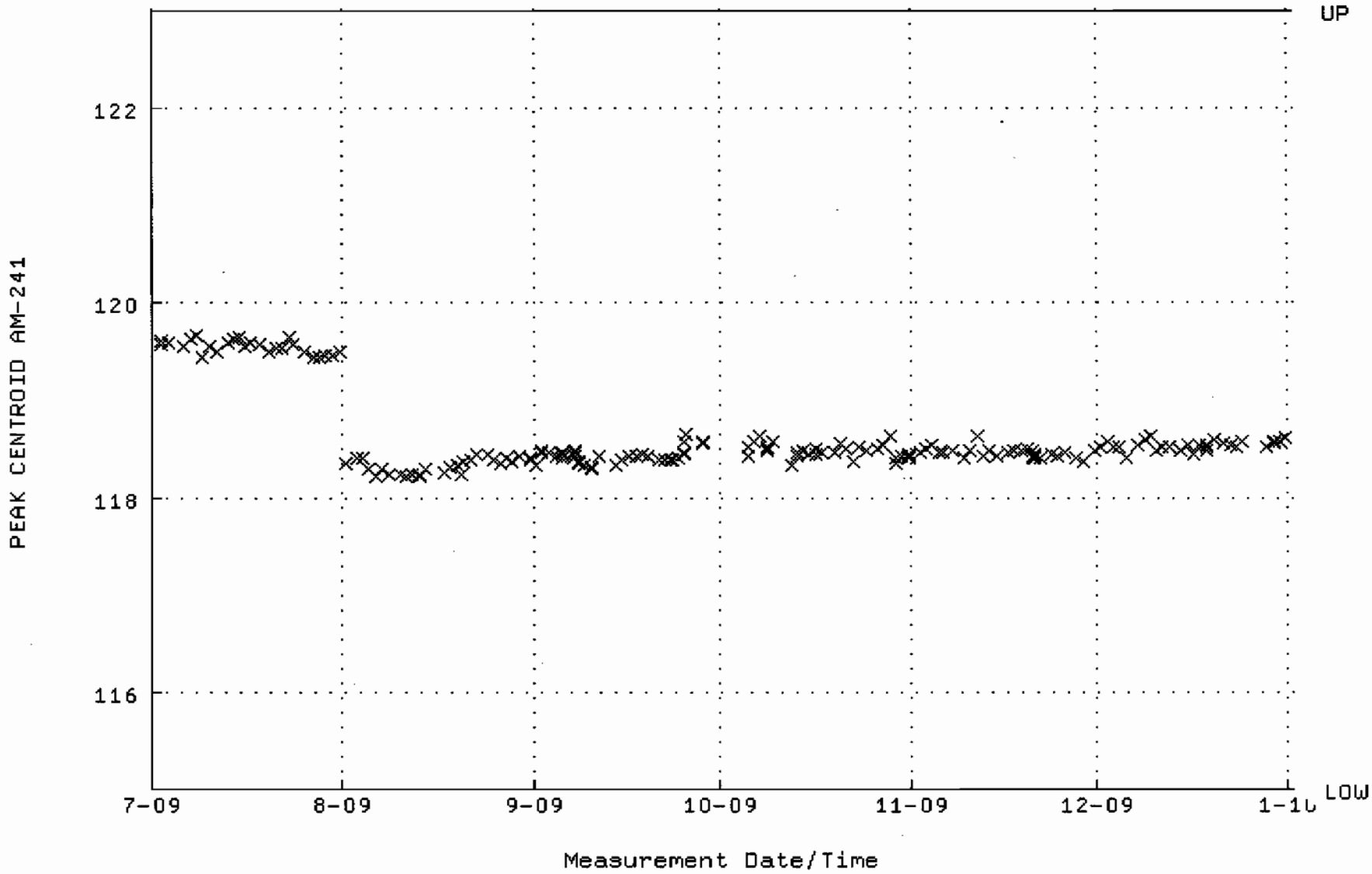
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM12_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:11 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



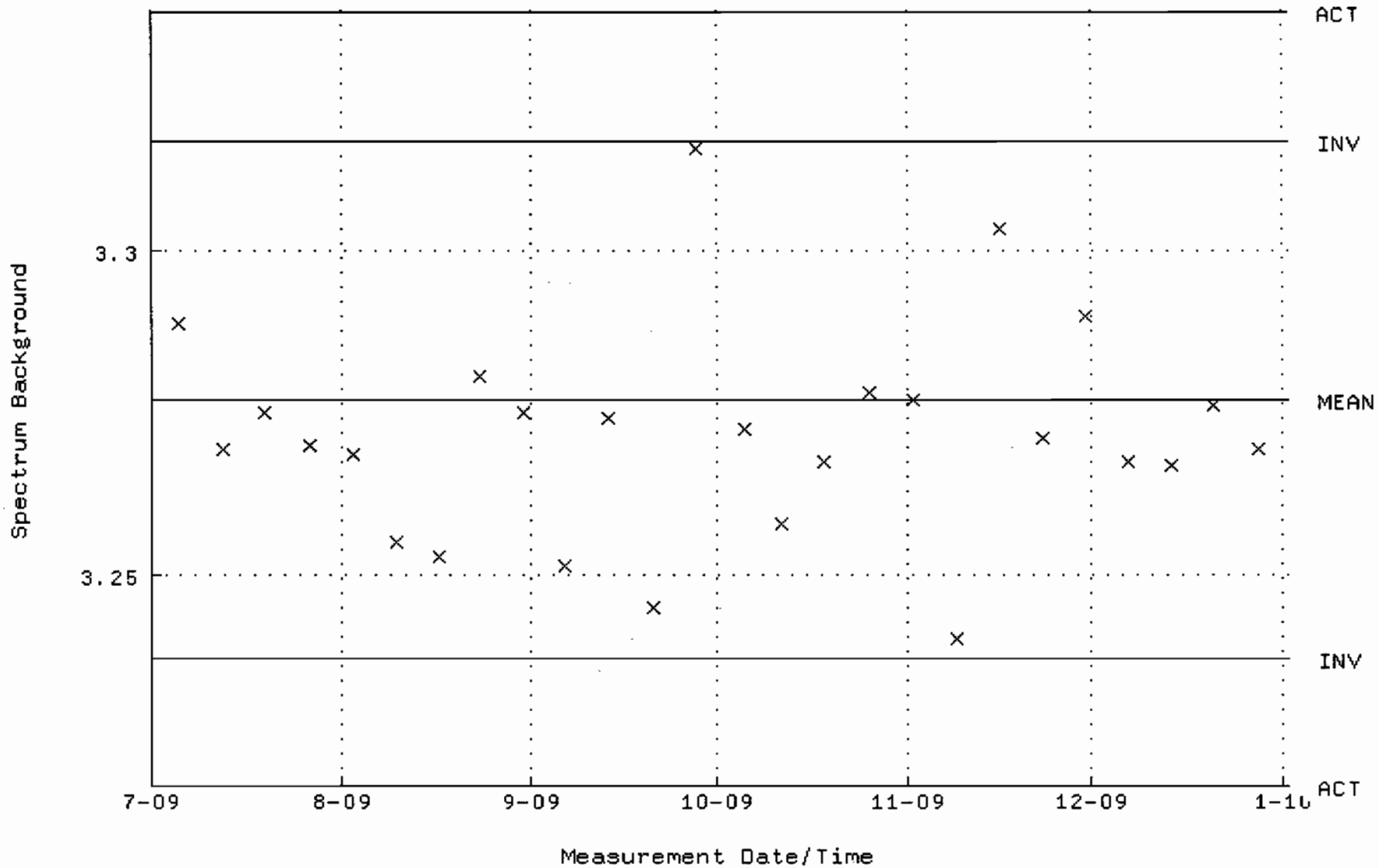
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM12.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:04 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.55746 +- 1.601675E-02 (1.03 %)



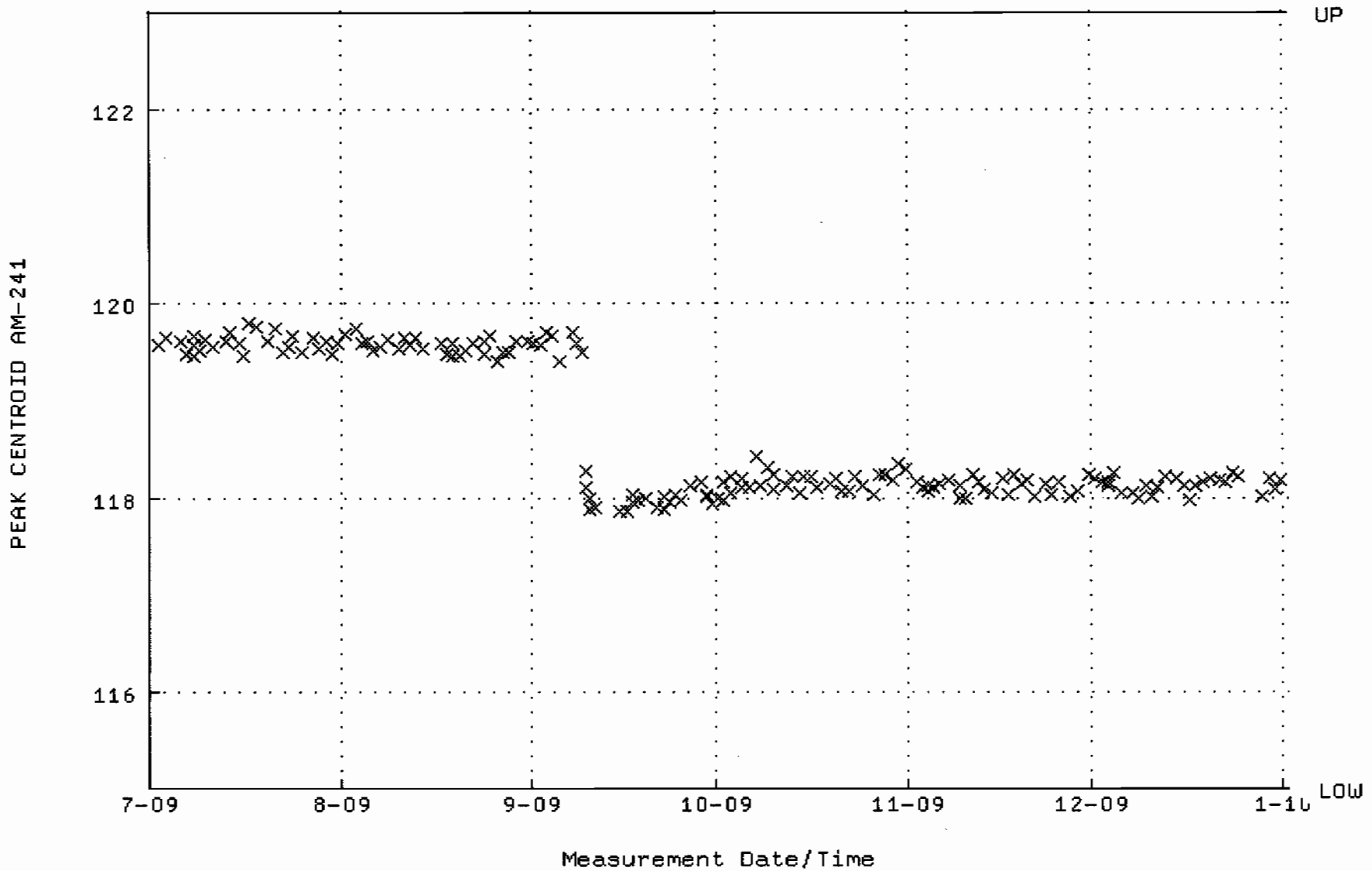
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM13_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:30 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



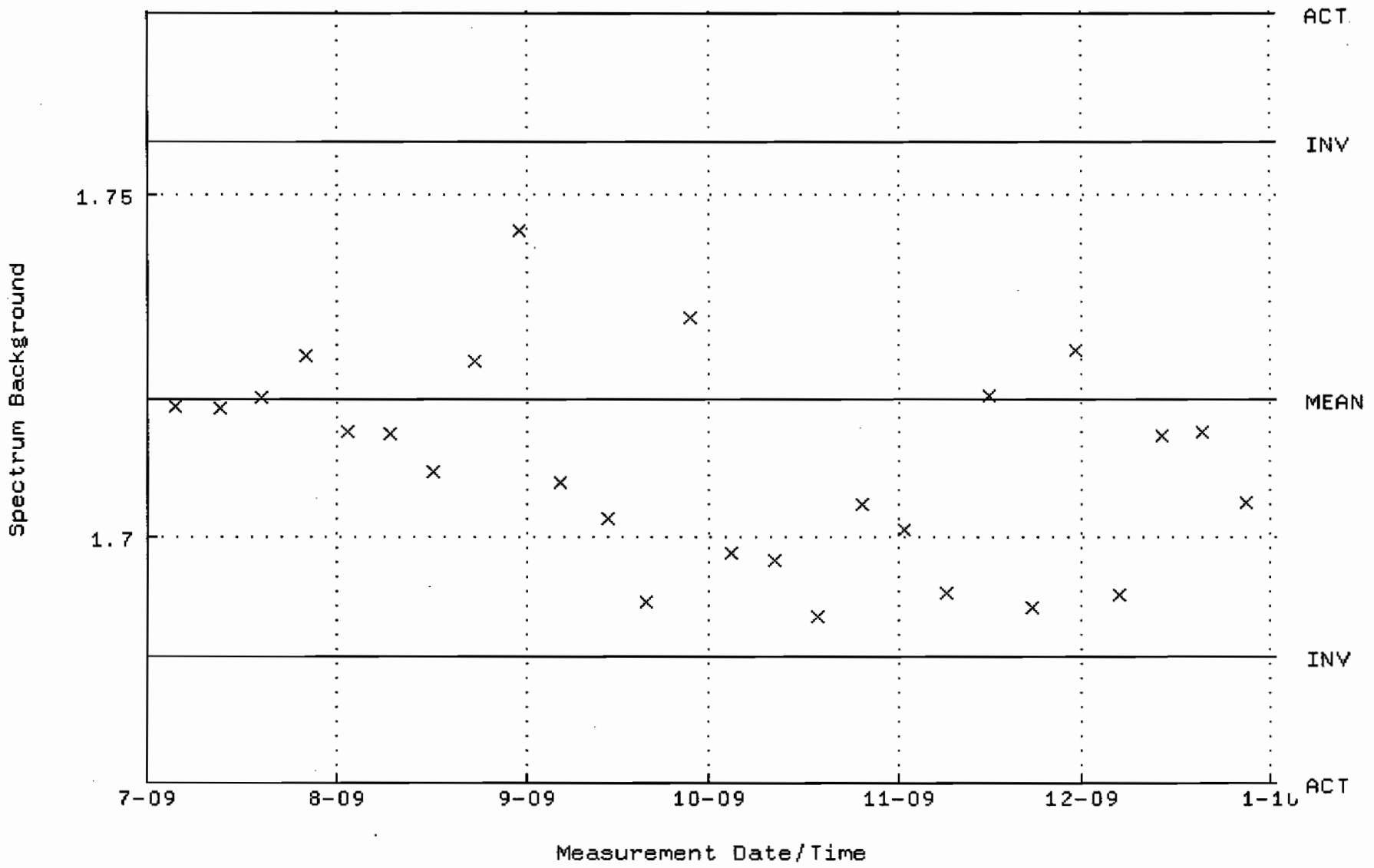
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM13.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:16 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 3.27712 +- 1.999120E-02 (0.61 %)



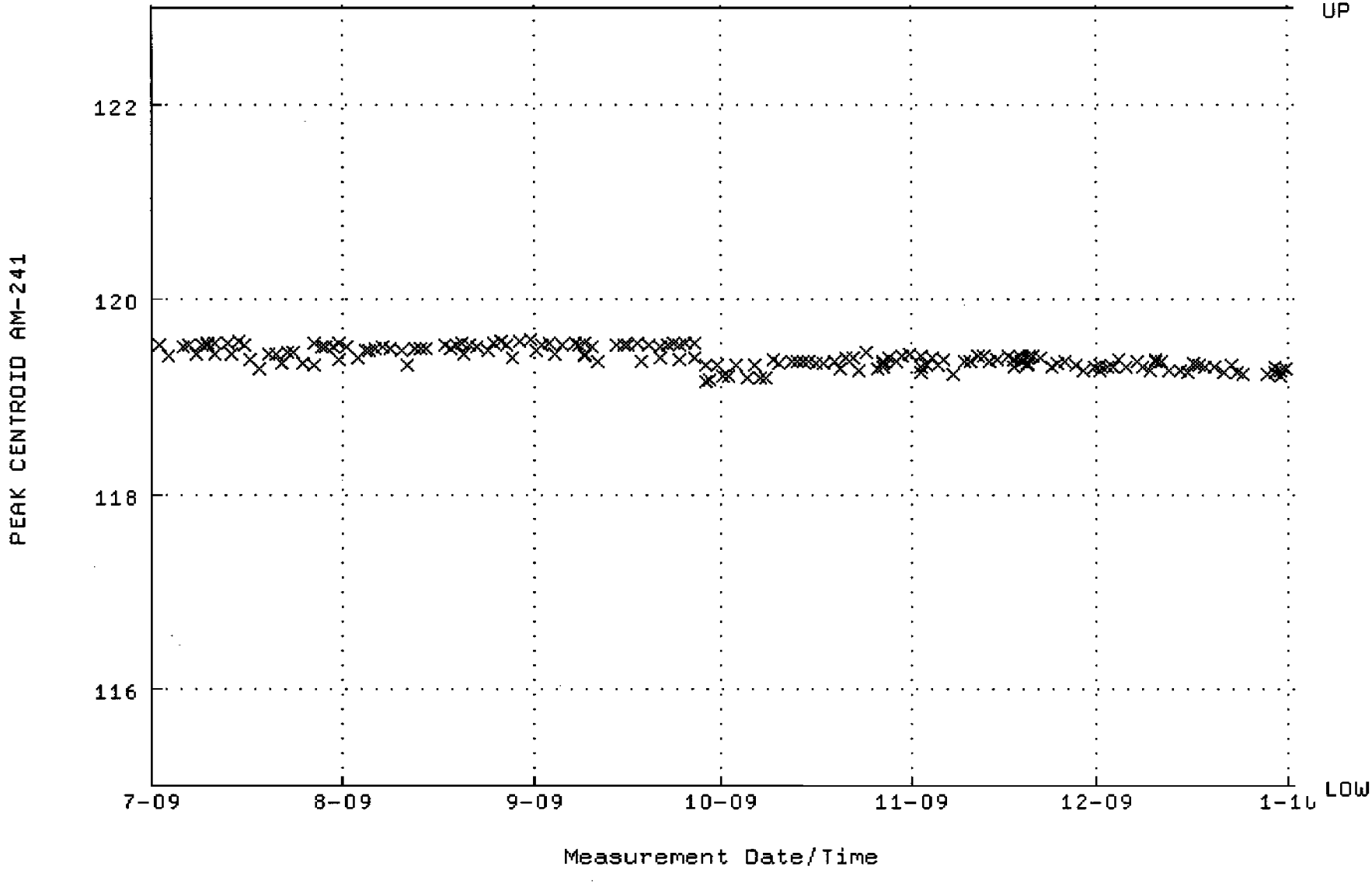
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM15_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:40 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



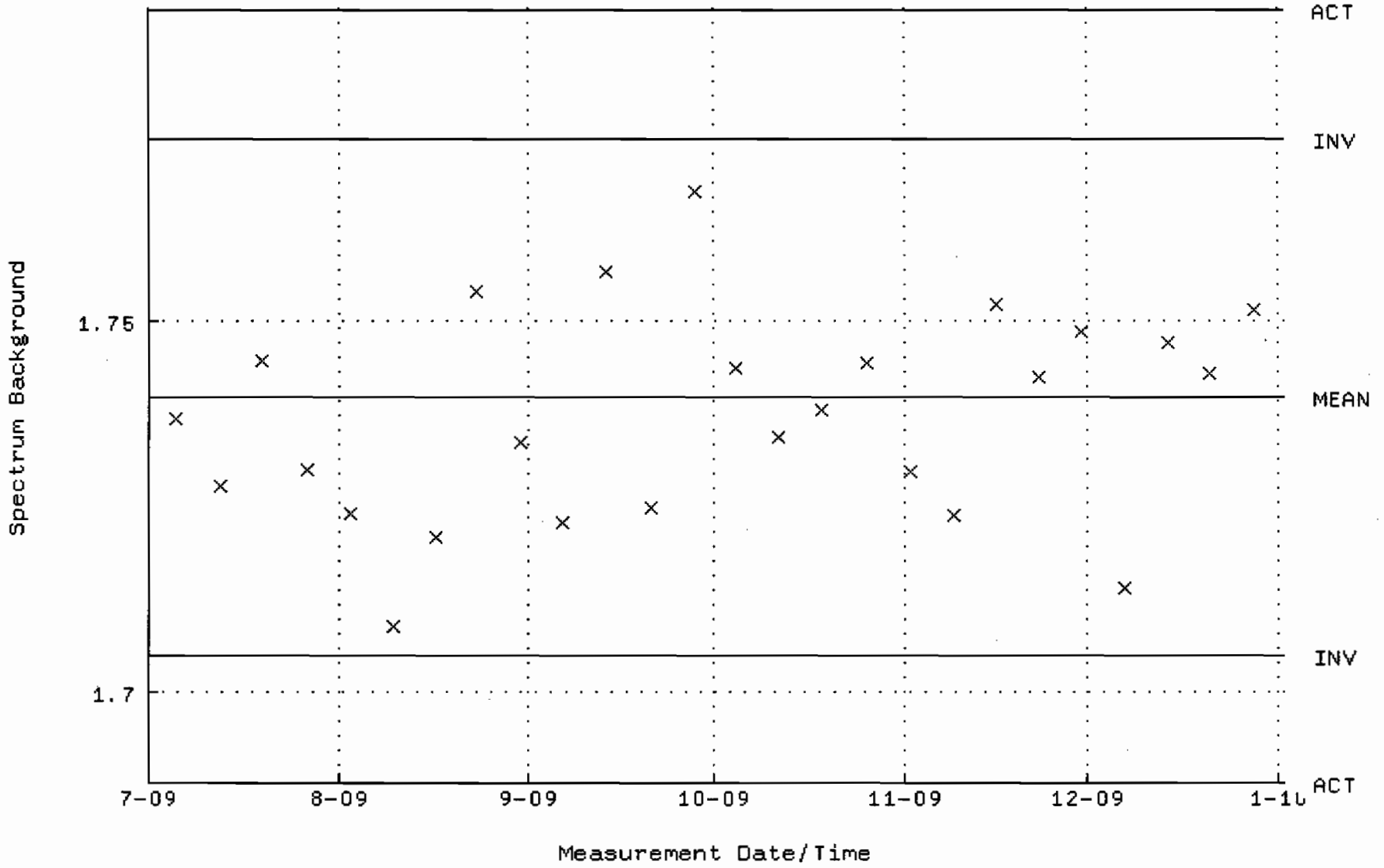
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM15.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:45 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.72024 +- 1.875820E-02 (1.09 %)



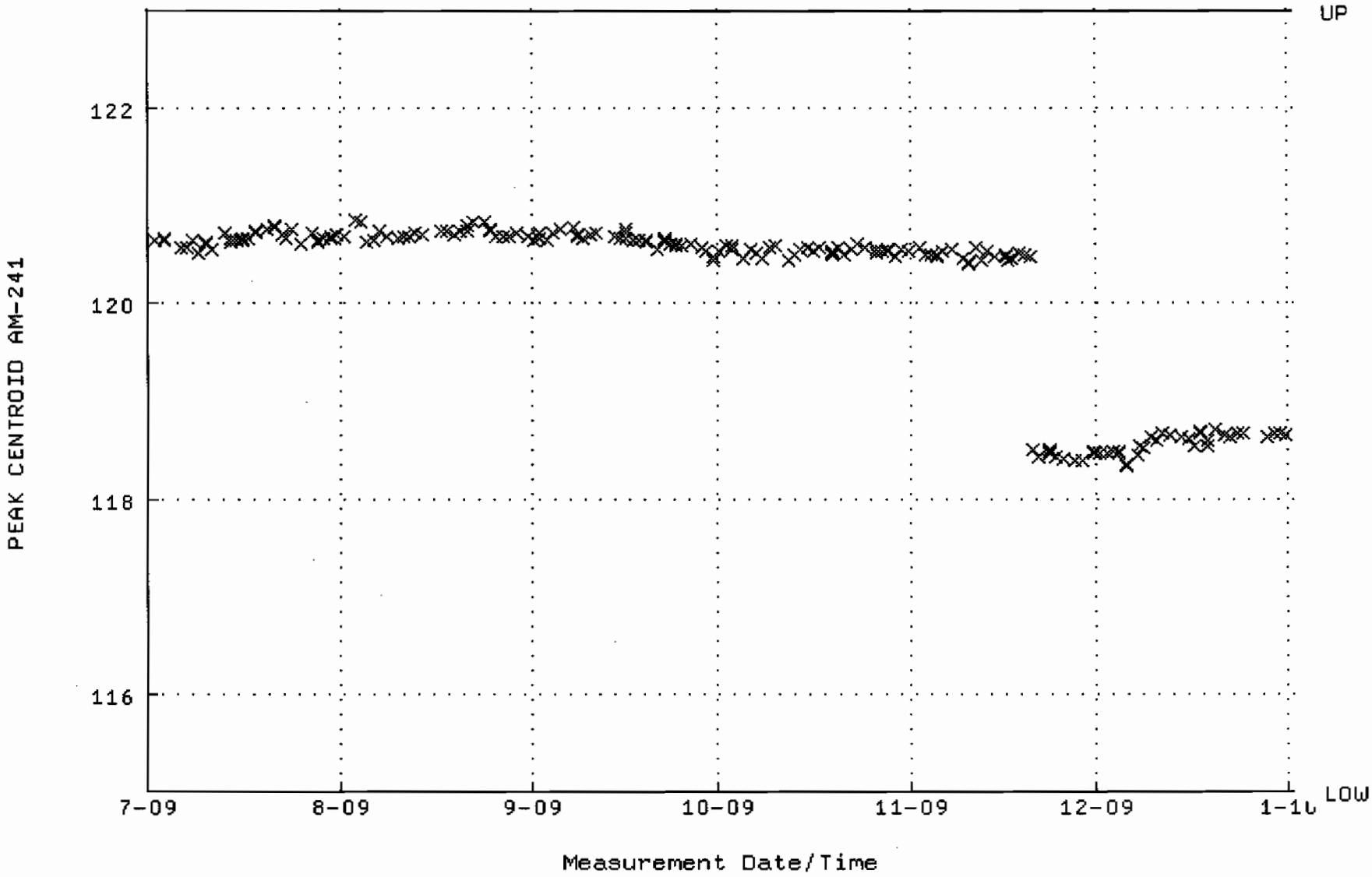
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM16_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:19 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



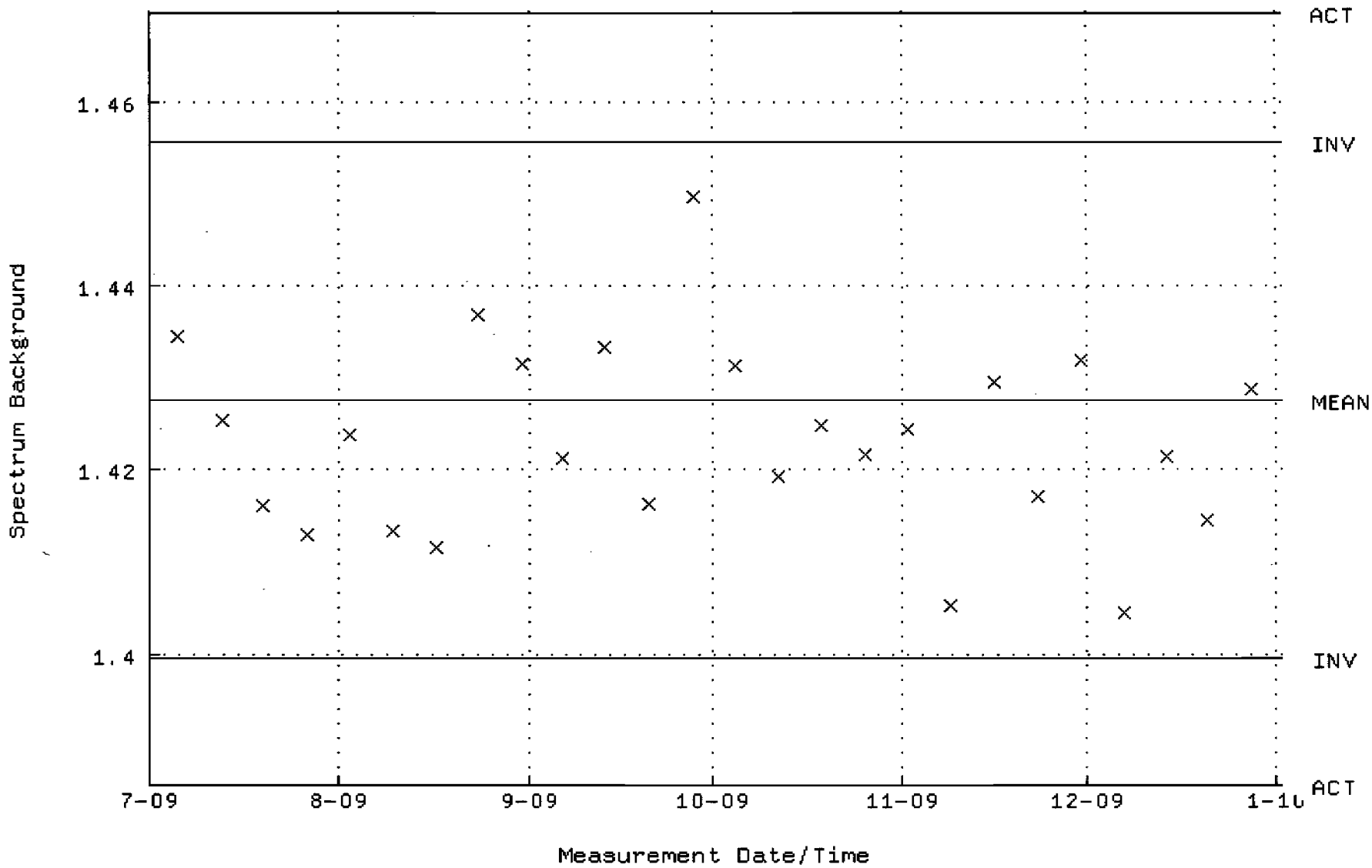
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM16.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:52:58 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.73980 +- 1.729897E-02 (0.99 %)



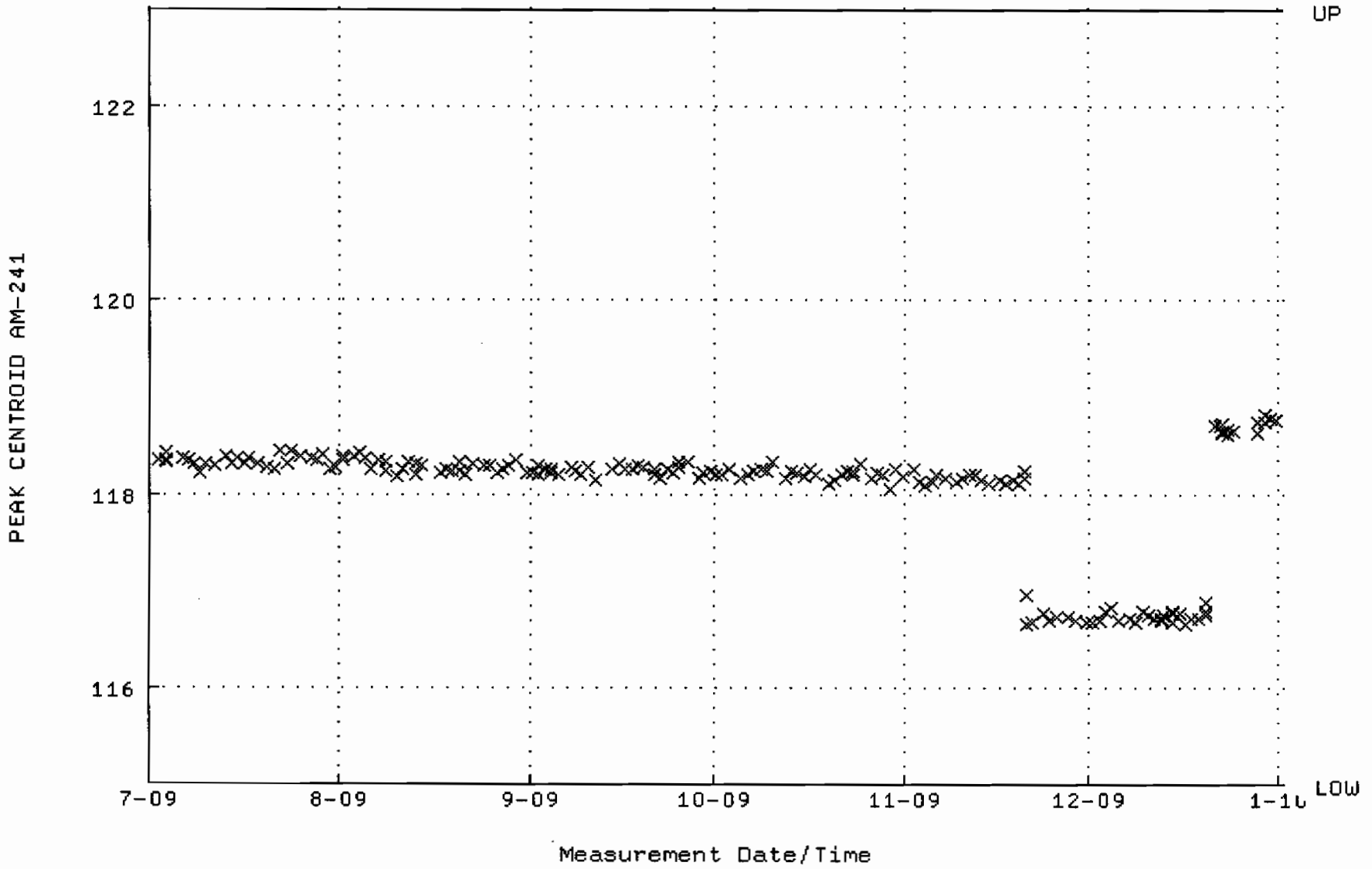
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM17_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 05:29:26 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



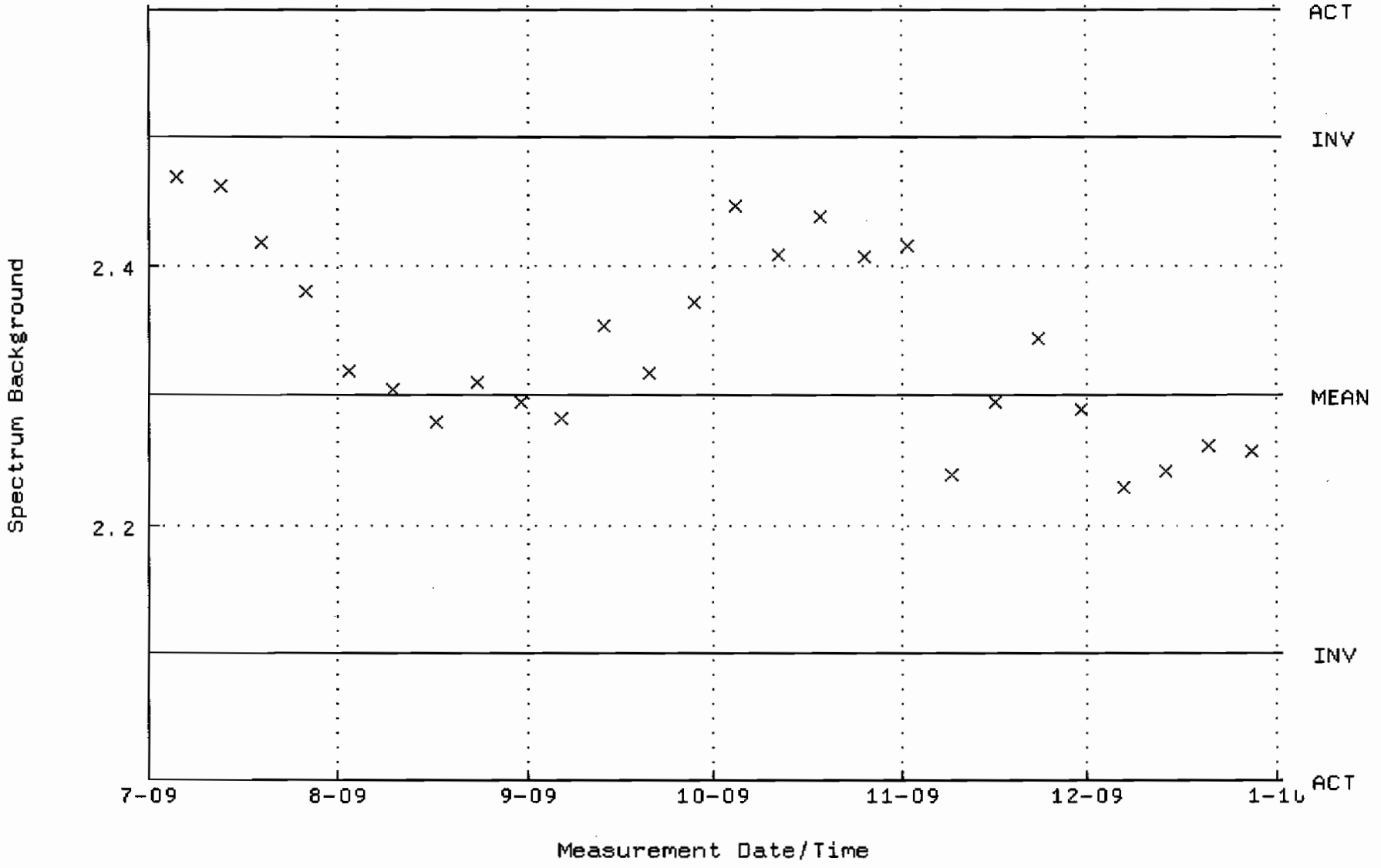
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM17.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:53:11 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.42766 +- 1.396974E-02 (0.98 %)



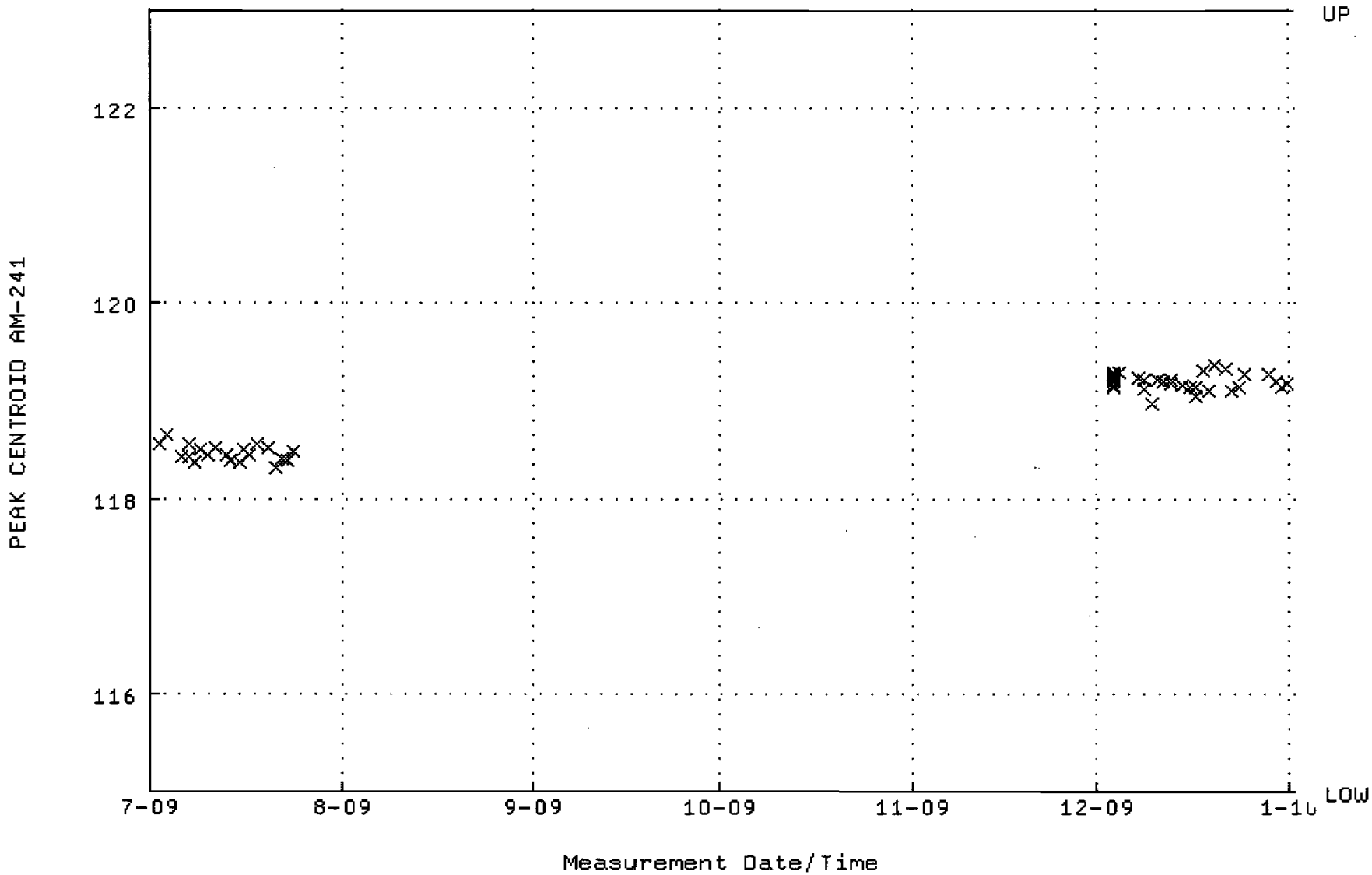
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM18_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 11:04:02 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



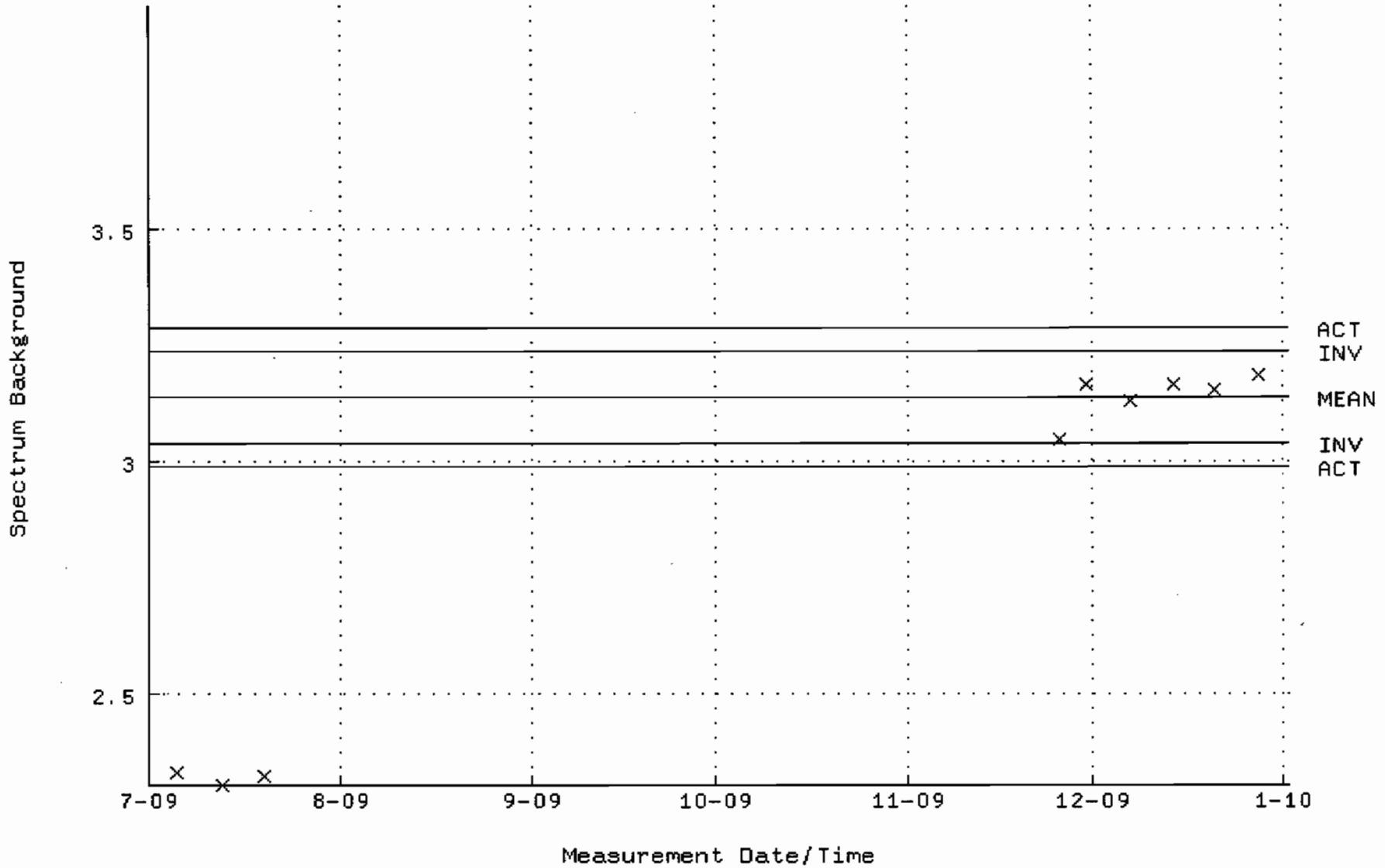
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM18.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:53:23 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 2.30164 +- 9.930626E-02 (4.31 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:50 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:54:18 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 3.13961 +- 4.985064E-02 (1.59 %)



STANDARDS DATA

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404·352·8677
Fax 404·352·2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-2-06

This standard will expire one year after the calibration date.

rec'd 11/2/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

Tel 404•352•8677
Fax 404•352•2837

www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6

Optional Additional Isotopes

Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/02/2009
Expiration Date:	12/02/2010
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241	Isotope	Result		
	Mixed Gamma N1	2534	pCi/L	- Ver. IAR-1
	Mixed Gamma N2	2510	pCi/L	- Ver. IAR-3
	Mixed Gamma N3	2413	pCi/L	- Ver. IAR-5
Mean Value (Counting) =	2485.67	**100.00**	**Pass**	
Stdev =	64.065		**Rule 3 (Pass/Fail)**	
Certificate Value =	2485.68018	pCi/L		
Lower Limit =	2357.536524	pCi/L		
Upper Limit =	2613.796809	pCi/L		
Rule 1 (Pass/Fail)	**Pass**			
Two sigma =	128.1301422			
10 % of Mean =	248.56666667			
Rule 2 (Pass/Fail)	**Pass**			

M. Stamps 12/2/09 witness/initial 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Cs-137	Isotope	Result		
	Mixed Gamma N1	854.2	pCi/L	- VER. JAR.1
	Mixed Gamma N2	907.6	pCi/L	- VER. JAR.3
	Mixed Gamma N3	898.9	pCi/L	- VER. JAR.2
Mean Value (Counting) =	886.90	**95.01**	**Pass**	
Stdev =	28.651		**Rule 3 (Pass/Fail)**	
Certificate Value =	933.44144	pCi/L		
Lower Limit =	829.597644	pCi/L		
Upper Limit =	944.202356	pCi/L		
Rule 1 (Pass/Fail)	**Pass**			
Two sigma =	57.30235597			
10 % of Mean =	88.69000000			
Rule 2 (Pass/Fail)	**Pass**			

M. Stamps 12/2/09 independent verification 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)	Isotope	Result	
	Mixed Gamma N1	1572	pCi/L - VER-JAR-5
	Mixed Gamma N2	1495	pCi/L - VER-JAR-2
	Mixed Gamma N3	1501	pCi/L - VER-JAR-3
Mean Value (Counting) =	1522.67	**98.50**	**Pass**
Stdev =	42.829		**Rule 3 (Pass/Fail)**
Certificate Value =	1545.8378	pCi/L	
Lower Limit =	1437.008431	pCi/L	
Upper Limit =	1608.324902	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	85.65823564		
10 % of Mean =	152.26666667		
Rule 2 (Pass/Fail)	**Pass**		

M. Stamps 12/2/09 witnessed 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

0244-A Characterization

Sample #	Uranium-233/234 Result (pCi/g)	Uranium-238 Result (pCi/g)	Thorium-230 Result (pCi/g)
0244-A 1	6.59	6.12	25.3
0244-A 2	6.36	6.07	28.5
0244-A 3	5.78	5.53	26.5
0244-A 4	6.48	5.97	25.5
0244-A 5	5.65	5.59	26.2
0244-A 6	6.96	5.78	27.0
0244-A 7	5.95	5.75	24.2
0244-A 8	5.29	5.67	27.2
0244-A 9	5.51	6.05	24.3
0244-A 10	6.37	5.57	25.6
0244-A 11	6.50	5.80	25.8
0244-A 12	6.13	5.42	22.4
0244-A 13	5.49	5.24	24.7
0244-A 14	6.19	5.21	26.9
0244-A 15	6.50	6.27	27.6
0244-A 16	6.50	5.24	24.9
0244-A 17	6.25	6.05	24.7
0244-A 18	6.14	6.00	25.4
0244-A 19	6.19	6.14	26.4
0244-A 20	5.67	5.61	23.2
Mean Value	6.13	5.75	25.62
1 sigma	0.439	0.325	1.493
2 sigma	0.878	0.650	2.986
75% Limit	4.60	4.31	19.22
125% Limit	7.66	7.19	32.03
Expected Result	6.2 +/- 4.0	6.0 +/- 4.0	24.5 +/- 0.6
Achieved Results	6.13 +/- 0.439	5.75 +/- 0.325	25.62 +/- 1.493

REFERENCE DATE 4/14/2000 Scott C Reid 12/1/04

Angela A. Johnson 12/3/04

TRM

Invoice:

5 bottles of TRM-1
10 " " TRM-2 and 3
5 " each of NRM-1 through 6
7 " baghouse dirt

Use 1/4 gm x 10 Samples WITH Together for TRM-2

Table 7. Recommended Concentrations of Tailings Reference Materials (pCi/g)

	TRM–1	TRM–2	TRM–3	TRM–4
U–238	99 ± 6	6.0 ± 4.0	19.6 ± 1.4	44.9 ± 1.6
U–234	105 ± 6	6.2 ± 4.0	19.6 ± 1.9	44.6 ± 1.2
Th–230	471 ± 11	24.5 ± 0.6	58.5 ± 2.1	44.0 ± 1.6
Ra–225	489 ± 17	25.4 ± 0.9	60.3 ± 2.3	42.9 ± 1.2
Pb–210	425 ± 24	22.1 ± 1.2	56.0 ± 2.1	38.9 ± 2.0

Attention Nancy Slater At GEL
Not For Log-In

9911627-01 -> 05

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 422494

Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 13
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept.
P.O. Box 5800 MS 0154

Location — Tech Area VI — Building N/A — Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Reference LOV (available at SMO): Sample Matrix	Container: Type	Container: Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE: Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐ Yes ☒ No Ref. No.

Sample Disposal ☐ Return to Client ☒ Disposal by lab

Turnaround Time ☒ Normal ☐ Rush Required Report Date

Sample Tracking (LAB USE)
Date Entered (mm/dd/yy)
Entered By
QC Initiated

Special Instructions/QC Requirements
EDD ☐ Yes ☒ No
Raw data package ☐ Yes ☒ No
These "samples" are soil investigation derived materials being sent to GEL on behalf of Mark Hinton
Please list as separate report.

Abnormal Conditions on Receipt (LAB USE)

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	Douglas E. Perry	DEP	Weston / 7577 / 845-0867

1. Relinquished by	Douglas E. Perry	Org.	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) — 1st Copy To Accompany Samples, Return to SMO (Blue) — 2nd Copy SMO Suspense Copy (Yellow) — 3rd Copy Field Copy (Pink)

0244-B Characterization

Sample #	Plutonium-239 Result (pCi/g)	Plutonium-238 Result (pCi/g)	Americium-241 Result (pCi/g)
0244-B 1	39.9	7.88	38.4
0244-B 2	44.1	7.97	40.6
0244-B 3	45.8	6.56	31.8
0244-B 4	43.6	7.69	31.5
0244-B 5	43	7.9	40.2
0244-B 6	43.5	7.84	29.4
0244-B 7	41.3	7.67	36
0244-B 8	44.3	6.95	33.2
0244-B 9	42.7	7.2	29.2
0244-B 10	44.9	7.69	30
0244-B 11	41.4	7.22	30.2
0244-B 12	41.3	7.74	36
0244-B 13	39.2	6.65	33.8
0244-B 14	39.6	7.78	31.1
0244-B 15	45.3	8.41	37.3
0244-B 16	38.1	6.74	33.6
0244-B 17	48.5	8.51	30.5
0244-B 18	36.5	7.23	38.6
0244-B 19	35.3	6.98	30.9
0244-B 20	37.4	8.55	31.3
Mean Value	41.79	7.56	33.68
1 sigma	3.418	0.596	3.724
2 sigma	6.835	1.193	7.448
75% Limit	30.75	6.02	24.38
125% Limit	51.25	10.04	40.63
Expected Result	41.0 +/- 3.0	8.03 +/- 0.37	32.5 +/- 1.1
Achieved Results	41.79 +/- 3.418	7.56 +/- .596	33.68 +/- 3.724

REFERENCE DATE 4/14/2000

Amanda L. Fehr 4/30/04
[illegible] 5/1/04

PEM-1

PREPARATION AND CHARACTERIZATION OF THE PERFORMANCE EVALUATION SOIL SAMPLE PEM-1

INTRODUCTION

Rust Geotech (Rust) was contracted by Los Alamos National Laboratory (LANL) to prepare and characterize a soil performance evaluation sample designated PEM-1. This report describes sample preparation, homogeneity assessment, and determination of the concentrations of 28 elements and radioactive isotopes in the sample.

SAMPLE PREPARATION

Rust received nine five-gallon buckets of soil from LANL. The soils were dried overnight in ovens at 103 °C. The large pieces of leaves and sticks were removed and the soils were ground with ceramic-plate grinders to a particle size that passed through a 325 mesh screen. The samples were blended at the proportions specified by LANL for 48 hours in a 3-cubic-foot cross-flow blender. The sample identifications and the amounts used are listed in Table 1.

Table 1. Sample Identifications and Amounts Used to Prepare PEM-1

LANL Sample ID	Amount Used (kg)
AAA 1592	1.7
AAA 2505-1	10.9
AAA 2505-2	12.8
AAA 2750-1	8.4
AAA 2750-2	8.4
AAA 3205	12.6
AAA 8581	4.2
AAB 3417	12.8
AAB 3475	12.6

The blended sample was transferred to three five-gallon plastic containers. While the sample was being transferred, 10 samples were taken at pre-determined time intervals to be used for homogeneity assessment and sample characterization. These samples are believed to be representative of the bulk material.

Attention Nancy Slater At GEL
Not For Log-In

9911627-01-70

SF 2001-COC (10-97)
Supersedes (5-97) issue

Internal Lab Batch No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY

SAR/WR No. N/A

Press F1 for instructions for each field.

AR/COC- 602945

Dept. No./Mail Stop: 7132 / 1042
Project/Task Manager: PAM PUISSANT
Project Name:
Record Center Code: N/A
Logbook Ref. No.: N/A
Service Order No.:

Date Samples Shipped: 11-16-99 SMO USE
Carrier/Waybill No.: 726494
Lab Contact: EDIE KENT
Lab Destination: G.E.L.
SMO Contact/Phone: Doug Salmi / 844-3110
Send Report to SMO: Suzi Jensen/844-3184

Contract No.: AJ-2480A
Case No.: 10204 1.3
SMO Authorization: Doug Salmi
Bill to: Sandia National Laboratories
Supplier Services, Dept. _____
P.O. Box 5800 MS 0154

Location Tech Area VI
Building N/A Room N/A

Sample No. - Fraction	ER Sample ID or Sample Location Detail	Beginning Depth in Ft.	ER Site No.	Date/Time Collected	Sample Matrix	Container Type	Container Volume	Preservative	Sample Collection Method	Sample Type	Parameter & Method Requested	LAB USE Lab Sample ID
050484 - 001	PEM-1	N/A	N/A	11/15/9 1100	S	P	1 L	4 C	G	SA	See Special	
050485 - 001	TRM-2	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Instructions	
050486 - 001	~~NRM-2~~ NBHD	N/A	N/A	11/15/9 1100	S	G	1 L	4 C	G	SA	Below	
-												
-												
-												
-												
-												
-												
-												

RMMA ☐ Yes ☒ No Ref. No.
Sample Disposal ☐ Return to Client ☒ Disposal by lab
Turnaround Time ☒ Normal ☐ Rush Required Report Date

Sample Tracking SMO USE
Date Entered (mm/dd/yy)
Entered by
QC Units

Special Instructions/QC Requirements
EDD ☐ Yes ☒ No
Raw data package ☐ Yes ☒ No
These "samples" are well characterized rad materials being sent to GEL on behalf of Mark Minteer
Please list as separate report.

Abnormal Conditions on Receipt LAB USE

Sample Team Members	Name	Signature	Init	Company/Organization/Phone
	Douglas E. Perry	[signature]	[initials]	Weston / 7577 / 845-0867

1. Relinquished by	[signature]	Org. 7577	Date 11-16-99	Time 0900	4. Relinquished by	Org.	Date
1. Received by		Org.	Date	Time	4. Received by	Org.	Date
2. Relinquished by		Org.	Date	Time	5. Relinquished by	Org.	Date
2. Received by		Org.	Date	Time	5. Received by	Org.	Date
3. Relinquished by		Org.	Date	Time	6. Relinquished by	Org.	Date
3. Received by		Org.	Date	Time	6. Received by	Org.	Date

Original To Accompany Samples, Laboratory Copy (White) 1st Copy To Accompany Samples, Return to SMO (Blue) 2nd Copy SMO Suspense Copy (Yellow) 3rd Copy Field Copy (Pink)

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS
Half Life:	7380 ± 40 years	P.O.No.:	9290-RAD
Catalog No.:	7243	Reference Date:	January 1 1994 12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 μCi
		Contained Radioactivity:	(Am-243) 3750 kBq

Description of Solution

a. Mass of solution:	5.3739 g (in a 5 ml Flame Sealed Ampoule)	
b. Chemical form:	Am(NO3)3 in 2N HNO3	
c. Carrier content:	None added	
d. Density:	1.0651	g/ml @ 20°C.

Radioimpurities None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μCi/g

Method of Calibration

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under:	228, 278	keV.
Branching ratio(s) used:	0.108, 0.1420	gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration:	±3.0%
b. Random uncertainty in assay:	±0.4%
c. Random uncertainty in weighing(s):	±0.0%
d. Total uncertainty at the 99% confidence level:	±3.0%

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).

Anna U. Kuen
QUALITY CONTROL

Jan 3, 1994
Date Signed

ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

RC-S-005-32

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☑ **1. STANDARD WIPE TEST**

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **2. SOAK TEST**

The source is immersed in distilled water and maintained at 50 ± 10° C for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **3. SOAK TEST -- BERYLLIUM WINDOW**

The source is immersed in distilled water and maintained at 50 ± 10° C for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **4. GAS SOURCE TEST (Radioactive Gas)**

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☑ **5. OTHER LEAK TEST**

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ **6. LEAK TEST NOT APPLICABLE**

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.3419 g
Density(g/mL):	1.0785
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (100 mL) = 2234238.9912 dpm/mL
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (1.0785 g/mL) / (100 mL) = 2071617.0528 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Julie Strock	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/30/2008	09/29/2009
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/23/2009	04/23/2010
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003

07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/05/2009	06/03/2010
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/ml	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4385.1449 dpm/ml	06/04/2009	06/04/2010
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-243 Standard *445-96-2-SS*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590
Mean Value (Counting) =	1.340	101.99	Pass
Stdev =	0.043588989		Rule 3 (Pass/Fail)
Target =	1.314		
Lower Limit =	1.252822021		
Upper Limit =	1.427177979		
Rule 1 Pass/Fail	Pass		
Two sigma =	0.087177979		
10 % of Mean =	0.134		
Rule 2 (Pass/Fail)	Pass		

The analyst prepared three standard verification sources for standard ***445-96-2-SS*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Cm-244*** standard ***0533-O*** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd(and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Aders 5/15/09

5/15/09

1374

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

RECEIVED 2/7/05

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

*Notes and references are on pages 5 to 7.

DC-5-051-C413

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994** [b]*
Massic activity of the solution [c]	**26.31 Bq·g^{-1}**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) g·mL^{-1} at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration (mol·L^{-1})	Mass Fraction (g·g^{-1})
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) Bq·g^{-1} [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three 4πα liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	$^{239}Pu + ^{240}Pu$ <0.000 001 [u]	$^{239}Pu + ^{240}Pu$ 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	$^{238}Pu + ^{241}Am$ <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One μSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (μSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) \equiv |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 s−1•g−1 for energies less than 3.1 MeV,
0.03 s−1•g−1 for energies between 3.1 and 4.4 MeV, and
0.003 s−1•g−1 for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5 × 10-5 s−1•g−1 for energies between 19 and 39 keV,
7 × 10-5 s−1•g−1 for energies between 49 and 92 keV,
2 × 10-5 s−1•g−1 for energies between 106 and 507 keV,
1 × 10-5 s−1•g−1 for energies between 515 and 1456 keV, and
5 × 10-6 s−1•g−1 for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i|\cdot(x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i|\cdot(x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i|\cdot u(x_i)/y = |\partial y/\partial x_i|\cdot(x_i/y)\cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i|\cdot(x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999.

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1374
Prepared By:	Mary Aders
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-051-093

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Ashley Drochter
Prep Date:	12/02/2009
Verification Date:	12/08/2009
Expiration Date:	12/08/2010
Primary Code:	1374-A
Dilution(mL):	250 mL
Mass of Parent(g):	5.3616 g
Density(g/mL):	1.0136
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (250 mL) = 33.8553 dpm/mL
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0136 g/mL) / (250 mL) = 33.4010 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1374-*A*

A.Drochter	Isotope	Value	Uncertainty	
12/8/2009	1374-A	1.610	0.2480	
	1374-A	1.580	0.2510	
	1374-A	1.530	0.2440	
Mean Value (Counting) =	1.573	103.17	**Pass**	
Stdev =	0.040414519		**Rule 3 (Pass/Fail)**	
Target =	1.52			
Lower Limit =	1.492504296			
Upper Limit =	1.654162371			
Rule 1 Pass/Fail	**Pass**			
Two sigma =	0.080829038			
10 % of Mean =	0.157333333			
Rule 2 (Pass/Fail)	**Pass**			

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1374-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-BB and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Four drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 49% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

12/9/09 12/9/09

Eckert & Ziegler
Analytics

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
www.analyticsinc.com

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20483 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

End of Certificate

RECEIVED
12/15/08
RC-S-08

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010
12/02/2009	Julie Strock	2.076	250	1283-F	17.5561 dpm/mL	01/09/2009	12/30/2009
12/02/2009	Julie Strock	.517	250	1283-G	4.3721 dpm/mL	01/09/2009	12/30/2009
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-H*

Analyst: A. Drochter	Serial #	Value		Uncertainty	
Date: 12/10/09	1283-H N1	2.020	pCi/L	0.238	pCi/L
	1283-H N2	2.000	pCi/L	0.234	pCi/L
	1283-H N3	2.060	pCi/L	0.242	pCi/L

Mean Value (Counting) =	2.027	pCi/L	**99.66904**	**Pass**
Stdev =	0.030550505	pCi/L		**Rule 3 (Pass/Fail)**
Target =	2.033	pCi/L		
Lower Limit =	1.965565657	pCi/L		
Upper Limit =	2.087767676	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	0.061101009			
10 % of Mean =	0.202666667			
Rule 2 (Pass/Fail)	**Pass**			

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-H** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-G** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A Drochter 12/14/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 936923**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
243457001	SAMPLE	MXR1	GAM05	04-JAN-10 13:58	DONE	CAN	11-JUN-09 00:00
243457002	SAMPLE	MXR1	GAM07	04-JAN-10 13:58	DONE	CAN	20-JUL-09 00:00
243457003	SAMPLE	MXR1	GAM10	04-JAN-10 13:58	DONE	CAN	16-MAR-09 00:00
243457004	SAMPLE	MXR1	GAM11	04-JAN-10 13:59	DONE	CAN	18-NOV-09 00:00
243492001	SAMPLE	MXR1	GAM12	04-JAN-10 13:59	DONE	CAN	10-FEB-09 00:00
243492002	SAMPLE	MXR1	GAM13	04-JAN-10 14:00	DONE	CAN	02-FEB-09 00:00
243492004	SAMPLE	MXR1	GAM15	04-JAN-10 14:01	DONE	CAN	16-FEB-09 00:00
243492005	SAMPLE	MXR1	GAM16	04-JAN-10 14:01	DONE	CAN	16-NOV-09 00:00
243492006	SAMPLE	MXR1	GAM17	04-JAN-10 14:02	DONE	CAN	27-JAN-09 00:00
243492007	SAMPLE	MXR1	GAM18	04-JAN-10 14:02	DONE	CAN	23-APR-09 00:00
1202004732	MB	MXR1	GAM22	04-JAN-10 14:05	DONE	CAN	02-DEC-09 00:00
1202004733	DUP	MXR1	GAM15	04-JAN-10 16:16	DONE	CAN	16-FEB-09 00:00
1202004734	LCS	MXR1	GAM05	05-JAN-10 07:39	DONE	CAN	11-JUN-09 00:00
243492003	SAMPLE	MXR1	GAM13	05-JAN-10 14:15	DONE	CAN	02-FEB-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 937596**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202006343	MB	JXD2	1110	05-JAN-10 14:30	DONE		
1202006344	DUP	JXD2	1111	05-JAN-10 14:30	DONE		
1202006345	LCS	JXD2	1112	05-JAN-10 14:30	DONE		
243385001	SAMPLE	JXD2	1029	05-JAN-10 15:09	DONE		
243385002	SAMPLE	JXD2	1030	05-JAN-10 15:09	DONE		
243385003	SAMPLE	JXD2	1031	05-JAN-10 15:09	DONE		
243385004	SAMPLE	JXD2	1033	05-JAN-10 15:09	DONE		
243385005	SAMPLE	JXD2	1035	05-JAN-10 15:09	DONE		
243385006	SAMPLE	JXD2	1036	05-JAN-10 15:09	DONE		
243385007	SAMPLE	JXD2	1037	05-JAN-10 15:09	DONE		
243385008	SAMPLE	JXD2	1038	05-JAN-10 15:09	DONE		
243385009	SAMPLE	JXD2	1039	05-JAN-10 15:09	DONE		
243385010	SAMPLE	JXD2	1040	05-JAN-10 15:09	DONE		
243385011	SAMPLE	JXD2	1041	05-JAN-10 15:09	DONE		
243492001	SAMPLE	JXD2	1042	05-JAN-10 15:09	DONE		
243492002	SAMPLE	JXD2	1043	05-JAN-10 15:09	DONE		
243492003	SAMPLE	JXD2	1044	05-JAN-10 15:09	DONE		
243492004	SAMPLE	JXD2	1045	05-JAN-10 15:09	DONE		
243492005	SAMPLE	JXD2	1046	05-JAN-10 15:09	DONE		
243492006	SAMPLE	JXD2	1047	05-JAN-10 15:09	DONE		
243492007	SAMPLE	JXD2	1048	05-JAN-10 15:09	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 937598**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202006348	LCS	JXD2	1234	04-JAN-10 10:37	DONE		
243492005	SAMPLE	JXD2	1216	04-JAN-10 11:23	DONE		
1202006346	MB	JXD2	1218	04-JAN-10 11:23	DONE		
1202006347	DUP	JXD2	1221	04-JAN-10 11:23	DONE		
243492006	SAMPLE	JXD2	1236	04-JAN-10 11:24	DONE		
243492007	SAMPLE	JXD2	1242	04-JAN-10 11:24	DONE		
243492002	SAMPLE	JXD2	1246	04-JAN-10 15:46	DONE		
243492003	SAMPLE	JXD2	1252	04-JAN-10 15:47	DONE		
243492004	SAMPLE	JXD2	1253	04-JAN-10 15:47	DONE		
243385001	SAMPLE	JXD2	1083	04-JAN-10 18:14	DONE		
243385002	SAMPLE	JXD2	1084	04-JAN-10 18:14	DONE		
243385003	SAMPLE	JXD2	1085	04-JAN-10 18:14	DONE		
243385004	SAMPLE	JXD2	1086	04-JAN-10 18:14	DONE		
243385005	SAMPLE	JXD2	1087	04-JAN-10 18:14	DONE		
243385006	SAMPLE	JXD2	1088	04-JAN-10 18:14	DONE		
243385007	SAMPLE	JXD2	1089	04-JAN-10 18:14	DONE		
243385008	SAMPLE	JXD2	1090	04-JAN-10 18:14	DONE		
243385009	SAMPLE	JXD2	1091	04-JAN-10 18:14	DONE		
243385010	SAMPLE	JXD2	1092	04-JAN-10 18:14	DONE		
243385011	SAMPLE	JXD2	1093	04-JAN-10 18:14	DONE		
243492001	SAMPLE	JXD2	1094	04-JAN-10 18:14	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 937600**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
243385001	SAMPLE	JXD2	1125	05-JAN-10 20:20	DONE		
243385002	SAMPLE	JXD2	1126	05-JAN-10 20:20	DUSE		
243385003	SAMPLE	JXD2	1127	05-JAN-10 20:20	DONE		
243385004	SAMPLE	JXD2	1128	05-JAN-10 20:20	DONE		
243385005	SAMPLE	JXD2	1129	05-JAN-10 20:20	DONE		
243385006	SAMPLE	JXD2	1130	05-JAN-10 20:20	DONE		
243385007	SAMPLE	JXD2	1133	05-JAN-10 20:20	DONE		
243385008	SAMPLE	JXD2	1134	05-JAN-10 20:20	DONE		
243385009	SAMPLE	JXD2	1153	05-JAN-10 20:20	DONE		
243385010	SAMPLE	JXD2	1154	05-JAN-10 20:20	DUSE		
243385011	SAMPLE	JXD2	1155	05-JAN-10 20:20	DONE		
243492001	SAMPLE	JXD2	1156	05-JAN-10 20:20	DONE		
243492002	SAMPLE	JXD2	1157	05-JAN-10 20:20	DONE		
243492003	SAMPLE	JXD2	1158	05-JAN-10 20:20	DONE		
243492004	SAMPLE	JXD2	1159	05-JAN-10 20:20	DONE		
243492005	SAMPLE	JXD2	1160	05-JAN-10 20:20	DONE		
243492006	SAMPLE	JXD2	1161	05-JAN-10 20:20	DONE		
243492007	SAMPLE	JXD2	1162	05-JAN-10 20:20	DONE		
1202006349	MB	JXD2	1163	05-JAN-10 20:21	DONE		
1202006350	DUP	JXD2	1164	05-JAN-10 20:21	DONE		
1202006351	LCS	JXD2	1165	05-JAN-10 20:21	DONE		
243385002	SAMPLE	JXD2	1161	07-JAN-10 11:16	DONE		
243385010	SAMPLE	JXD2	1162	07-JAN-10 11:16	DONE		

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Los Alamos National Laboratory (LANL)
SDG 10-1037-2
Work Order 243494

Method/Analysis Information

Product:	**Alphaspec Am241 Cm, Filter**
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Filter Prep
Analytical Batch Number:	938067
Prep Batch Number:	937268

Sample ID	Client ID
243494001	RE12-10-7867
243494002	RE12-10-7868
1202007313	Method Blank (MB)
1202007314	243494002(RE12-10-7868) Sample Duplicate (DUP)
1202007316	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202007313 (MB) and 1202007316 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 243494002 (RE12-10-7868). The QC was from LANL work order 243494.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Pu, Filter**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Filter Prep
Analytical Batch Number:	938068
Prep Batch Number:	937268

Sample ID	Client ID
243494001	RE12-10-7867
243494002	RE12-10-7868
1202007317	Method Blank (MB)
1202007318	Laboratory Control Sample (LCS)
1202007319	243494002(RE12-10-7868) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202007317 (MB) and 1202007318 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 243494002 (RE12-10-7868). The QC was from LANL work order 243494.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The blank result is less than 1.65 times the CSU.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The blank result is less than the decision level.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec U, Filter**
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Filter Prep
Analytical Batch Number:	938069
Prep Batch Number:	937268

Sample ID	Client ID
243494001	RE12-10-7867
243494002	RE12-10-7868
1202007321	Method Blank (MB)
1202007322	243494002(RE12-10-7868) Sample Duplicate (DUP)
1202007323	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. Calibrations are performed monthly using mixed alpha standards comprised of the following: Gd-148, Np-237, and Cm-244.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
Aliquots for samples 1202007321 (MB) and 1202007323 (LCS) were changed to 1.0 per client request.

Designated QC
The following sample was used for QC: 243494002 (RE12-10-7868). The QC was from LANL work order 243494.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The U233/234 blank result is greater than 1.65 times the CSU but less than 5% of the activity of the least active sample. The U238 blank result is greater than 1.65 times the CSU but less than the MDC.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Additional Comments
The blank activity for U-233/234 for sample 1202007321 (MB) is less than five percent of the lowest sample activity in the batch.

Blank Decision Level
The U238 blank result is greater than the decision level but less than the MDC. The U233/234 blank result is greater than the decision level but less than 5% of the activity of the least active sample.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gammaspec, Gamma, Filter (Long List)**
Analytical Method:	DOE HASL 300, 4.5.2.3/Ga-01-R
Prep Method:	Filter Prep
Analytical Batch Number:	937282
Prep Batch Number:	937268

Sample ID	Client ID
243494001	RE12-10-7867
243494002	RE12-10-7868
1202005628	Method Blank (MB)
1202005629	243494001(RE12-10-7867) Sample Duplicate (DUP)
1202005630	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 18.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met. The initial Calibrations were performed in March 2009, May 2009, June 2009, July 2009, August 2009 and December 2009.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 243494001 (RE12-10-7867). The QC was from LANL work order 243494.

QC Information
All of the QC samples met the required acceptance limits.

CSU
The method blank 1202005628 (MB) result is greater than 1.65 times the CSU but less than the MDC for Ra-224 and Th-231.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Blank Decision Level
The method blank 1202005628 (MB) result is greater than the decision level but less than the MDC for Ra-224 and Th-231.

Qualifier information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Data rejected due to high counting uncertainty.	Thorium-234	1202005629	RE12-10-7867(243494001DUP)
UI	Data rejected due to low abundance.	Strontium-85	243494002	RE12-10-7868
			1202005628	MB for batch 937282
		Thallium-208	243494001	RE12-10-7867
			1202005629	RE12-10-7867(243494001DUP)

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: Heather B. McCarty 1/14/10

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

LANL010 Los Alamos National Laboratory (72733-001-09)

Client SDG: 10-1037-2 GEL Work Order: 243494

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.

** Indicates the analyte is a surrogate compound.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Valerie Davis.

Reviewed by _____ 1/14/10

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7867
Sample ID: 243494001
Matrix: SWP
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
Alphaspec Am241 Cm, Filter "As Received"												
Americium-241	U	-0.0228	0.276	+/-0.0694	1.00	pCi/Filter		MXE1	01/13/10	0827	938067	1
Alphaspec Pu, Filter "As Received"												
Plutonium-238	U	-0.014	0.103	+/-0.0198	1.00	pCi/Filter		MXE1	01/13/10	0827	938068	2
Plutonium-239/240	U	0.028	0.130	+/-0.0343	1.00	pCi/Filter						
Alphaspec U, Filter "As Received"												
Uranium-233/234		0.692	0.0386	+/-0.110	1.00	pCi/Filter		MXE1	01/13/10	0712	938069	3
Uranium-235/236		0.0705	0.0478	+/-0.0356	1.00	pCi/Filter						
Uranium-238		1.23	0.0386	+/-0.157	1.00	pCi/Filter						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Filter (Long List) "As Received"												
Americium-241	U	9.97	17.0	+/-4.82		pCi/Filter		MXR1	01/04/10	1928	937282	5
Bismuth-211	U	-0.0754	16.9	+/-6.15		pCi/Filter						
Bismuth-214	U	-1.89	6.52	+/-2.90		pCi/Filter						
Cadmium-109	U	-32.3	50.2	+/-17.8		pCi/Filter						
Cerium-139	U	-0.698	2.09	+/-0.663		pCi/Filter						
Cesium-134	U	1.34	3.21	+/-0.911		pCi/Filter						
Cesium-137	U	-1.36	3.58	+/-1.38	5.00	pCi/Filter						
Cobalt-60	U	-2.85	2.92	+/-1.41		pCi/Filter						
Europium-152	U	-1.82	6.97	+/-2.14		pCi/Filter						
Lanthanum-140	U	-1.83	7.51	+/-2.41		pCi/Filter						
Lead-212	U	-2.68	4.72	+/-2.05		pCi/Filter						
Lead-214	U	-2.18	5.79	+/-2.17		pCi/Filter						
Mercury-203	U	-0.407	2.97	+/-0.889		pCi/Filter						
Potassium-40	U	6.24	27.0	+/-13.2		pCi/Filter						
Radium-223	U	-20.6	44.7	+/-14.0		pCi/Filter						
Radium-224	U	-52.4	46.1	+/-16.0		pCi/Filter						
Radium-226	U	10.2	49.9	+/-26.9		pCi/Filter						
Radium-228	U	-1.55	10.1	+/-3.99		pCi/Filter						
Ruthenium-106	U	-3.59	22.7	+/-7.24		pCi/Filter						
Sodium-22	U	0.270	2.70	+/-0.792		pCi/Filter						
Strontium-85	U	-14.1	3.74	+/-1.52		pCi/Filter						
Thallium-208	UI	3.47	3.31	+/-1.79		pCi/Filter						
Thorium-227	U	11.2	29.0	+/-8.36		pCi/Filter						

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Certificate of Analysis

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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7867 Project: LANL01004
Sample ID: 243494001 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Filter (Long List) "As Received"												
Thorium-231	U	-22.1	33.8	+/-14.0		pCi/Filter						
Thorium-234	U	-110	122	+/-50.2		pCi/Filter						
Tin-113	U	-0.0691	3.27	+/-0.991		pCi/Filter						
Uranium-235	U	-13.3	13.6	+/-6.37		pCi/Filter						
Yttrium-88	U	-0.31	2.48	+/-0.794		pCi/Filter						

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Cm, Filter "As I	95.1	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Filter "As Received	95.2	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Filter "As Received"	83.7	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure

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Certificate of Analysis

Company : Los Alamos National Laboratory
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Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7867
Sample ID: 243494001

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

N/A RPD or %Recovery limits do not apply.
ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on an "as received" basis.

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7868
Sample ID: 243494002
Matrix: SWP
Collect Date: 18-DEC-09
Receive Date: 23-DEC-09
Collector: Client

Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis												
Alphaspec Am241 Cm, Filter "As Received"												
Americium-241	U	0.0262	0.296	+/-0.0794	1.00	pCi/Filter		MXE1	01/13/10	0827	938067	1
Alphaspec Pu, Filter "As Received"												
Plutonium-238	U	0.0155	0.114	+/-0.0269	1.00	pCi/Filter		MXE1	01/13/10	0827	938068	2
Plutonium-239/240	U	0.0155	0.114	+/-0.0269	1.00	pCi/Filter						
Alphaspec U, Filter "As Received"												
Uranium-233/234		0.594	0.037	+/-0.0987	1.00	pCi/Filter		MXE1	01/13/10	0712	938069	3
Uranium-235/236		0.101	0.0457	+/-0.0419	1.00	pCi/Filter						
Uranium-238		0.682	0.127	+/-0.111	1.00	pCi/Filter						
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Filter (Long List) "As Received"												
Americium-241	U	-0.584	9.34	+/-2.82		pCi/Filter		MXR1	01/04/10	1928	937282	5
Bismuth-211	U	-12.6	18.0	+/-7.98		pCi/Filter						
Bismuth-214	U	-2.84	6.43	+/-2.45		pCi/Filter						
Cadmium-109	U	-30.3	50.0	+/-19.6		pCi/Filter						
Cerium-139	U	-0.766	2.42	+/-0.734		pCi/Filter						
Cesium-134	U	-1.15	3.05	+/-1.28		pCi/Filter						
Cesium-137	U	0.0701	2.59	+/-0.787	5.00	pCi/Filter						
Cobalt-60	U	-1.22	2.54	+/-0.813		pCi/Filter						
Europium-152	U	-1.22	7.69	+/-2.33		pCi/Filter						
Lanthanum-140	U	0.338	7.82	+/-2.34		pCi/Filter						
Lead-212	U	0.757	4.51	+/-2.13		pCi/Filter						
Lead-214	U	0.319	6.33	+/-3.28		pCi/Filter						
Mercury-203	U	1.08	3.41	+/-1.05		pCi/Filter						
Potassium-40	U	2.64	25.5	+/-16.2		pCi/Filter						
Radium-223	U	-8.33	51.7	+/-15.6		pCi/Filter						
Radium-224	U	19.2	54.9	+/-19.0		pCi/Filter						
Radium-226	U	54.7	56.3	+/-45.2		pCi/Filter						
Radium-228	U	-1.41	11.6	+/-5.02		pCi/Filter						
Ruthenium-106	U	-9.31	23.6	+/-7.34		pCi/Filter						
Sodium-22	U	-1.82	2.45	+/-0.803		pCi/Filter						
Strontium-85	Ul	15.9	4.25	+/-1.31		pCi/Filter						
Thallium-208	U	0.332	2.69	+/-1.50		pCi/Filter						
Thorium-227	U	8.86	30.7	+/-9.42		pCi/Filter						
Thorium-231	U	0.412	31.0	+/-11.6		pCi/Filter						

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Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7868 Project: LANL01004
Sample ID: 243494002 Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Filter (Long List) "As Received"												
Thorium-234	U	-90.7	95.9	+/-36.1		pCi/Filter						
Tin-113	U	0.095	3.41	+/-1.03		pCi/Filter						
Uranium-235	U	-9.04	17.2	+/-6.76		pCi/Filter						
Yttrium-88	U	0.861	2.95	+/-0.862		pCi/Filter						

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, U-02-RC Modified
4	DOE EML HASL-300, U-02-RC Modified
5	DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Cm, Filter "As l	85.6	(50%-105%)
Plutonium-242 Tracer	Alphaspec Pu, Filter "As Received	91.9	(50%-105%)
Uranium-232 Tracer	Alphaspec U, Filter "As Received"	89.9	(50%-105%)

Notes:
TPU is calculated at the 67% confidence level (1-sigma).
The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
E Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F Estimated Value
H Analytical holding time was exceeded
J Value is estimated
M M if above MDC and less than LLD
M Matrix Related Failure
N/A RPD or %Recovery limits do not apply.

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Los Alamos National Laboratory
Address : PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico 87545
Contact: Ms. Joylene Valdez
Project: LANL ER Project

Report Date: January 14, 2010

Client Sample ID: RE12-10-7868
Sample ID: 243494002
Project: LANL01004
Client ID: LANL010

Parameter	Qualifier	Result	DL	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.

ND Analyte concentration is not detected above the detection limit
NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UJ Gamma Spectroscopy--Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h Preparation or preservation holding time was exceeded
The above sample is reported on an "as received" basis.

QUALITY CONTROL DATA

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: January 14, 2010

Client : Los Alamos National Laboratory
PO Box 1663
TA-03, SM271, Drop Pt. 02U, Rm
Los Alamos, New Mexico
Contact: Ms. Joylene Valdez

Workorder: 243494

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 938067										
QC1202007314 243494002 DUP										
Americium-241	U	0.0262	U	0.00726	pCi/Filter	0.0692		(0-1)	MXE1	01/13/1008:27
	TPU:	+/-0.0794		+/-0.0573						
	Yield:	85.6		93.8						
QC1202007316 LCS										
Americium-241	2.84			2.63	pCi/Filter		92.7	(75%-125%)		
	TPU:			+/-0.168						
	Yield:			101						
QC1202007313 MB										
Americium-241			U	-0.00228	pCi/Filter					01/13/1008:27
	TPU:			+/-0.00314						
	Yield:			95.9						
Batch 938068										
QC1202007319 243494002 DUP										
Plutonium-238	U	0.0155	U	-0.0324	pCi/Filter	0.360		(0-1)	MXE1	01/13/1008:27
	TPU:	+/-0.0269		+/-0.0396						
	Yield:	91.9		88.6						
Plutonium-239/240	U	0.0155	U	0.0162	pCi/Filter	0.00352		(0-1)		
	TPU:	+/-0.0269		+/-0.0667						
	Yield:	91.9		88.6						
QC1202007318 LCS										
Plutonium-238			U	0.00498	pCi/Filter			(75%-125%)		
	TPU:			+/-0.00894						
	Yield:			90.2						
Plutonium-239/240	2.27			2.47	pCi/Filter		109	(75%-125%)		
	TPU:			+/-0.143						
	Yield:			90.2						
QC1202007317 MB										
Plutonium-238			U	-0.00322	pCi/Filter					
	TPU:			+/-0.00279						
	Yield:			93.9						
Plutonium-239/240			U	0.00	pCi/Filter					
	TPU:			+/-0.00395						
	Yield:			93.9						
Batch 938069										
QC1202007322 243494002 DUP										
Uranium-233/234		0.594		0.555	pCi/Filter	0.103		(0-1)	MXE1	01/13/1007:12
	TPU:	+/-0.0987		+/-0.0913						
	Yield:	89.9		97.9						
Uranium-235/236		0.101	U	0.074	pCi/Filter	0.166		(0-1)		
	TPU:	+/-0.0419		+/-0.0395						
	Yield:	89.9		97.9						
Uranium-238		0.682		0.779	pCi/Filter	0.218		(0-1)		
	TPU:	+/-0.111		+/-0.111						

QC Summary

Workorder: 243494

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 938069										
	Yield:	89.9		97.9						
QC1202007323 LCS										
Uranium-233/234				2.41	pCi/Filter			(75%-125%)		01/13/1007:12
	TPU:			+/-0.182						
	Yield:			97.1						
Uranium-235/236				0.128	pCi/Filter			(75%-125%)		
	TPU:			+/-0.0195						
	Yield:			97.1						
Uranium-238	2.59			2.51	pCi/Filter		96.9	(75%-125%)		
	TPU:			+/-0.188						
	Yield:			97.1						
QC1202007321 MB										
Uranium-233/234				0.0133	pCi/Filter					01/13/1007:12
	TPU:			+/-0.00492						
	Yield:			92.1						
Uranium-235/236			U	-0.00631	pCi/Filter					
	TPU:			+/-0.00386						
	Yield:			92.1						
Uranium-238			U	0.00765	pCi/Filter					
	TPU:			+/-0.00445						
	Yield:			92.1						
Rad Gamma Spec										
Batch 937282										
QC1202005629 243494001 DUP										
Americium-241	U	9.97	U	4.79	pCi/Filter	0.172		(0-1)	MXR1	01/05/1009:08
	TPU:	+/-4.82		+/-10.2						
Bismuth-211	U	-0.0754	U	-9.74	pCi/Filter	0.303		(0-1)		
	TPU:	+/-6.15		+/-9.79						
Bismuth-214	U	-1.89	U	2.19	pCi/Filter	0.314		(0-1)		
	TPU:	+/-2.90		+/-3.60						
Cadmium-109	U	-32.3	U	-1.52	pCi/Filter	0.287		(0-1)		
	TPU:	+/-17.8		+/-35.7						
Cerium-139	U	-0.698	U	-0.943	pCi/Filter	0.0644		(0-1)		
	TPU:	+/-0.663		+/-1.24						
Cesium-134	U	1.34	U	1.61	pCi/Filter	0.0568		(0-1)		
	TPU:	+/-0.911		+/-1.53						
Cesium-137	U	-1.36	U	1.13	pCi/Filter	0.448		(0-1)		
	TPU:	+/-1.38		+/-1.39						
Cobalt-60	U	-2.85	U	-0.199	pCi/Filter	0.481		(0-1)		
	TPU:	+/-1.41		+/-1.35						
Europium-152	U	-1.82	U	-5.79	pCi/Filter	0.327		(0-1)		
	TPU:	+/-2.14		+/-3.94						
Lanthanum-140	U	-1.83	U	-0.344	pCi/Filter	0.132		(0-1)		
	TPU:	+/-2.41		+/-3.21						
Lead-212	U	-2.68	U	1.17	pCi/Filter	0.235		(0-1)		
	TPU:	+/-2.05		+/-6.13						
Lead-214	U	-2.18	U	-8.17	pCi/Filter	0.541		(0-1)		
	TPU:	+/-2.17		+/-3.37						
Mercury-203	U	-0.407	U	4.03	pCi/Filter	0.870		(0-1)		
	TPU:	+/-0.889		+/-1.66						

QC Summary

Workorder: 243494

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 937282										
Potassium-40	U	6.24	U	-10.4	pCi/Filter	0.257		(0-1)		
	TPU:	+/-13.2		+/-19.1						
Radium-223	U	-20.6	U	-25.5	pCi/Filter	0.0619		(0-1)		
	TPU:	+/-14.0		+/-25.6						
Radium-224	U	-52.4	U	55.2	pCi/Filter	1.26		(0-1)		
	TPU:	+/-16.0		+/-26.7						
Radium-226	U	10.2	U	21.1	pCi/Filter	0.0586		(0-1)		
	TPU:	+/-26.9		+/-65.7						
Radium-228	U	-1.55	U	5.15	pCi/Filter	0.300		(0-1)		
	TPU:	+/-3.99		+/-7.18						
Ruthenium-106	U	-3.59	U	7.13	pCi/Filter	0.265		(0-1)		
	TPU:	+/-7.24		+/-13.0						
Sodium-22	U	0.270	U	-1.61	pCi/Filter	0.450		(0-1)		
	TPU:	+/-0.792		+/-1.29						
Strontium-85	U	-14.1	U	-13.5	pCi/Filter	0.0801		(0-1)		
	TPU:	+/-1.52		+/-2.35						
Thallium-208	UI	3.47	UI	8.69	pCi/Filter	0.538		(0-1)		
	TPU:	+/-1.79		+/-3.07						
Thorium-227	U	11.2	U	-20	pCi/Filter	0.630		(0-1)		
	TPU:	+/-8.36		+/-16.4						
Thorium-231	U	-22.1	U	-21.8	pCi/Filter	0.00487		(0-1)		
	TPU:	+/-14.0		+/-23.0						
Thorium-234	U	-110	UI	267	pCi/Filter	1.12		(0-1)		
	TPU:	+/-50.2		+/-119						
Tin-113	U	-0.0691	U	3.38	pCi/Filter	0.628		(0-1)		
	TPU:	+/-0.991		+/-1.75						
Uranium-235	U	-13.3	U	-20.3	pCi/Filter	0.208		(0-1)		
	TPU:	+/-6.37		+/-10.4						
Yttrium-88	U	-0.31	U	0.654	pCi/Filter	0.218		(0-1)		
	TPU:	+/-0.794		+/-1.41						
QC1202005630 LCS										
Americium-241	2470			2460	pCi/Filter		99.5	(75%-125%)		01/04/1019:55
	TPU:			+/-109						
Bismuth-211			U	43.4	pCi/Filter					
	TPU:			+/-30.9						
Bismuth-214			U	-5.05	pCi/Filter					
	TPU:			+/-10.1						
Cadmium-109				5450	pCi/Filter					
	TPU:			+/-301						
Cerium-139			U	-2.52	pCi/Filter					
	TPU:			+/-3.27						
Cesium-134			U	10.7	pCi/Filter					
	TPU:			+/-7.32						
Cesium-137	866			874	pCi/Filter		101	(75%-125%)		
	TPU:			+/-38.1						
Cobalt-60	1010			995	pCi/Filter		98.8	(75%-125%)		
	TPU:			+/-45.0						
Europium-152			U	14.1	pCi/Filter					
	TPU:			+/-13.0						
Lanthanum-140			U	2.68	pCi/Filter					
	TPU:			+/-3.26						

QC Summary

Workorder: 243494

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 937282										
Lead-212			U	-0.404	pCi/Filter					
	TPU:			+/-7.92						
Lead-214			U	3.49	pCi/Filter					
	TPU:			+/-10.9						
Mercury-203			U	0.941	pCi/Filter					
	TPU:			+/-4.24						
Potassium-40			U	22.6	pCi/Filter					
	TPU:			+/-37.8						
Radium-223			U	194	pCi/Filter					
	TPU:			+/-93.8						
Radium-224			U	-22.9	pCi/Filter					
	TPU:			+/-89.4						
Radium-226			U	83.7	pCi/Filter					
	TPU:			+/-94.8						
Radium-228			U	36.1	pCi/Filter					
	TPU:			+/-27.9						
Ruthenium-106			U	10.8	pCi/Filter					
	TPU:			+/-43.6						
Sodium-22			U	1.66	pCi/Filter					
	TPU:			+/-3.74						
Strontium-85			U	-11.5	pCi/Filter					
	TPU:			+/-4.99						
Thallium-208			U	4.27	pCi/Filter					
	TPU:			+/-5.96						
Thorium-227			U	0.568	pCi/Filter					
	TPU:			+/-50.3						
Thorium-231			U	49.6	pCi/Filter					
	TPU:			+/-65.6						
Thorium-234			U	61.9	pCi/Filter					
	TPU:			+/-135						
Tin-113			U	10.1	pCi/Filter					
	TPU:			+/-6.81						
Uranium-235			U	-16.7	pCi/Filter					
	TPU:			+/-23.1						
Yttrium-88			U	3.09	pCi/Filter					
	TPU:			+/-2.89						
QC1202005628 MB										
Americium-241			U	-17.7	pCi/Filter					01/04/1019:28
	TPU:			+/-4.92						
Bismuth-211			U	-15	pCi/Filter					
	TPU:			+/-8.35						
Bismuth-214			U	-0.237	pCi/Filter					
	TPU:			+/-2.51						
Cadmium-109			U	-83	pCi/Filter					
	TPU:			+/-19.8						
Cerium-139			U	0.497	pCi/Filter					
	TPU:			+/-0.715						
Cesium-134			U	-0.198	pCi/Filter					
	TPU:			+/-1.04						
Cesium-137			U	1.13	pCi/Filter					
	TPU:			+/-0.948						

QC Summary

Workorder: 243494

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 937282										
Cobalt-60			U	-0.949	pCi/Filter					
	TPU:			+/-1.02						
Europium-152			U	0.0429	pCi/Filter					
	TPU:			+/-2.54						
Lanthanum-140			U	-0.45	pCi/Filter					
	TPU:			+/-0.892						
Lead-212			U	0.0237	pCi/Filter					
	TPU:			+/-2.30						
Lead-214			U	-5.68	pCi/Filter					
	TPU:			+/-2.92						
Mercury-203			U	-1.38	pCi/Filter					
	TPU:			+/-0.852						
Potassium-40			U	6.28	pCi/Filter					
	TPU:			+/-14.4						
Radium-223			U	2.96	pCi/Filter					
	TPU:			+/-17.5						
Radium-224			U	46.9	pCi/Filter					
	TPU:			+/-19.7						
Radium-226			U	-40.9	pCi/Filter					
	TPU:			+/-33.8						
Radium-228			U	5.26	pCi/Filter					
	TPU:			+/-3.25						
Ruthenium-106			U	-10.3	pCi/Filter					
	TPU:			+/-8.10						
Sodium-22			U	0.904	pCi/Filter					
	TPU:			+/-0.968						
Strontium-85			UI	7.85	pCi/Filter					
	TPU:			+/-1.04						
Thallium-208			U	-0.745	pCi/Filter					
	TPU:			+/-1.67						
Thorium-227			U	-8.62	pCi/Filter					
	TPU:			+/-10.3						
Thorium-231			U	23.6	pCi/Filter					
	TPU:			+/-11.4						
Thorium-234			U	-122	pCi/Filter					
	TPU:			+/-55.1						
Tin-113			U	-4.05	pCi/Filter					
	TPU:			+/-1.35						
Uranium-235			U	-11.2	pCi/Filter					
	TPU:			+/-7.13						
Yttrium-88			U	0.641	pCi/Filter					
	TPU:			+/-1.03						

Notes:
The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported

QC Summary

Workorder: 243494

Parmname	NOM	Sample	Qual	QC	Units	RER	REC%	Range	Anlst	Date	Time

A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
E	Metals--%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
F	Estimated Value
H	Analytical holding time was exceeded
J	Value is estimated
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

RAW DATA

Radiochemistry Batch Checklist, Rev10

Batch# 938067 Product: Am Date: 1/14/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.	✓		
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [signature] 1/14/10

Secondary Review Performed By: [signature] 1/14/10

1/13 1/20

Am/Cm Que Sheet

08-JAN-10

Batch #: 938067 Analyst: MXG HAKB First Client Due Date: 20-JAN-10 Internal Due Date13-JAN-10 Comments:

Tracer(s): Am243/Cm244 Tracer Code: 445-96-2-SS Expiration Date: 05-11-10 Vol: 0.1

LCS Isotope(s): Am241/Cm244 LCS Code(s): 0533-0 / — Expiration Date: 09-10-10 / — Vol(s): 0.1 / —

Spike Isotope(s): Am241/Cm244 Spike Code(s): — / — Expiration Date: — / — Vol(s): — / —

Prep Date: 01-12-10 Initials: HW Pipet ID: 2971058 Balance ID: 19350208 Witness: MDA 1/12/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/(Dry) Aliquot (g/l/(f))	Am/Cm Det #
243494001-1	RE12-10-7867	SAMPLE		1 pCi/Filter	SWIPE	LANL010	18-DEC-09	1	1	1.0004-01	71
243494002-1	RE12-10-7868	SAMPLE		1 pCi/Filter	SWIPE	LANL010	18-DEC-09	2	2	1.0004-01	72
1202007313-1	MB for batch 938067	MB		1 pCi/Filter	SWIPE	QC ACCOUNT		3	3	1.00	74
1202007314-1	RE12-10-7868(243494002DUP)	DUP		1 pCi/Filter	SWIPE	QC ACCOUNT	18-DEC-09	4	4	1.0004-01	77
1202007316-1	LCS for batch 938067	LCS		1 pCi/Filter	SWIPE	QC ACCOUNT		6	5	1.00	78

Choose SOP Used: GL-RAD-A-011 ~~GL-RAD-A-036~~

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: JoL ML — 1/14/10

Filter Aliquot Corrections 12-Jan-10 Batch: 938067

Sample ID	Type	Original Hsn	Aliquot	Calculation	Adjusted Aliquot	Adjusted Aliquot * Number of Filters
243494001	SAMPLE		20 mL	(20 / 200) * (1.507 / 1.507) =	1.000E-01 Filter	1.000E-01 Filter
243494002	SAMPLE		20 mL	(20 / 200) * (1.591 / 1.591) =	1.000E-01 Filter	1.000E-01 Filter
1202007314	DUP	243494002	20 mL	(20 / 200) * (1.591 / 1.591) =	1.000E-01 Filter	1.000E-01 Filter

Reviewed by JH

Date 1-12-10

GEL Laboratories LLC

Blank Correction Report

Batch ID 938067

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202007314	DUP	Americium-241	0.100 Filter	0.00726	0.0573	0.226	-.0228	pCi/Filter	NO
1202007316	LCS	Americium-241	1.00 Filter	2.63	0.168	0.0202	-.00228	pCi/Filter	NO
1202007313	MB	Americium-241	1.00 Filter	-0.00228	0.00314	0.016	-.00228	pCi/Filter	NO
243494001	RE12-10-7867	Americium-241	0.100 Filter	-0.0228	0.0694	0.276	-.0228	pCi/Filter	NO
243494002	RE12-10-7868	Americium-241	0.100 Filter	0.0262	0.0794	0.296	-.0228	pCi/Filter	NO

Alpha Spectroscopy Software Version 2.0
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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

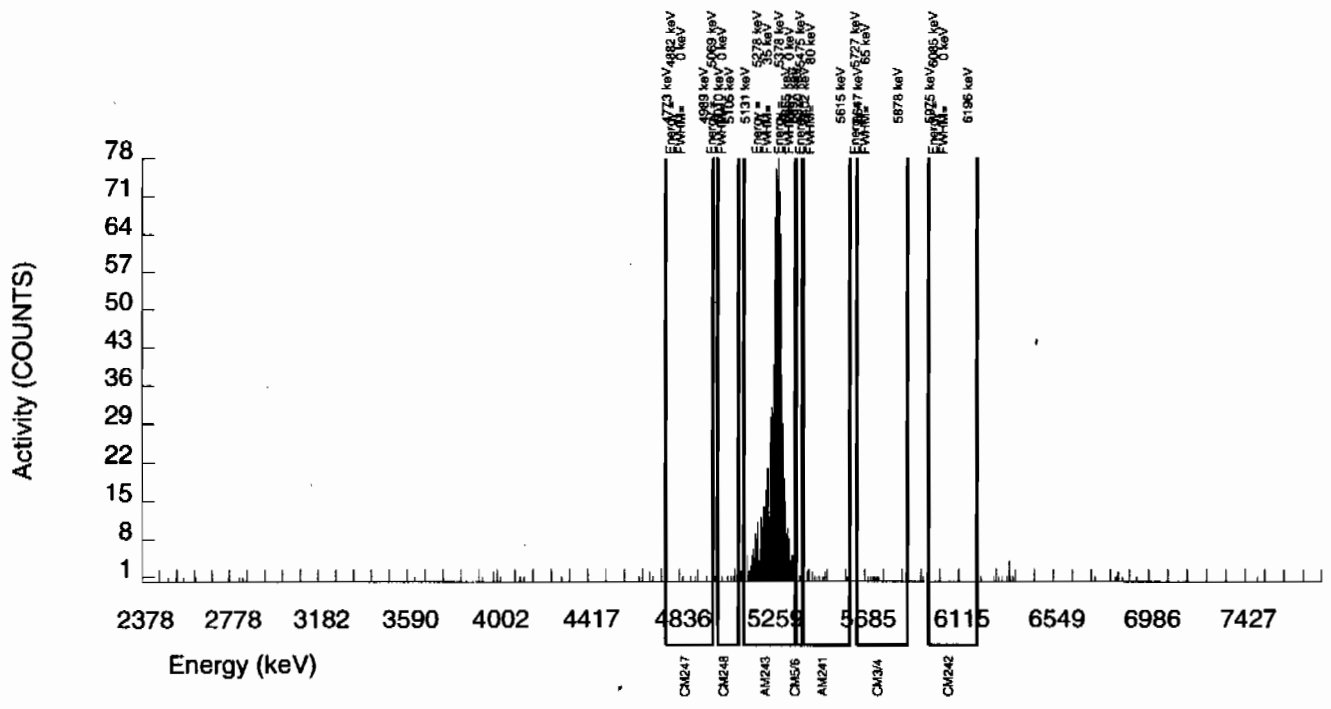
BATCH NUMBER: 938067 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243494001_AM SAMPLE QTY: 0.100 F
DETECTOR NUMBER :64259 AVERAGE %EFFICIENCY :32.3636 % YIELD : 95.133	COUNT DATE:13-JAN-2010 08:27:44 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+01	ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.77466 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B071.CNF;1091 BKG DATE : 10-JAN-2010 EFF FILE : W071.CNF;284 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
CM-3/4	5795.020	8.000	3.000	5.000	2.2361	100.0000	4.40E-02	5.30E-02	7.63E-02	1.92E-01	5.29E-02
CM-5/6	5386.000	5.000	4.000	1.000	1.0000	86.09000	6.80E-02	4.18E-02	3.95E-02	1.25E-01	4.16E-02
AM-241	5479.150	12.000	-1.559	12.000	3.4641	99.94000	-2.28E-02	6.94E-02	1.18E-01	2.76E-01	6.94E-02
CM-242	6102.000	0.000	-2.000	2.000	1.4142	100.0000	-3.28E-02	2.84E-02	5.39E-02	1.52E-01	2.84E-02
AM243	5270.000	898.000	896.000	2.000	1.4142	99.78000	1.31E+01	8.97E-01	4.82E-02	1.36E-01	4.40E-01
CM-247	4946.000	7.000	5.000	2.000	1.4142	79.30000	9.22E-02	5.56E-02	6.07E-02	1.71E-01	5.53E-02
CM-248	5078.600	7.000	6.000	1.000	1.0000	91.00000	9.65E-02	4.58E-02	3.74E-02	1.18E-01	4.55E-02

NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938067
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243494002_AM
SAMPLE QTY: 0.100 F

DETECTOR NUMBER :45-149AA3
AVERAGE %EFFICIENCY :32.2361
% YIELD : 85.596

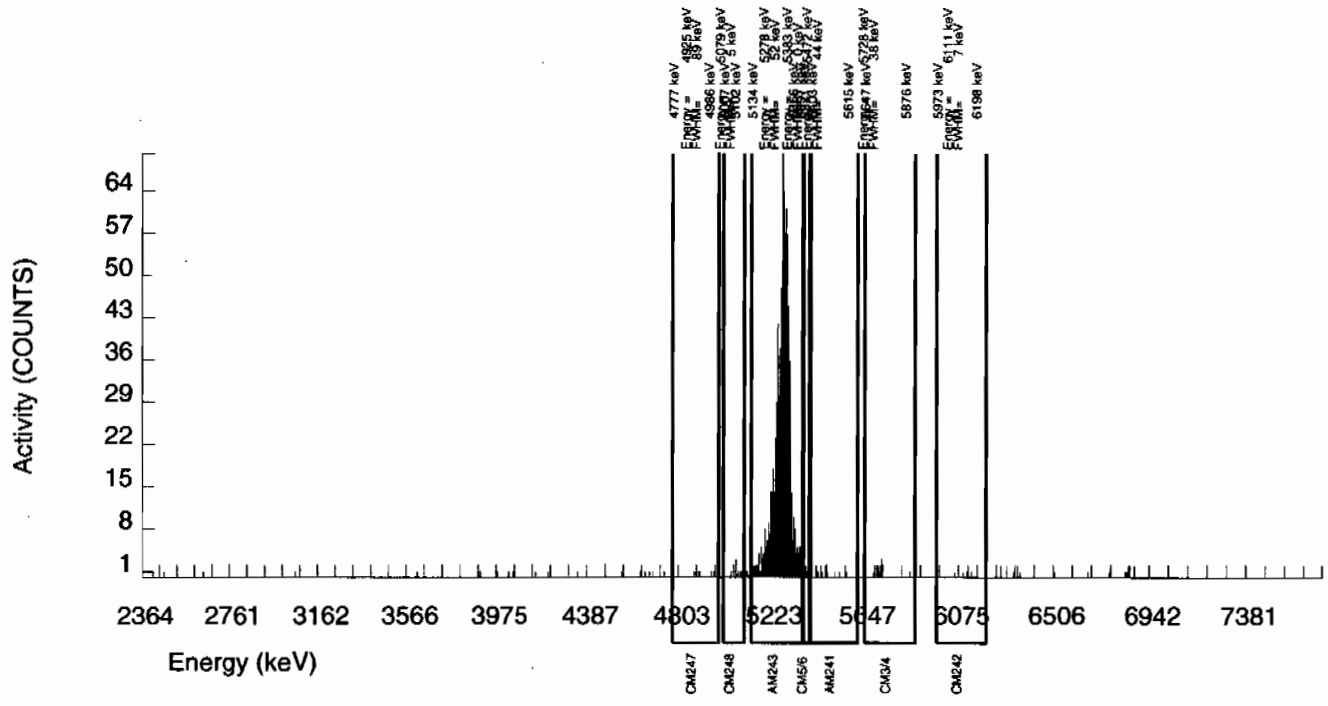
COUNT DATE:13-JAN-2010 08:27:44
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0533-O	ID : 0533-O	ID : 445-96-2-SS	LIB FILE : ENV_ALPHA_AM.N
ISOTOPE : AM-241	ISOTOPE : AM-241	ISOTOPE : AM243	BKG FILE : B072.CNF;1089
PCI/F : 2.842E+01	PCI/F : 2.842E+01	NOMINAL : 2.91660 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 2.49650 dpm	EFF FILE : W072.CNF;275
			CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
CM-3/4	5795.020	16.000	5.000	11.000	3.3166	100.0000	8.19E-02	8.52E-02	1.26E-01	2.97E-01	8.51E-02
CM-5/6	5386.000	12.000	9.000	3.000	1.7321	86.09000	1.71E-01	7.42E-02	7.64E-02	2.04E-01	7.34E-02
AM-241	5479.150	14.000	1.602	11.000	3.3166	99.94000	2.62E-02	7.94E-02	1.26E-01	2.96E-01	7.94E-02
CM-242	6102.000	6.000	5.000	1.000	1.0000	100.0000	9.14E-02	4.87E-02	4.25E-02	1.35E-01	4.84E-02
AM243	5270.000	807.000	803.000	4.000	2.0000	99.78000	1.31E+01	9.23E-01	7.61E-02	1.97E-01	4.66E-01
CM-247	4946.000	5.000	3.000	2.000	1.4142	79.30000	6.18E-02	5.46E-02	6.77E-02	1.91E-01	5.45E-02
CM-248	5078.600	8.000	8.000	0.000	0.0000	91.00000	1.44E-01	5.15E-02	0.00E+00	4.86E-02	5.07E-02

NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

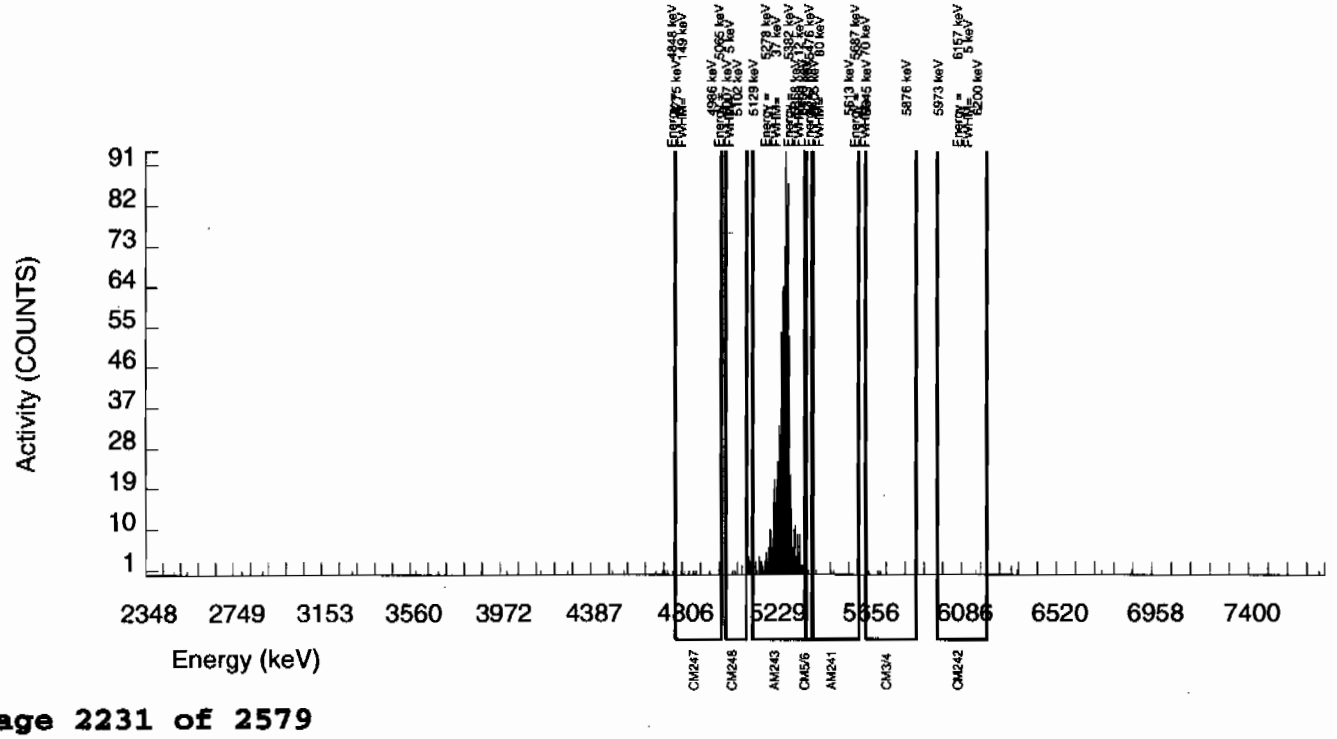
BATCH NUMBER: 938067 SAMPLE DATE : 12-JAN-2010 00:00:00	SAMPLE ID : S1202007313_AM SAMPLE QTY: 1.000 F
DETECTOR NUMBER :78266 AVERAGE %EFFICIENCY :31.6797 % YIELD : 95.886	COUNT DATE:13-JAN-2010 08:27:44 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+00	ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+00	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91658 dpm RESULTS : 2.79658 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B074.CNF;1113 BKG DATE : 10-JAN-2010 EFF FILE : W074.CNF;330 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
CM-3/4	5795.020	4.000	2.000	2.000	1.4142	100.0000	2.97E-03	3.64E-03	4.88E-03	1.38E-02	3.63E-03
CM-5/6	5386.000	5.000	5.000	0.000	0.0000	86.09000	8.61E-03	3.89E-03	0.00E+00	4.67E-03	3.85E-03
AM-241	5479.150	3.000	-1.539	3.000	1.7321	99.94000	-2.28E-03	3.14E-03	5.98E-03	1.60E-02	3.13E-03
CM-242	6102.000	1.000	1.000	0.000	0.0000	100.0000	1.49E-03	1.50E-03	0.00E+00	4.05E-03	1.49E-03
AM243	5270.000	888.000	884.000	4.000	2.0000	99.78000	1.31E+00	9.01E-02	6.91E-03	1.79E-02	4.44E-02
CM-247	4946.000	7.000	5.000	2.000	1.4142	79.30000	9.35E-03	5.64E-03	6.15E-03	1.74E-02	5.61E-03
CM-248	5078.600	6.000	5.000	1.000	1.0000	91.00000	8.15E-03	4.34E-03	3.79E-03	1.20E-02	4.31E-03

NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

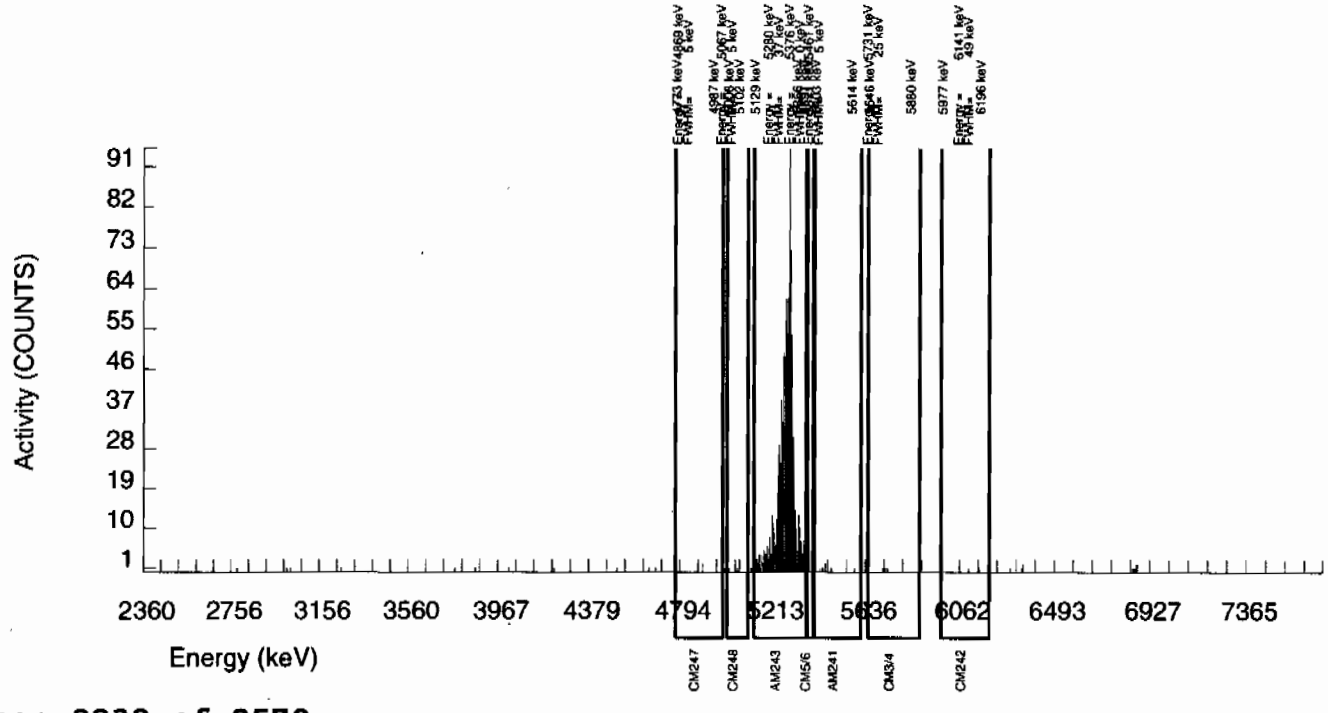
BATCH NUMBER: 938067 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S1202007314_AM SAMPLE QTY: 0.100 F
DETECTOR NUMBER :67576 AVERAGE %EFFICIENCY :31.9454 % YIELD : 93.797	COUNT DATE:13-JAN-2010 08:27:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+01	ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+01	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91660 dpm RESULTS : 2.73570 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B077.CNF;1006 BKG DATE : 10-JAN-2010 EFF FILE : W077.CNF;261 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
CM-3/4	5795.020	3.000	-1.000	4.000	2.0000	100.0000	-1.51E-02	3.99E-02	7.01E-02	1.81E-01	3.99E-02
CM-5/6	5386.000	5.000	4.000	1.000	1.0000	86.09000	6.98E-02	4.30E-02	4.06E-02	1.29E-01	4.28E-02
AM-241	5479.150	9.000	0.482	7.000	2.6458	99.94000	7.26E-03	5.73E-02	9.26E-02	2.26E-01	5.73E-02
CM-242	6102.000	3.000	3.000	0.000	0.0000	100.0000	5.05E-02	2.93E-02	0.00E+00	4.56E-02	2.92E-02
AM243	5270.000	875.000	872.000	3.000	1.7321	99.78000	1.31E+01	9.03E-01	6.07E-02	1.62E-01	4.46E-01
CM-247	4946.000	3.000	0.000	3.000	1.7321	79.30000	-9.04E-09	4.64E-02	7.64E-02	2.04E-01	4.64E-02
CM-248	5078.600	6.000	6.000	0.000	0.0000	91.00000	9.91E-02	4.09E-02	0.00E+00	4.48E-02	4.05E-02

NOTE: Corrections made to AM-241 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

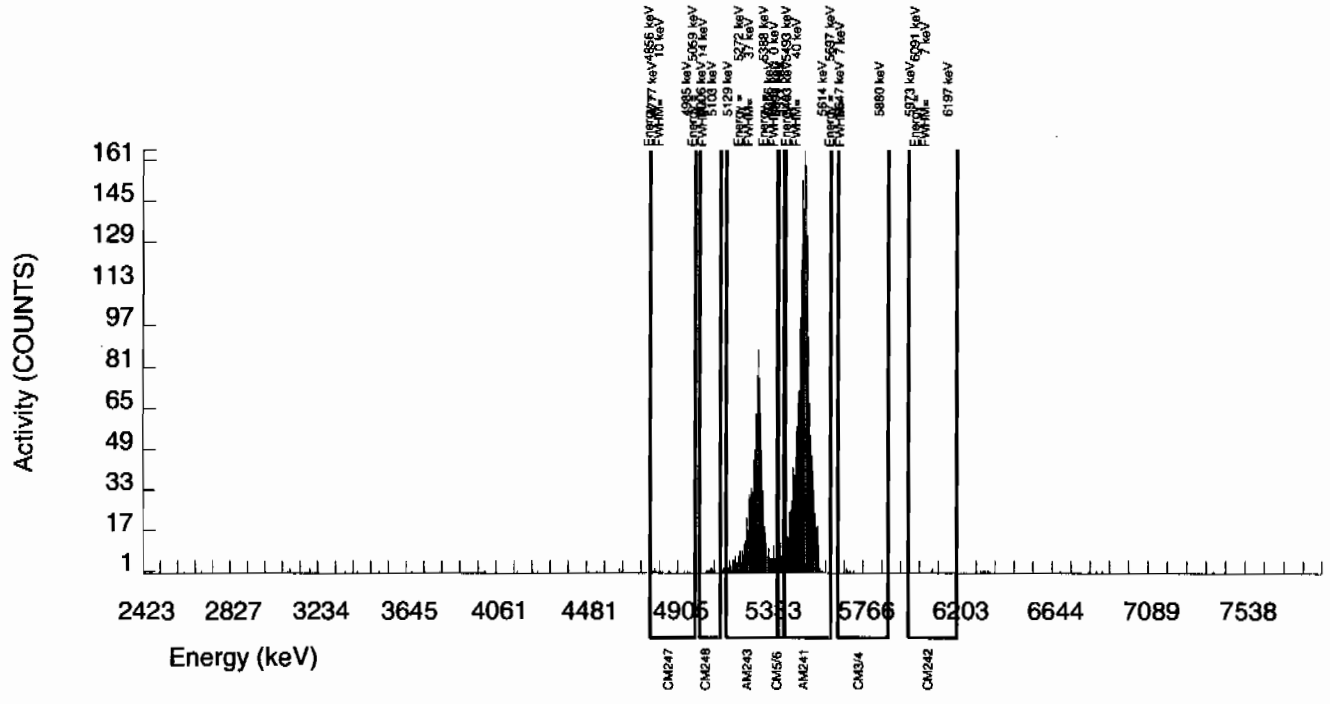
BATCH NUMBER: 938067 SAMPLE DATE : 12-JAN-2010 00:00:00	SAMPLE ID : S1202007316_AM SAMPLE QTY: 1.000 F
DETECTOR NUMBER :67577 AVERAGE %EFFICIENCY :31.0633 % YIELD : 101.217	COUNT DATE:13-JAN-2010 08:27:45 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+00	ID : 0533-O ISOTOPE : AM-241 PCI/F : 2.842E+00	ID : 445-96-2-SS ISOTOPE : AM243 NOMINAL : 2.91658 dpm RESULTS : 2.95209 dpm	LIB FILE : ENV_ALPHA_AM.N BKG FILE : B078.CNF;1006 BKG DATE : 10-JAN-2010 EFF FILE : W078.CNF;251 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
CM-3/4	5795.020	6.000	2.000	4.000	2.0000	100.0000	2.87E-03	4.53E-03	6.67E-03	1.72E-02	4.53E-03
CM-5/6	5386.000	44.000	44.000	0.000	0.0000	86.09000	7.32E-02	1.19E-02	0.00E+00	4.51E-03	1.10E-02
AM-241	5479.150	1845.000	1837.408	6.000	2.4495	99.94000	2.63E+00	1.68E-01	8.17E-03	2.02E-02	6.16E-02
CM-242	6102.000	3.000	2.000	1.000	1.0000	100.0000	2.89E-03	2.89E-03	3.36E-03	1.06E-02	2.89E-03
AM243	5270.000	917.000	915.000	2.000	1.4142	99.78000	1.31E+00	8.92E-02	4.72E-03	1.33E-02	4.35E-02
CM-247	4946.000	14.000	12.000	2.000	1.4142	79.30000	2.17E-02	7.34E-03	5.94E-03	1.68E-02	7.23E-03
CM-248	5078.600	11.000	10.000	1.000	1.0000	91.00000	1.57E-02	5.53E-03	3.66E-03	1.16E-02	5.45E-03

NOTE: Corrections made to AM-241 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev10

Batch# 938068 Product: PU Date: 1/14/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.	✓		~~X~~ DC 1/14/10
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [signature] 1/14/10

Secondary Review Performed By: [signature] 1/14/10

1/20

P

Plutonium Que Sheet

08-JAN-10

Batch #: 938068 Analyst: MVG/HAKB First Client Due Date:20-JAN-10 Internal Due Date:13-JAN-10

Tracer Isotope(s): Pu-242/Pu-238 Tracer Code: 1374-A Expiration Date: 12-08-10 Vol: 0.1

LCS Isotope(s): Pu-239/Pu-238 LCS Code: 0338-66 Expiration Date: 06-23-10 Vol: 0.1

Spike Isotope(s): Pu-239/Pu-238 Spike Code: — Expiration Date: — Vol: —

Prep Date: 01-12-10 Initials: AMO Pipet ID: 2971058 Balance ID: 19350208 Witness: MDA 1/12/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g / l / ml)	Pu Det #
243494001-1	RE12-10-7867	SAMPLE		1 pCi/Filter	SWIPE	LANL010	18-DEC-09	1	1	1.00E-01	84
243494002-1	RE12-10-7868	SAMPLE		1 pCi/Filter	SWIPE	LANL010	18-DEC-09	2	2	1.00E-01	85
1202007317-1	MB for batch 938068	MB		1 pCi/Filter	SWIPE	QC ACCOUNT		3	3	1.00	86
1202007319-1	RE12-10-7868(243494002DUP)	DUP		1 pCi/Filter	SWIPE	QC ACCOUNT	18-DEC-09	4	4	1.00E-01	87
1202007318-1	LCS for batch 938068	LCS		1 pCi/Filter	SWIPE	QC ACCOUNT		6	5	1.00	88

Choose SOP Used: GL-RAD-A-011, ~~GL-RAD-A-036, GL-RAD-A-045~~, GL-RAD-A-043

Solid Sample Dissolution by: LEACH or DIGESTION Circle One

Data Reviewed By: [signature] 1/14/10

Filter Aliquot Corrections 12-Jan-10 Batch: 938068

Sample ID	Type	Original Hsn	Aliquot	Calculation	Adjusted Aliquot	Adjusted Aliquot * Number of Filters
243494001	SAMPLE		20 mL	(20 / 200) * (1.507 / 1.507) =	1.000E-01 Filter	1.000E-01 Filter
243494002	SAMPLE		20 mL	(20 / 200) * (1.591 / 1.591) =	1.000E-01 Filter	1.000E-01 Filter
1202007319	DUP	243494002	20 mL	(20 / 200) * (1.591 / 1.591) =	1.000E-01 Filter	1.000E-01 Filter

Reviewed by JH

Date 1-12-10

GEL Laboratories LLC

Blank Correction Report

Batch ID 938068

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202007319	DUP	Plutonium-238	0.100 Filter	-0.0324	0.0396	0.194	-.0322	pCi/Filter	NO
		Plutonium-239/240	0.100 Filter	0.0162	0.0667	0.257	0	pCi/Filter	NO
1202007318	LCS	Plutonium-238	1.00 Filter	0.00498	0.00894	0.0323	-.00322	pCi/Filter	NO
		Plutonium-239/240	1.00 Filter	2.47	0.143	0.0122	0	pCi/Filter	NO
1202007317	MB	Plutonium-238	1.00 Filter	-0.00322	0.00279	0.015	-.00322	pCi/Filter	NO
		Plutonium-239/240	1.00 Filter	0.00	0.00395	0.0174	0	pCi/Filter	NO
243494001	RE12-10-7867	Plutonium-238	0.100 Filter	-0.014	0.0198	0.103	-.0322	pCi/Filter	NO
		Plutonium-239/240	0.100 Filter	0.028	0.0343	0.130	0	pCi/Filter	NO
243494002	RE12-10-7868	Plutonium-238	0.100 Filter	0.0155	0.0269	0.114	-.0322	pCi/Filter	NO
		Plutonium-239/240	0.100 Filter	0.0155	0.0269	0.114	0	pCi/Filter	NO

Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

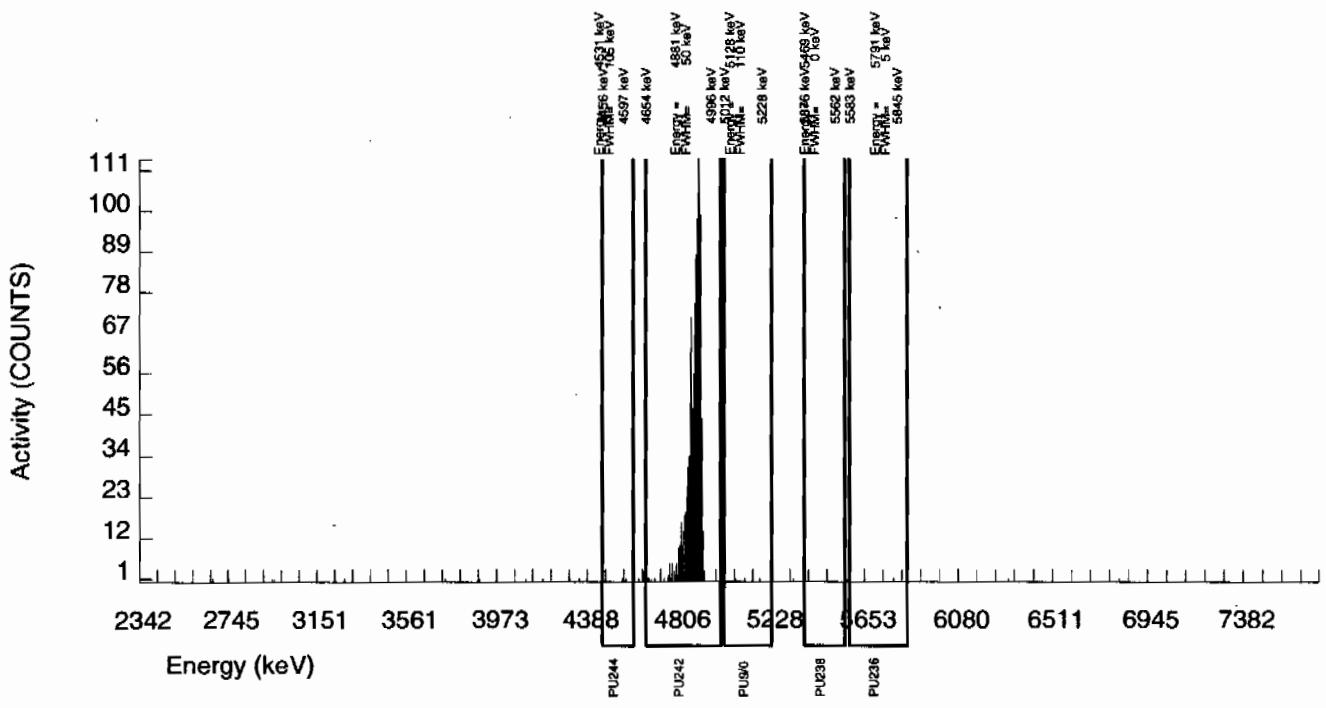
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938068 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243494001_PU SAMPLE QTY: 0.100 F
DETECTOR NUMBER :78265 AVERAGE %EFFICIENCY :33.8353 % YIELD : 95.245	COUNT DATE:13-JAN-2010 08:27:46 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+01	ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.22444 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B084.CNF;1011 BKG DATE : 10-JAN-2010 EFF FILE : W084.CNF;293 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
PU-9/0	5155.000	4.000	2.000	2.000	1.4142	99.90000	2.80E-02	3.43E-02	4.60E-02	1.30E-01	3.43E-02
PU-236	5749.000	1.000	0.000	1.000	1.0000	100.0000	0.00E+00	2.01E-02	3.31E-02	1.05E-01	2.01E-02
PU-238	5499.000	0.000	-1.000	1.000	1.0000	99.90000	-1.40E-02	1.98E-02	3.26E-02	1.03E-01	1.98E-02
PU242	4890.000	1095.000	1091.000	4.000	2.0000	100.0000	1.52E+01	8.91E-01	6.50E-02	1.68E-01	4.63E-01
PU-244	4589.000	3.000	2.000	1.000	1.0000	99.90000	2.80E-02	2.80E-02	3.26E-02	1.03E-01	2.80E-02



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

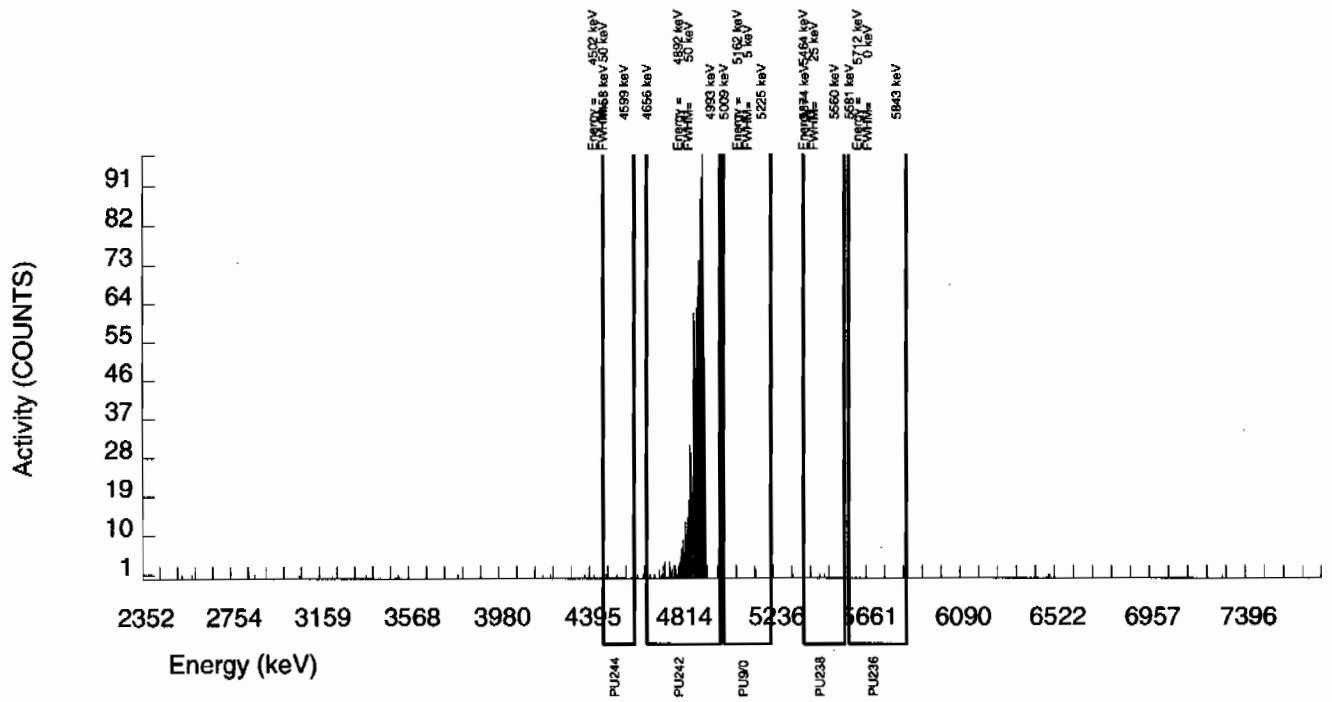
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938068 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243494002_PU SAMPLE QTY: 0.100 F
DETECTOR NUMBER :78776 AVERAGE %EFFICIENCY :31.6195 % YIELD : 91.923	COUNT DATE:13-JAN-2010 08:27:46 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+01	ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.11200 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B085.CNF;1012 BKG DATE : 10-JAN-2010 EFF FILE : W085.CNF;300 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
PU-9/0	5155.000	2.000	1.000	1.000	1.0000	99.90000	1.55E-02	2.69E-02	3.61E-02	1.14E-01	2.69E-02
PU-236	5749.000	0.000	0.000	0.000	0.0000	100.0000	0.00E+00	1.58E-02	0.00E+00	4.27E-02	1.58E-02
PU-238	5499.000	2.000	1.000	1.000	1.0000	99.90000	1.55E-02	2.69E-02	3.61E-02	1.14E-01	2.69E-02
PU242	4890.000	987.000	984.000	3.000	1.7321	100.0000	1.52E+01	9.17E-01	6.24E-02	1.67E-01	4.88E-01
PU-244	4589.000	2.000	2.000	0.000	0.0000	99.90000	3.10E-02	2.20E-02	0.00E+00	4.20E-02	2.19E-02



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

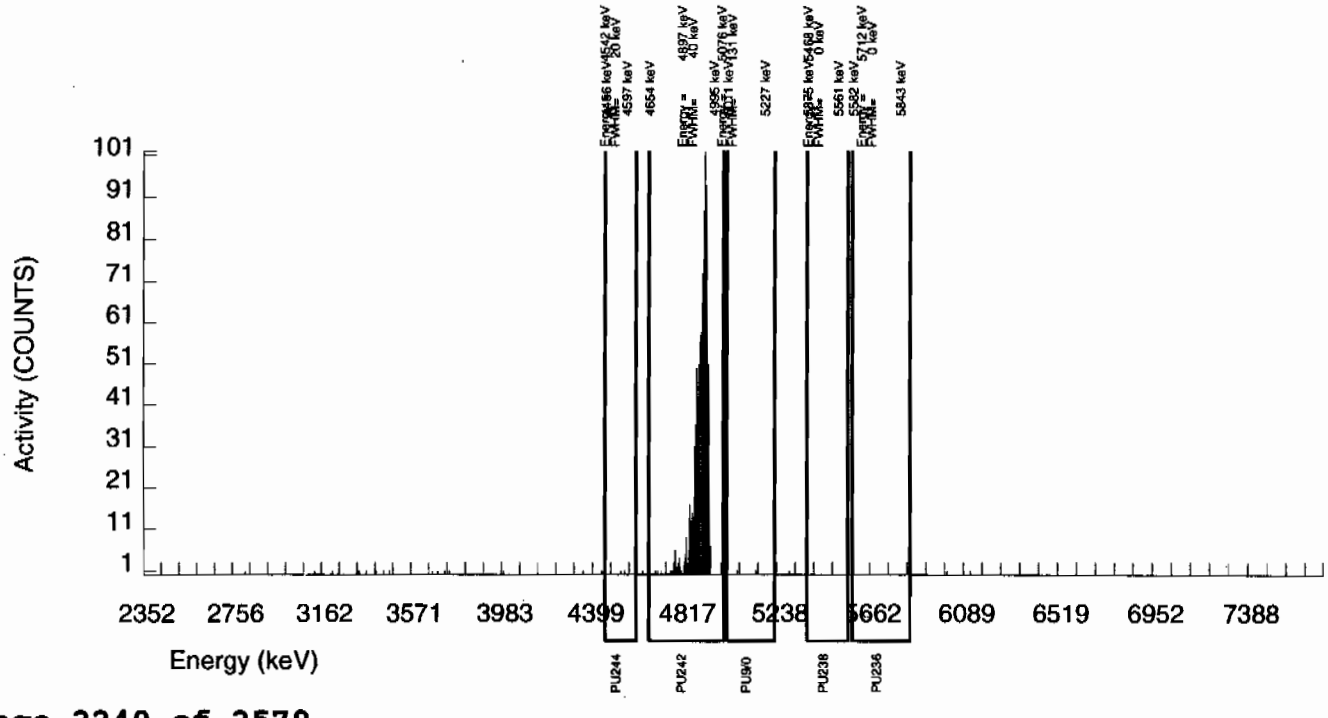
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938068 SAMPLE DATE : 12-JAN-2010 00:00:00	SAMPLE ID : S1202007317_PU SAMPLE QTY: 1.000 F
DETECTOR NUMBER :78198 AVERAGE %EFFICIENCY :29.7986 % YIELD : 93.873	COUNT DATE:13-JAN-2010 08:27:46 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+00	ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+00	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.17800 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B086.CNF;1013 BKG DATE : 10-JAN-2010 EFF FILE : W086.CNF;281 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
PU-9/0	5155.000	3.000	0.000	3.000	1.7321	99.90000	0.00E+00	3.95E-03	6.50E-03	1.74E-02	3.95E-03
PU-236	5749.000	0.000	0.000	0.000	0.0000	100.0000	0.00E+00	1.61E-03	0.00E+00	4.37E-03	1.61E-03
PU-238	5499.000	0.000	-2.000	2.000	1.4142	99.90000	-3.22E-03	2.79E-03	5.30E-03	1.50E-02	2.79E-03
PU242	4890.000	950.000	947.000	3.000	1.7321	100.0000	1.52E+00	9.27E-02	6.49E-03	1.73E-02	4.97E-02
PU-244	4589.000	2.000	1.000	1.000	1.0000	99.90000	1.61E-03	2.79E-03	3.75E-03	1.19E-02	2.79E-03



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

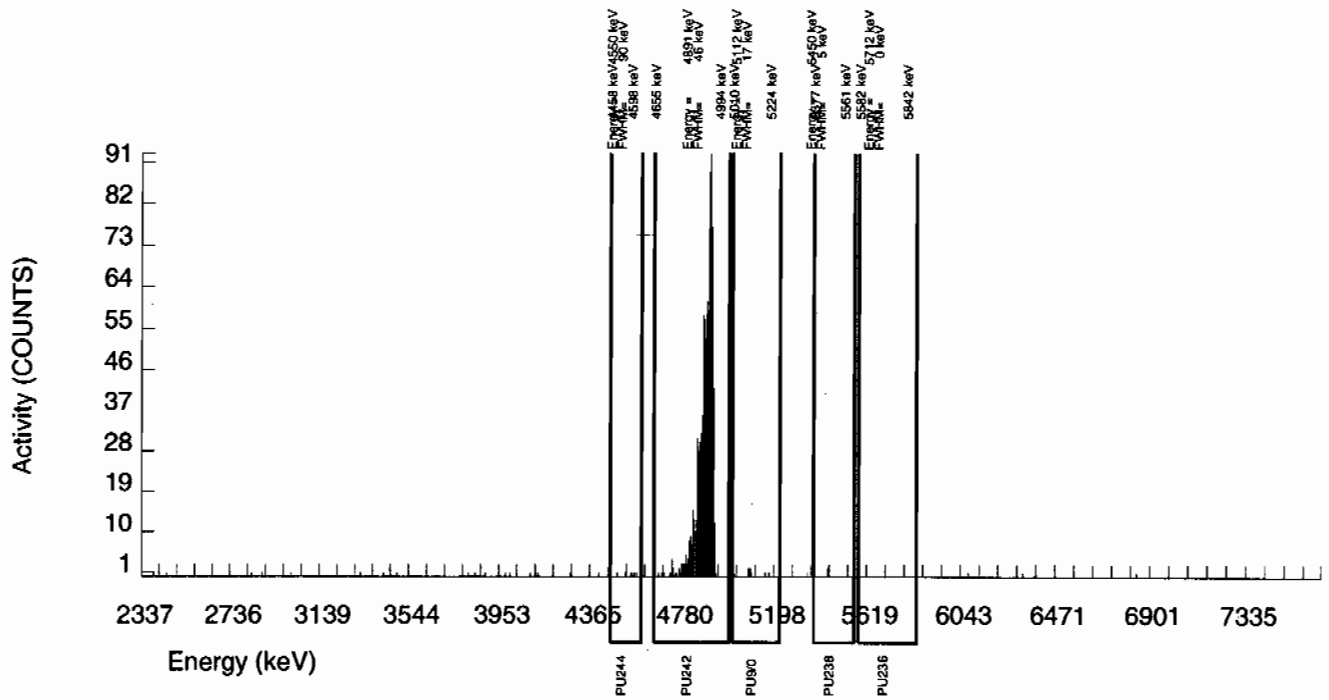
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938068 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S1202007319_PU SAMPLE QTY: 0.100 F
DETECTOR NUMBER :78199 AVERAGE %EFFICIENCY :31.4743 % YIELD : 88.593	COUNT DATE:13-JAN-2010 08:27:46 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+01	ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+01	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 2.99927 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B087.CNF;1020 BKG DATE : 10-JAN-2010 EFF FILE : W087.CNF;274 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
PU-9/0	5155.000	9.000	1.000	8.000	2.8284	99.90000	1.62E-02	6.67E-02	1.06E-01	2.57E-01	6.67E-02
PU-236	5749.000	0.000	0.000	0.000	0.0000	100.0000	0.00E+00	1.65E-02	0.00E+00	4.46E-02	1.64E-02
PU-238	5499.000	2.000	-2.000	4.000	2.0000	99.90000	-3.24E-02	3.96E-02	7.53E-02	1.94E-01	3.96E-02
PU242	4890.000	948.000	944.000	4.000	2.0000	100.0000	1.52E+01	9.29E-01	7.52E-02	1.94E-01	4.98E-01
PU-244	4589.000	6.000	5.000	1.000	1.0000	99.90000	8.09E-02	4.30E-02	3.76E-02	1.19E-01	4.28E-02



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

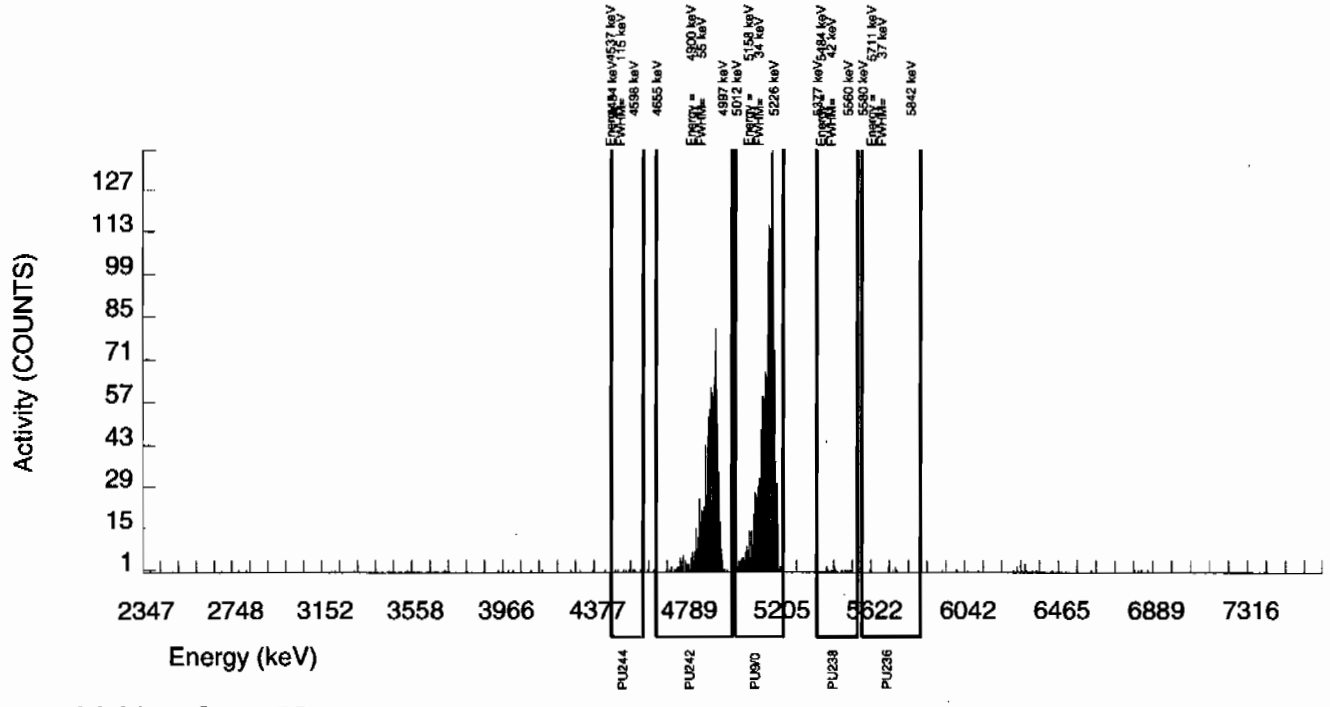
GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938068 SAMPLE DATE : 12-JAN-2010 00:00:00	SAMPLE ID : S1202007318_PU SAMPLE QTY: 1.000 F
DETECTOR NUMBER :33452 AVERAGE %EFFICIENCY :30.1337 % YIELD : 90.182	COUNT DATE:13-JAN-2010 08:27:46 ELAPSED LIVE TIME(SEC): 59999.99 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+00	ID : 0338-BB ISOTOPE : PU-9/0 PCI/F : 2.269E+00	ID : 1374-A ISOTOPE : PU242 NOMINAL : 3.38543 dpm RESULTS : 3.05306 dpm	LIB FILE : ENV_ALPHA_PU.N BKG FILE : B088.CNF;1008 BKG DATE : 10-JAN-2010 EFF FILE : W088.CNF;284 CAL DATE : 11-JAN-2010

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
PU-9/0	5155.000	1492.000	1491.000	1.000	1.0000	99.90000	2.47E+00	1.43E-01	3.86E-03	1.22E-02	6.41E-02
PU-236	5749.000	8.000	0.000	8.000	2.8284	100.0000	0.00E+00	6.64E-03	1.09E-02	2.63E-02	6.64E-03
PU-238	5499.000	16.000	3.000	13.000	3.6056	99.90000	4.98E-03	8.94E-03	1.39E-02	3.23E-02	8.94E-03
PU242	4890.000	924.000	920.000	4.000	2.0000	100.0000	1.52E+00	9.36E-02	7.71E-03	1.99E-02	5.05E-02
PU-244	4589.000	9.000	7.000	2.000	1.4142	99.90000	1.16E-02	5.54E-03	5.46E-03	1.54E-02	5.50E-03



Radiochemistry Batch Checklist, Rev10

Batch# 938069 Product: U Date: 1/14/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			N/A
Samples have been blank corrected (if required)			N/A
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.	✓		
Method RDL/ LLD has been met.	✓		N/A 1/14/10
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.	✓		
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		case narrative
Sample was run within hold time.	✓		
Sample was correctly preserved if required.			N/A
Smears Taken for Radioactive batches.			N/A
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			N/A
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			N/A
Batch entered into Case Narrative.	✓		
Batch Data Exception Reports (DER) completed, if applicable.			N/A
Batch Data Exception Reports (DER) second reviewed and disposition verified to be completed.			N/A
Aliquot Correction completed if required.	✓		
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

RADchecklistrev10, revised 1/13/2010

Primary Review Performed By: [signature] 1/14/10

Secondary Review Performed By: [signature] 1/14/10

1/13 1/20

P

Uranium Que Sheet

31-DEC-09

Batch #: 938069 Analyst: ~~HAKB~~ MKG First Client Due Date:20-JAN-10 Internal Due Date:13-JAN-10

Tracer Isotope: U-232/U-236 Tracer Code: 1283-H Expiration Date: 12-10-10 Vol: 0.1
LCS Isotope: U-238 LCS Code: 1163-H Expiration Date: 10-21-10 Vol: 0.1
Spike Isotope: U-238 Spike Code: — Expiration Date: — Vol: —
Prep Date: 01-12-10 Initials: [illegible] Pipet ID: 2971058 Balance ID: 19350208 Witness: MDA 1/12/10

Sample ID	Client Description	Type	Hazard Code	Min CRDL	Matrix	Client	Collection Date	Pos.	Label #	Wet/Dry Aliquot (g / l / f)	U Det #
243494001-1	RE12-10-7867	SAMPLE		1 pCi/Filter	SWIPE	LANL010	18-DEC-09	1	1	1.000E-01	169
243494002-1	RE12-10-7868	SAMPLE		1 pCi/Filter	SWIPE	LANL010	18-DEC-09	2	2	1.000E-01	170
1202007321-1	MB for batch 938069	MB		1 pCi/Filter	SWIPE	QC ACCOUNT		3	3	1.0	171
1202007322-1	RE12-10-7868(243494002DUP)	DUP		1 pCi/Filter	SWIPE	QC ACCOUNT	18-DEC-09	4	4	1.000E-01	172
1202007323-1	LCS for batch 938069	LCS		1 pCi/Filter	SWIPE	QC ACCOUNT		5	5	1.0	115

Choose SOP used: GL-RAD-A-011

Solid Sample Dissolution by: LEACH or DIGESTION
Circle One

Data Reviewed By: [illegible] 1/14/10

GEL Laboratories LLC, Radiochemistry Division

Filter Aliquot Corrections 12-Jan-10
Batch: 938069

Sample ID	Type	Original Hsn	Aliquot	Calculation	Adjusted Aliquot	Adjusted Aliquot * Number of Filters
243494001	SAMPLE		20 mL	(20 / 200) * (1.507 / 1.507) =	1.000E-01 Filter	1.000E-01 Filter
243494002	SAMPLE		20 mL	(20 / 200) * (1.591 / 1.591) =	1.000E-01 Filter	1.000E-01 Filter
1202007322	DUP	243494002	20 mL	(20 / 200) * (1.591 / 1.591) =	1.000E-01 Filter	1.000E-01 Filter

Reviewed by JH

Date 1-12-10

GEL Laboratories LLC

Blank Correction Report

Batch ID 938069

GEL Sample ID	Client sample ID	Parameter	Aliquot	Result	TPU	MDA	Aliquot Corrected Blank Result	Units	Activity <5X Corrected Blank
1202007322	DUP	Uranium-233/234	0.100 Filter	0.555	0.0913	0.0882	.133	pCi/Filter	YES
		Uranium-235/236	0.100 Filter	0.074	0.0395	0.109	-.0631	pCi/Filter	NO
		Uranium-238	0.100 Filter	0.779	0.111	0.0882	.0765	pCi/Filter	NO
1202007323	LCS	Uranium-233/234	1.00 Filter	2.41	0.182	0.00493	.0133	pCi/Filter	NO
		Uranium-235/236	1.00 Filter	0.128	0.0195	0.0165	-.00631	pCi/Filter	NO
		Uranium-238	1.00 Filter	2.51	0.188	0.00493	.00765	pCi/Filter	NO
1202007321	MB	Uranium-233/234	1.00 Filter	0.0133	0.00492	0.0118	.0133	pCi/Filter	YES
		Uranium-235/236	1.00 Filter	-0.00631	0.00386	0.0207	-.00631	pCi/Filter	NO
		Uranium-238	1.00 Filter	0.00765	0.00445	0.0137	.00765	pCi/Filter	YES
243494001	RE12-10-7867	Uranium-233/234	0.100 Filter	0.692	0.110	0.0386	.133	pCi/Filter	NO
		Uranium-235/236	0.100 Filter	0.0705	0.0356	0.0478	-.0631	pCi/Filter	NO
		Uranium-238	0.100 Filter	1.23	0.157	0.0386	.0765	pCi/Filter	NO
243494002	RE12-10-7868	Uranium-233/234	0.100 Filter	0.594	0.0987	0.037	.133	pCi/Filter	YES
		Uranium-235/236	0.100 Filter	0.101	0.0419	0.0457	-.0631	pCi/Filter	NO
		Uranium-238	0.100 Filter	0.682	0.111	0.127	.0765	pCi/Filter	NO

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GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938069
SAMPLE DATE : 18-DEC-2009 00:00:00

SAMPLE ID : S0243494001_UU
SAMPLE QTY: 0.100 F

DETECTOR NUMBER :72548
AVERAGE %EFFICIENCY :37.7552
% YIELD : 83.667

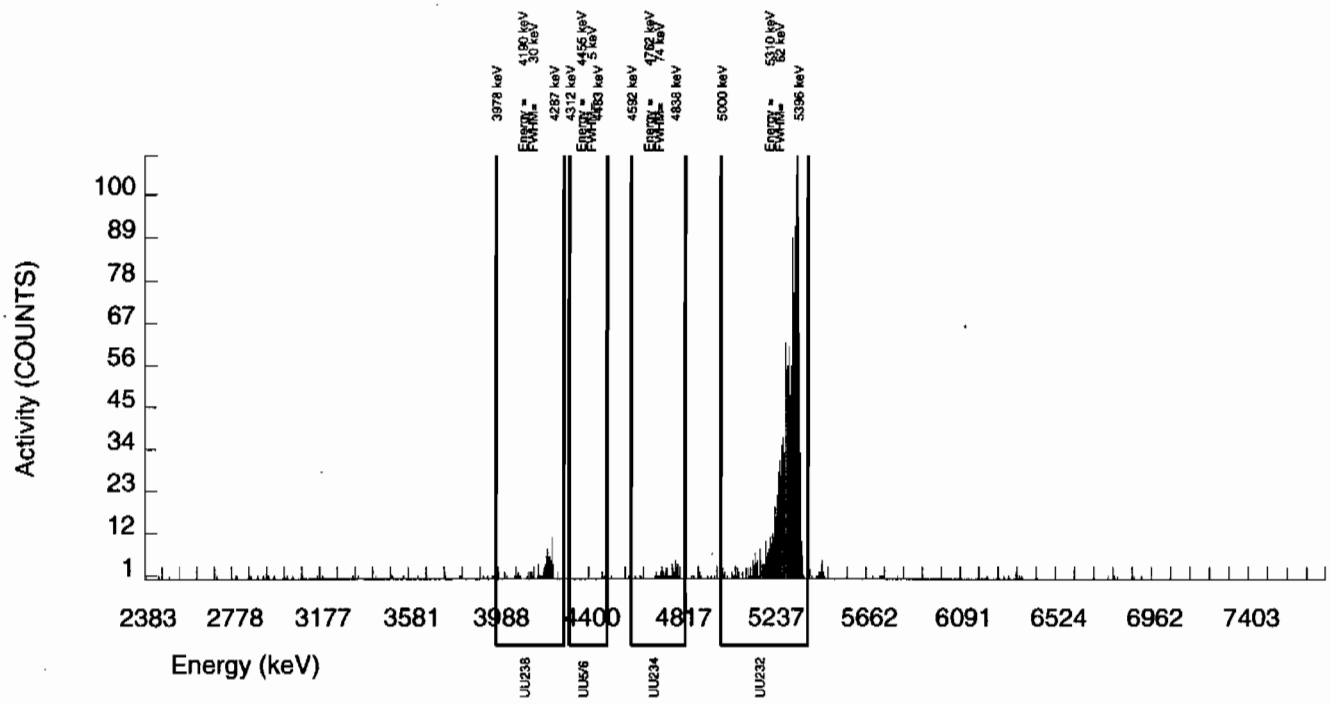
COUNT DATE:13-JAN-2010 07:12:33
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 1163-H	ID : 1163-H	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B169.CNF;161
PCI/F : 2.594E+01	PCI/F : 2.594E+01	NOMINAL : 4.51126 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 3.77443 dpm	EFF FILE : W169.CNF;62
			CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
U-3/4	4763.020	50.000	48.560	0.000	0.0000	100.0000	6.92E-01	1.10E-01	0.00E+00	3.86E-02	9.94E-02
U232	5302.100	1428.000	1424.000	4.000	2.0000	100.0000	2.03E+01	1.50E+00	6.64E-02	1.71E-01	5.40E-01
U-235	4391.000	4.000	4.000	0.000	0.0000	80.90000	7.05E-02	3.56E-02	0.00E+00	4.78E-02	3.53E-02
U-238	4184.730	86.000	86.000	0.000	0.0000	100.0000	1.23E+00	1.57E-01	0.00E+00	3.86E-02	1.32E-01

NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

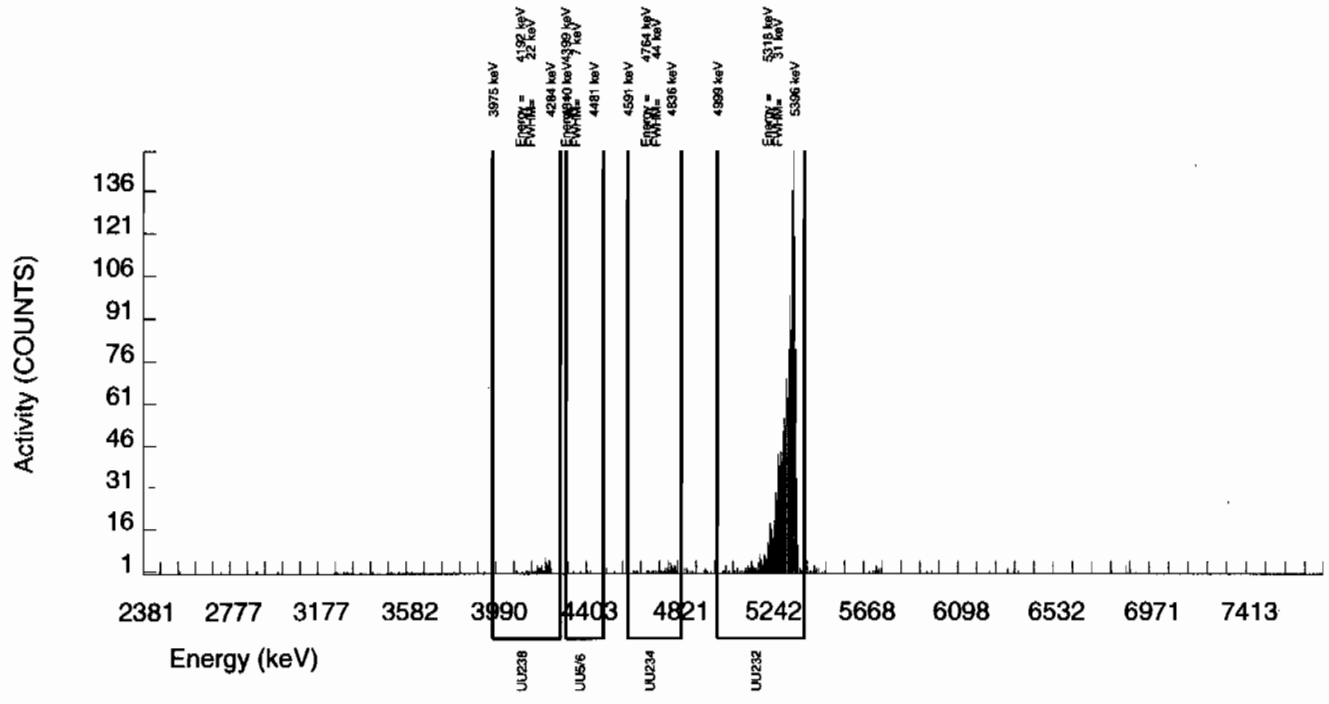
BATCH NUMBER: 938069 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S0243494002_UU SAMPLE QTY: 0.100 F
DETECTOR NUMBER :72549 AVERAGE %EFFICIENCY :36.7019 % YIELD : 89.936	COUNT DATE:13-JAN-2010 07:12:35 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 1163-H ISOTOPE : U-238 PCI/F : 2.594E+01	ID : 1163-H ISOTOPE : U-238 PCI/F : 2.594E+01	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 4.05726 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B170.CNF;159 BKG DATE : 10-JAN-2010 EFF FILE : W170.CNF;52 CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
U-3/4	4763.020	45.000	43.495	0.000	0.0000	100.0000	5.94E-01	9.87E-02	0.00E+00	3.70E-02	9.00E-02
U232	5302.100	1493.000	1488.000	5.000	2.2361	100.0000	2.03E+01	1.49E+00	7.10E-02	1.79E-01	5.29E-01
U-235	4391.000	6.000	6.000	0.000	0.0000	80.90000	1.01E-01	4.19E-02	0.00E+00	4.57E-02	4.13E-02
U-238	4184.730	52.000	50.000	2.000	1.4142	100.0000	6.82E-01	1.11E-01	4.49E-02	1.27E-01	1.00E-01

NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

BATCH NUMBER: 938069
SAMPLE DATE : 12-JAN-2010 00:00:00

SAMPLE ID : S1202007321_UU
SAMPLE QTY: 1.000 F

DETECTOR NUMBER :78260
AVERAGE %EFFICIENCY :38.3524
% YIELD : 92.081

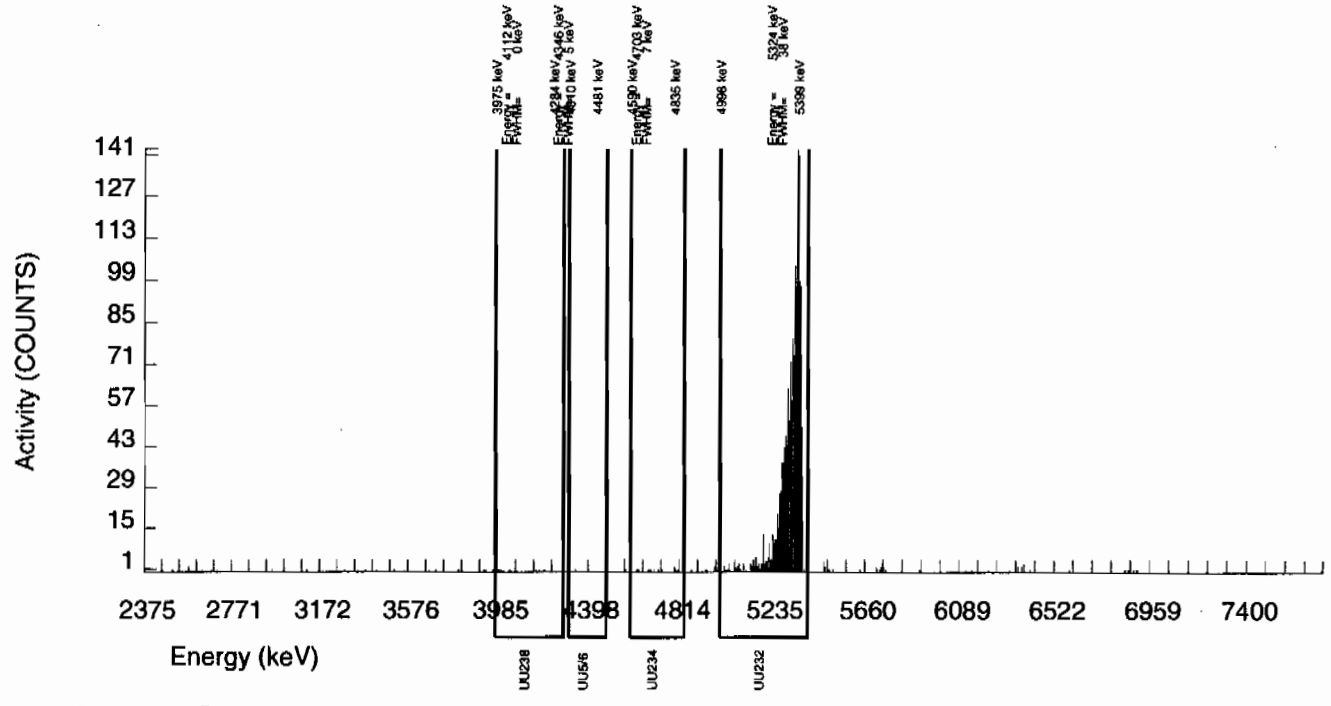
COUNT DATE:13-JAN-2010 07:12:38
ELAPSED LIVE TIME(SEC): 60000.00
ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 1163-H	ID : 1163-H	ID : 1283-H	LIB FILE : ENV_ALPHA_UU.N
ISOTOPE : U-238	ISOTOPE : U-238	ISOTOPE : U232	BKG FILE : B171.CNF;165
PCI/F : 2.594E+00	PCI/F : 2.594E+00	NOMINAL : 4.50816 dpm	BKG DATE : 10-JAN-2010
		RESULTS : 4.15117 dpm	EFF FILE : W171.CNF;69
			CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
U-3/4	4763.020	14.000	10.390	2.000	1.4142	100.0000	1.33E-02	4.92E-03	4.20E-03	1.18E-02	4.84E-03
U232	5302.100	1596.000	1592.000	4.000	2.0000	100.0000	2.03E+00	1.47E-01	5.93E-03	1.53E-02	5.10E-02
U-235	4391.000	1.000	-4.000	5.000	2.2361	80.90000	-6.31E-03	3.86E-03	8.20E-03	2.07E-02	3.86E-03
U-238	4184.730	9.000	6.000	3.000	1.7321	100.0000	7.65E-03	4.45E-03	5.14E-03	1.37E-02	4.42E-03

NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

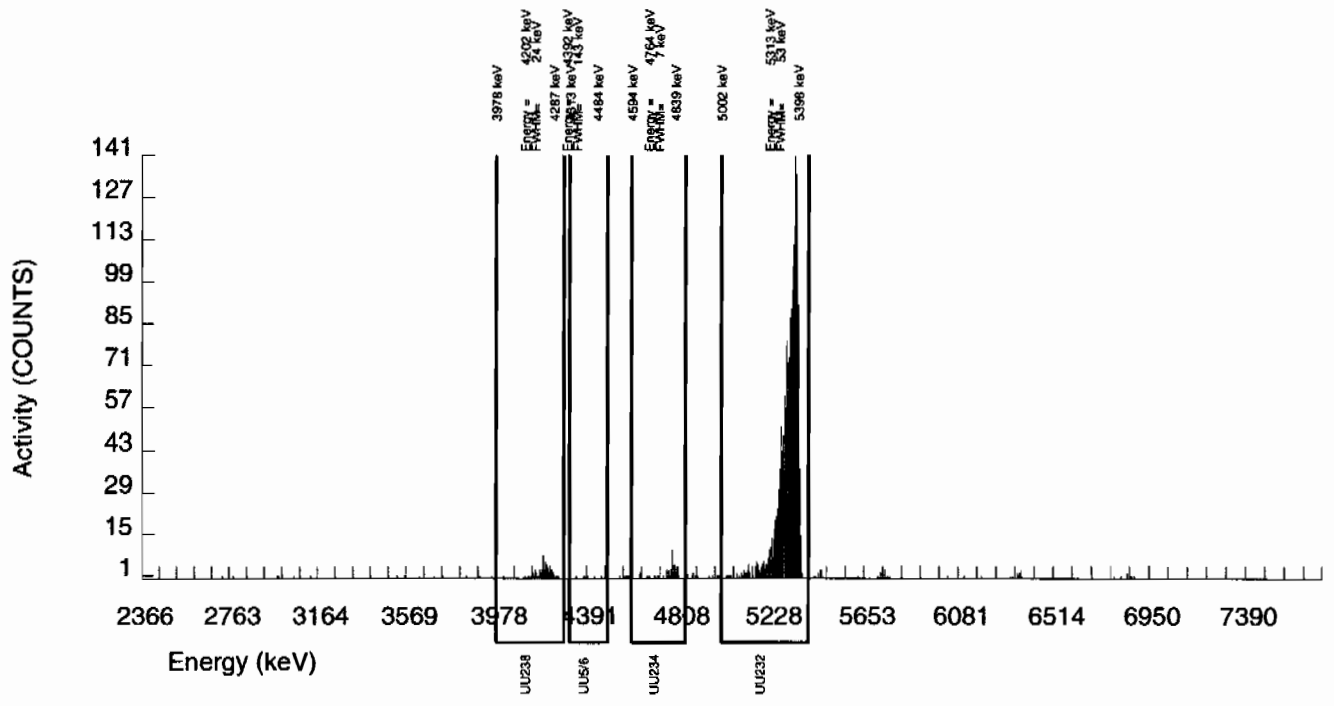
BATCH NUMBER: 938069 SAMPLE DATE : 18-DEC-2009 00:00:00	SAMPLE ID : S1202007322_UU SAMPLE QTY: 0.100 F
DETECTOR NUMBER :78772 AVERAGE %EFFICIENCY :38.4140 % YIELD : 97.881	COUNT DATE:13-JAN-2010 07:12:40 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 1163-H ISOTOPE : U-238 PCI/F : 2.594E+01	ID : 1163-H ISOTOPE : U-238 PCI/F : 2.594E+01	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.51126 dpm RESULTS : 4.41569 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B172.CNF;163 BKG DATE : 10-JAN-2010 EFF FILE : W172.CNF;62 CAL DATE : 21-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
U-3/4	4763.020	49.000	46.286	1.000	1.0000	100.0000	5.55E-01	9.13E-02	2.79E-02	8.82E-02	8.32E-02
U232	5302.100	1700.000	1695.000	5.000	2.2361	100.0000	2.03E+01	1.46E+00	6.24E-02	1.57E-01	4.95E-01
U-235	4391.000	6.000	5.000	1.000	1.0000	80.90000	7.40E-02	3.95E-02	3.44E-02	1.09E-01	3.92E-02
U-238	4184.730	66.000	65.000	1.000	1.0000	100.0000	7.79E-01	1.11E-01	2.79E-02	8.82E-02	9.81E-02

NOTE: Corrections made to U-3/4 net area due to tracer impurity



Alpha Spectroscopy Software Version 2.0
effective date: 09-Mar-1997

GEL Laboratories LLC
ALPHA SPECTROSCOPY REPORT

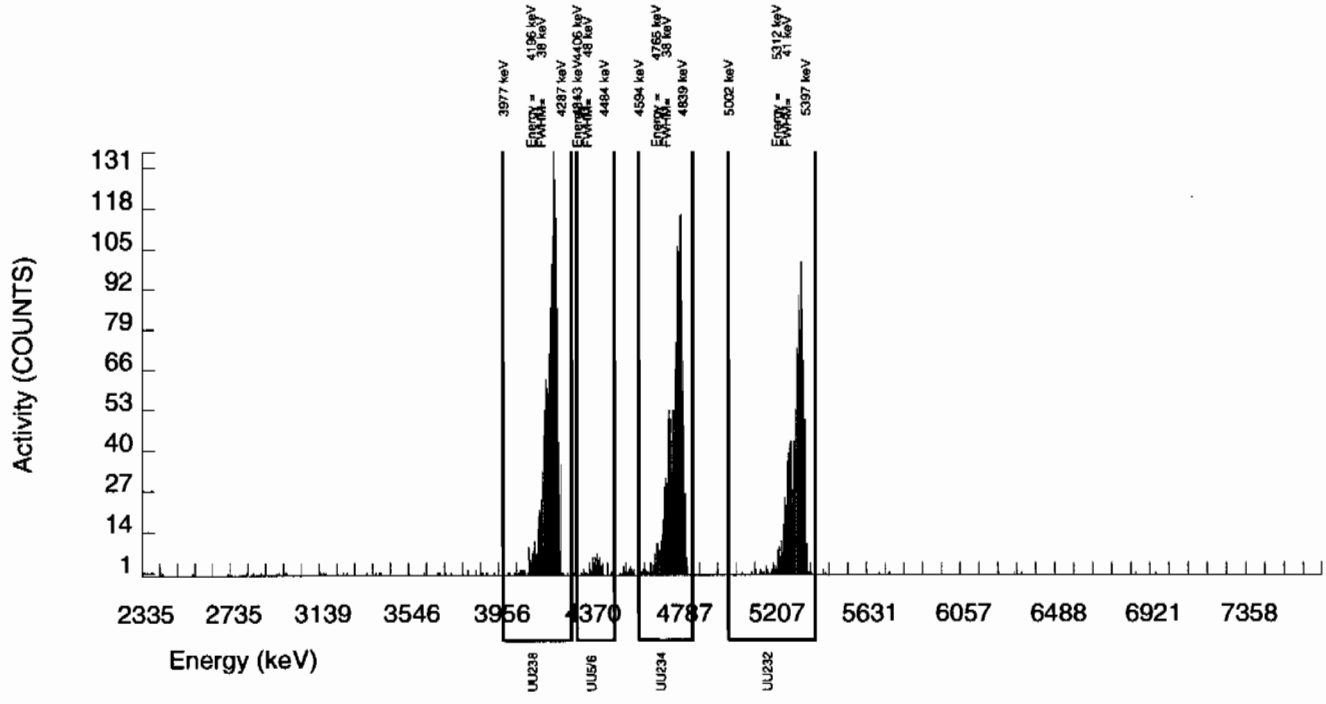
BATCH NUMBER: 938069 SAMPLE DATE : 12-JAN-2010 00:00:00	SAMPLE ID : S1202007323_UU SAMPLE QTY: 1.000 F
DETECTOR NUMBER :79995 AVERAGE %EFFICIENCY :25.5238 % YIELD : 97.080	COUNT DATE:13-JAN-2010 07:12:31 ELAPSED LIVE TIME(SEC): 60000.00 ANALYST :MXE1

MS/MSD	LCS/LCSD	TRACER	
ID : 1163-H ISOTOPE : U-238 PCI/F : 2.594E+00	ID : 1163-H ISOTOPE : U-238 PCI/F : 2.594E+00	ID : 1283-H ISOTOPE : U232 NOMINAL : 4.50816 dpm RESULTS : 4.37651 dpm	LIB FILE : ENV_ALPHA_UU.N BKG FILE : B115.CNF;437 BKG DATE : 10-JAN-2010 EFF FILE : W115.CNF;145 CAL DATE : 15-DEC-2009

NUCLIDE ACTIVITY SUMMARY

NUCLIDE	ENERGY	GROSS AREA	NET AREA	BKG AREA	BKG Sg	%ABUN	ACTIVITY pCi/F	TPU 1-SIGMA	DLC pCi/F	MDC pCi/F	UNC pCi/F
U-3/4	4763.020	1327.000	1325.871	0.000	0.0000	100.0000	2.41E+00	1.81E-01	0.00E+00	4.93E-03	6.62E-02
U232	5302.100	1118.000	1117.000	1.000	1.0000	100.0000	2.03E+00	1.55E-01	4.23E-03	1.34E-02	6.08E-02
U-235	4391.000	58.000	57.000	1.000	1.0000	80.90000	1.28E-01	1.95E-02	5.23E-03	1.65E-02	1.73E-02
U-238	4184.730	1380.000	1380.000	0.000	0.0000	100.0000	2.51E+00	1.88E-01	0.00E+00	4.93E-03	6.75E-02

NOTE: Corrections made to U-3/4 net area due to tracer impurity



Radiochemistry Batch Checklist, Rev 9

Batch# 937282 Product: 8L Date: 1/5/10

Criteria:	Yes	No	Comments
Sample Solids are less than or equal to100 mg for GAB.			NA
Samples have been blank corrected (if required)			NA
If activity less 10* MDA/ MDC, error is 150% or less of sample activity. If greater 10* MDA/ MDC, error is 40% or less. If below the MDA/ MDC, error is okay.	✓		
Instrument source check is within limits. Instrument bkg check is within limits.			
Method RDL/ LLD has been met.	✓		
If duplicate activities are less 5* MDA/ MDC, then RPD is 100% or less. If greater 5* MDA/ MDC, then RPD 20% or less. If below the MDA/ MDC, the RPD is 0%. Or meets the client's required RER acceptance criteria.	✓		
Tracer yield is 15-125% . Carrier yield 25-125%. Or meets the client's contract acceptance criteria.			NA
Method blank is less than the RDL/ LLD. (If rad samples, < 5% of lowest activity)	✓		
Sample was run within hold time.	✓		
Sample was correctly preserved if required.	✓		
Smears Taken for Radioactive batches.			NA
Method Spike and LCS are within 75-125% or meets the client's contract acceptance criteria.	✓		
No blank spaces on data forms. All line outs initialed and dated. No transcription errors are apparent.	✓		
Aux data is correct.			NA
Client Special requirements page has been checked.	✓		
Raw Data and/ or spectrum are included and properly statused.	✓		
QC data entered into QC database and batch is in REVW	✓		
Hit notification complete (if necessary)			NA
Batch entered into Case Narrative.	✓		
Batch non-conformances completed, if applicable.			NA
Batch non-conformances second reviewed and disposition verified to be completed.			NA
Aliquot Correction completed if required.	✓		
Review sample historical results if available (If REMP, results above MDC have been verified by historical results, recount or re-analysis.)	✓		

GEL Laboratories, LLC

revised 8/1/08

Primary Review Performed By: [signature] 1/5/10

Secondary Review Performed By: [signature] 1/8/10

Gamma Spec Que Sheet

12/29/2009

Batch #:937282 Analyst: MXR1 First Client DueDate 01/20/2010 Internal Due Date: 01/13/2010 ✓

Gamma Spike Isotope: Mixed Gamma Spike Code: n/a Expiration Date: n/a Vol: n/a Nominal Concentration: n/a

Gamma LCS Isotope: Mixed Gamma LCS Code: 1032-A Expiration Date: 12/2/10 Vol: 1.0 mL Nominal Concentration: Am-241 2473; Cs-137 866.1; Co-60 1007

Initials: MS Prep Date: 1/4/10 Library: LIQUID Witness: n/a

Sample ID	Client Description / Container ID	Type	Hazard Code	Client	Matrix	Collect Date	Geometry	Wet/Dry Aliquot (l/g F)	Detector	Sealing Date/Time (if Applicable)
243494001-1	RE12-10-7867	SAMPLE		LANL010	SWIPE	18-DEC-09 12:00:00	Jar	1.0	4	
243494002-1	RE12-10-7868	SAMPLE		LANL010	SWIPE	18-DEC-09 12:00:00		1.0	22	
1202005628-1	MB	MB		QC ACCOUNT	SWIPE	1/4/10		1.0	23	
1202005629-1	DUP RE12-10-7867(243494001)	DUP		QC ACCOUNT	SWIPE	18-DEC-09 12:00:00	RF	1.0	3	
1202005630-1	LCS	LCS		QC ACCOUNT	SWIPE	1/4/10		1.0	7	

MS 1/4/10

GEL Laboratories LLC, Radiochemistry Division

history ✓ dailies ✓

Data Reviewed By: [signature] 1/5/10 [signature] 1/8/10

Filter Aliquot Corrections 04-Jan-10 Batch: 937282

Sample ID	Type	Original Hsn	Aliquot	Calculation	Adjusted Aliquot	Adjusted Aliquot * Number of Filters
243494001	SAMPLE		200 mL	(200 / 200) * (1.507 / 1.507) =	1.000E+00 Filter	1.000E+00 Filter
243494002	SAMPLE		200 mL	(200 / 200) * (1.591 / 1.591) =	1.000E+00 Filter	1.000E+00 Filter
1202005629	DUP	243494001	200 mL	(200 / 200) * (1.507 / 1.507) =	1.000E+00 Filter	1.000E+00 Filter

Reviewed by M. Stamps

Date 1/4/10

GEL Laboratories LLC

Failed RDL Report

Batch Id	Samp Id	Sample Type	Run Date	YIELD	Parmname	Result	MDA	RDL
937282	243494001	SAMPLE	04-JAN-10					
937282	243494002	SAMPLE	04-JAN-10					
937282	1202005628	MB	04-JAN-10					
937282	1202005629	DUP	05-JAN-10					
937282	1202005630	LCS	04-JAN-10					

GEL QUALS

Batch ID: 937282

Report run on: January 5, 2010 3:53 PM

Samp Id	Parmname	Cofa	Edd	Qual	Comments	Auto	Result	MDA	Uncert	SQL
243494001-1 04-JAN-2010 19:28	Thallium-208	UI	UI	UI	Data rejected due to low abundance.		3.47			
243494002-1 04-JAN-2010 19:28	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		15.94			
1202005628-1 MB 04-JAN-2010 19:28	Strontium-85	UI	UI	UI	Data rejected due to low abundance.		7.852			
1202005629-1 DUP 05-JAN-2010 09:08	Thallium-208	UI	UI	UI	Data rejected due to low abundance.		8.693			
	Thorium-234	UI	UI	UI	Data rejected due to high counting uncertainty.		266.7			

Gamma Review Report based on Result > MDA for Batch:937282

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243494001	18-DEC-09 12:00	04-JAN-10 19:28	17.3	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Iodine-123		4.75E+09	2.30E+09	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Iodine-133		1.91E+06	8.54E+05	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Iodine-135		4.70E+19	0	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Technetium-99m		8.58E+20	0	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Thallium-200	HE	39380	46830	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Thallium-208	LA	3.47	1.787	pCi/Filter	3.309	Y	0	6	0	FAIL_ABUND	0	UI	Data rejected due to low abundance.

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
243494002	18-DEC-09 12:00	04-JAN-10 19:28	17.3	SAMPLE	LOAD	1	LANL	LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Annihilation Rad.	HE	2.802	2.143	pCi/Filter	2.19	N	511	1	2.731	IDENTIFIED	76.39		
Cerium-143	HE	3794	10020	pCi/Filter	0	N	0	8	0	SHORT_HLIF	0		
Iodine-133	HE	1.09E+05	8.69E+05	pCi/Filter	0	N	0	8	0	SHORT_HLIF	0		
Iodine-135		1.57E+19	0	pCi/Filter	0	N	0	8	0	SHORT_HLIF	0		
Krypton-85	LA	3034	249.9	pCi/Filter	809.3	N	0	8	0	NOT_IDENTI	0		
Niobium-97	HE	1.85E+07	1.97E+07	pCi/Filter	0	N	0	8	0	SHORT_HLIF	0		
Sodium-24	HE	1.45E+08	2.13E+08	pCi/Filter	0	N	0	8	0	SHORT_HLIF	0		
Strontium-85	LA	15.94	1.313	pCi/Filter	4.252	Y	0	8	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Zirconium-97		5.32E+09	5.54E+08	pCi/Filter	0	N	0	8	0	SHORT_HLIF	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202005628		04-JAN-10 19:28	0	MB	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Annihilation Rad.	HE	2.601	2.633	pCi/Filter	2.41	N	510.4	1	2.409	IDENTIFIED	101.2		
Krypton-85	LA	1777	235.6	pCi/Filter	829.4	N	0	4	0	NOT_IDENTI	0		
Protactinium-227		1.02E+12	3.10E+11	pCi/Filter	0	N	0	4	0	SHORT_HLIF	0		
Strontium-85	LA	7.852	1.041	pCi/Filter	3.664	Y	0	4	0	NOT_IDENTI	0	UI	Data rejected due to low abundance.
Zirconium-97	LA	527.6	58.59	pCi/Filter	205.8	N	0	4	0	NOT_IDENTI	0		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202005629	18-DEC-09 12:00	05-JAN-10 09:08	17.9	DUP	LOAD	1		LANL01004|GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Cadmium-115	HE	1675	940.8	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Iodine-133	HE	1.08E+06	2.08E+06	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Promethium-149	HE	9482	8377	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Protactinium-227		1.00E+41	0	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Sodium-24	HE	1.15E+09	6.40E+08	pCi/Filter	0	N	0	6	0	SHORT_HLIF	0		
Thallium-208	LA	8.693	3.065	pCi/Filter	5.702	Y	0	6	0	FAIL_ABUND	0	UI	Data rejected due to low abundance.
Thorium-234	FUNC	266.7	118.5	pCi/Filter	208.3	Y	63.6	2	0.9865	IDENTIFIED	43.22	VI	
Total Uranium	HE	786.06737	352.67973	pCi/Filter	619.73932	N		0					
Uranium-238	HE	266.7	118.5	pCi/Filter	208.3	N	63.6	2	0.9865	IDENTIFIED	43.22		

*** = Number of isotopes identified with a keyline at this energy.

Sample ID	Collect Date	Run Date	Days Past	Sample Type	Status	Instance	Client	Project Quals	Zero?	queue
1202005630		04-JAN-10 19:55	0	LCS	LOAD	1		GEL	N	RGSP

Name		Result	Uncert.	Units	MDA	RDL	Energy	***	FWHM	Comb Act	Rpt Err(%)	Qual	Qual Comment
Americium-241	✓	2460	109.4	pCi/Filter	74.28	Y	59.45	3	1.055	IDENTIFIED	2.407		
Barium-137m		826.5	35.98	pCi/Filter	17.11	N	661.7	2	1.399	IDENTIFIED	2.637		
Cadmium-109		5454	300.6	pCi/Filter	291	Y	87.96	3	1.077	IDENTIFIED	4.025		
Cesium-137	✓	873.7	38.11	pCi/Filter	18.09	5.00	661.7	2	1.399	IDENTIFIED	2.637		
Cobalt-57		38.66	4.907	pCi/Filter	9.325	N	122.1	1	1.096	IDENTIFIED	12.26		
Cobalt-60	✓	994.6	45.01	pCi/Filter	10.66	Y	1333	1	1.968	IDENTIFIED	2.89		

Gross Gamma	3813	130.3	pCi/Filter	272.1	N		0				
Neptunium-237	1608	188.1	pCi/Filter	86.67	N	87.96	3	1.077	IDENTIFIED	4.025	
Plutonium-237	27280	1124	pCi/Filter	823.7	N	59.45	3	1.055	IDENTIFIED	2.407	
Thorium-232 HE	4.65E+05	2.45E+06	pCi/Filter	14300	N	59.45	3	1.055	IDENTIFIED	2.407	
Tin-126	547.7	30.19	pCi/Filter	29.31	N	87.96	3	1.077	IDENTIFIED	4.025	

*** = Number of isotopes identified with a keyline at this energy.

Result Greater Than DL

Batch Id	Sample Id	Sample Type	Run Date	Parmname	Result	Uncertainty	Units	DL	RDL
937282	243494001	SAMPLE	04-JAN-10	Americium-241	9.973	4.82	pCi/Filter	8.479	Y
				Arsenic-73	90.52	35.23	pCi/Filter	62.45	N
				Iodine-123	4.75E+09	2.30E+09	pCi/Filter	0	N
				Iodine-133	1.91E+06	8.54E+05	pCi/Filter	0	N
				Iodine-135	4.70E+19	0	pCi/Filter	0	N
				Plutonium-237	142.7	68.94	pCi/Filter	121.3	N
				Technetium-99m	8.58E+20	0	pCi/Filter	0	N
				Thallium-200	39380	46830	pCi/Filter	0	N
				Thallium-208	6.47	1.787	pCi/Filter	1.655	Y
				Thorium-232	1915	10120	pCi/Filter	1651	N
				Uranium-234	5636	28310	pCi/Filter	4757	N
937282	243494002	SAMPLE	04-JAN-10	Cerium-143	3794	10020	pCi/Filter	0	N
				Iodine-133	1.09E+05	8.69E+05	pCi/Filter	0	N
				Iodine-135	1.57E+19	0	pCi/Filter	0	N
				Krypton-85	3034	249.9	pCi/Filter	404.9	N
				Niobium-97	1.85E+07	1.97E+07	pCi/Filter	0	N
				Radium-226	54.74	45.18	pCi/Filter	28.14	Y
				Sodium-24	1.45E+08	2.13E+08	pCi/Filter	0	N
				Strontium-85	16.94	1.313	pCi/Filter	2.127	Y
				Zirconium-97	5.32E+09	5.54E+08	pCi/Filter	0	N
937282	1202005628	MB	04-JAN-10	Krypton-85	1777	235.6	pCi/Filter	415	N
				Protactinium-227	1.02E+12	3.10E+11	pCi/Filter	0	N
				Protactinium-231	74.7	41.02	pCi/Filter	71.21	N
				Radium-224	46.93	19.73	pCi/Filter	29.5	(Y)
				Strontium-85	7.852	1.041	pCi/Filter	1.833	Y
				Thorium-231	23.58	11.41	pCi/Filter	19.34	(Y)
				Zirconium-97	527.6	58.59	pCi/Filter	102.9	N
937282	1202005629	DUP	05-JAN-10	Arsenic-73	125.1	65.68	pCi/Filter	109.2	N
				Barium-140	22.52	12.87	pCi/Filter	21.79	N
				Cadmium-115	1675	940.8	pCi/Filter	0	N
				Gross Gamma	23.37	35.19	pCi/Filter	21.8	N
				Iodine-133	1.08E+06	2.08E+06	pCi/Filter	0	N
				Mercury-203	4.03	1.661	pCi/Filter	2.877	Y
				Promethium-149	9482	8377	pCi/Filter	0	N
				Protactinium-227	1.00E+41	0	pCi/Filter	0	N
				Radium-224	55.19	26.74	pCi/Filter	45.74	Y
				Radon-220	1868	967.3	pCi/Filter	1726	N

LSE 1/8/09

LSE 1/8/09

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:48:14.29

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494001.CNF;1
Sample date       : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:00.
Sample ID         : G243494001           Sample quantity  : 1.00000E+00 FILTER
Detector name     : GAM04                Detector geometry: JAR
Elapsed live time: 0 08:20:00.00         Elapsed real time: 0 08:20:01.81  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 937282               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	92.53*	0	423	1.03	185.11	181	10	1.18E-05	*****	
2	0	185.43*	15	314	1.41	370.93	367	8	5.08E-04	260.6	
3	0	582.54*	59	124	1.90	1165.18	1158	15	1.96E-03	51.4	
4	0	1461.30*	6	20	1.40	2922.48	2916	13	2.06E-04	212.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 03:48:17

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494001.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:00
Sample ID : G243494001 Sample quantity : 1.0000 FILTER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA4 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:01.81 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
K-40	+	1460.81	*	6.237E+00	2.647E+01	2.699E+01	2.172E+00	0.231
RA-226	+	186.21	*	1.021E+01	5.372E+01	4.988E+01	3.658E+01	0.205

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7	477.59	*	5.457E+00	1.493E+01	2.495E+01	1.663E+00	0.219
NA-22	1274.54	*	2.698E-01	1.583E+00	2.701E+00	1.956E-01	0.100
NA-24	1368.53	*	-1.249E+02	1.583E+00	Half-Life too short		
AL-26	1129.67		2.907E-01	6.552E+01	1.059E+02	6.504E+00	0.003
	1808.65	*	8.213E-01	1.494E+00	2.646E+00	1.567E-01	0.310
TI-44	67.85		-1.689E+00	2.287E+00	3.716E+00	3.693E-01	-0.454
	78.38	*	-4.258E-02	1.456E+00	2.438E+00	2.242E-01	-0.017
SC-46	889.25	*	2.558E-01	1.555E+00	2.603E+00	1.930E-01	0.098
	1120.51		1.432E+00	2.023E+00	3.502E+00	2.178E-01	0.409
V-48	944.10		5.248E-01	4.151E+01	6.811E+01	4.971E+00	0.008
	983.50	*	-2.440E+00	3.057E+00	4.526E+00	3.221E-01	-0.539
	1312.09		5.093E-01	3.472E+00	5.895E+00	4.600E-01	0.086
CR-51	320.08	*	5.964E+00	1.680E+01	2.865E+01	1.972E+00	0.208
MN-52	744.21		-9.423E+00	1.298E+01	2.027E+01	1.306E+00	-0.465
	848.13		-1.620E+02	4.124E+02	6.585E+02	4.701E+01	-0.246
	935.52		3.977E+00	1.308E+01	2.211E+01	1.622E+00	0.180
	1246.25		-1.621E+01	3.249E+02	5.416E+02	3.688E+01	-0.030
	1333.61		-4.971E+02	4.836E+02	5.033E+02	4.087E+01	-0.988
	1434.06	*	6.365E+00	1.463E+01	2.549E+01	2.005E+00	0.250
MN-54	834.83	*	-1.267E+00	1.547E+00	2.367E+00	1.668E-01	-0.535
CO-56	846.75	*	-6.375E-02	1.905E+00	3.140E+00	2.239E-01	-0.020
	977.42		-8.590E+01	1.175E+02	1.757E+02	1.256E+01	-0.489
	1037.82		-9.816E+00	1.734E+01	2.111E+01	1.559E+00	-0.465
	1175.09		1.143E+01	8.321E+01	1.361E+02	7.880E+00	0.084
	1238.25		3.837E-01	2.836E+00	4.824E+00	3.382E-01	0.080
	1360.21		-2.342E+01	4.164E+01	6.411E+01	5.170E+00	-0.365
	1771.40		-1.033E+01	1.354E+01	1.949E+01	1.204E+00	-0.530

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CO-57	122.06	*	2.249E-01	1.054E+00	1.750E+00	1.169E-01	0.129
	136.48		2.886E+00	9.120E+00	1.511E+01	1.039E+00	0.191
CO-58	810.76	*	-1.040E+00	2.077E+00	2.869E+00	1.984E-01	-0.362
FE-59	142.65		-2.065E+02	1.699E+02	1.839E+02	1.054E+01	-1.122
	192.34		2.826E+01	4.258E+01	7.030E+01	8.120E+00	0.402
	1099.22	*	4.646E-01	3.402E+00	5.597E+00	4.087E-01	0.083
	1291.56		-2.230E-01	4.183E+00	6.943E+00	6.113E-01	-0.032
CO-60	1173.22		3.223E-01	1.645E+00	2.708E+00	1.561E-01	0.119
	1332.49	*	-2.845E+00	2.812E+00	2.922E+00	2.373E-01	-0.974
ZN-65	1115.52	*	-1.714E+00	3.452E+00	5.264E+00	3.301E-01	-0.326
GE-68	1077.35	*	1.355E+01	5.179E+01	8.629E+01	5.648E+00	0.157
AS-73	53.44	*	9.052E+01	7.044E+01	1.248E+02	1.577E+01	0.725
AS-74	595.88	*	1.500E+00	4.795E+00	7.871E+00	4.640E-01	0.191
	634.78		-7.511E+00	1.729E+01	2.653E+01	1.565E+00	-0.283
SE-75	66.05		5.154E+01	2.581E+02	4.390E+02	5.166E+01	0.117
	96.73		-5.465E+00	3.636E+01	5.363E+01	7.112E+00	-0.102
	121.11		-9.140E-01	5.770E+00	9.415E+00	9.243E-01	-0.097
	136.00		3.065E-01	1.716E+00	2.828E+00	1.719E-01	0.108
	198.60		5.104E+01	1.215E+02	1.426E+02	9.626E+00	0.358
	264.65	*	3.940E-01	1.879E+00	3.212E+00	2.044E-01	0.123
	279.53		-3.086E+00	4.633E+00	7.553E+00	5.247E-01	-0.409
	303.91		-4.112E-01	9.687E+01	1.626E+02	1.612E+01	-0.003
	400.65		1.576E+00	1.103E+01	1.836E+01	1.628E+00	0.086
BR-77	87.88		-1.391E+04	1.515E+04	2.132E+04	1.969E+03	-0.653
	200.40		-1.321E+04	1.500E+04	2.300E+04	1.232E+03	-0.574
	239.00		-6.880E+02	1.259E+03	1.445E+03	8.557E+01	-0.476
	249.79		-2.123E+03	5.646E+03	9.421E+03	5.732E+02	-0.225
	281.68		-2.322E+01	7.237E+03	1.220E+04	7.952E+02	-0.002
	297.23		-2.101E+03	4.355E+03	7.142E+03	4.595E+02	-0.294
	303.76		6.032E+03	1.567E+04	2.679E+04	1.712E+03	0.225
	439.47		9.377E+02	1.258E+04	2.073E+04	1.156E+03	0.045
	484.57		-2.211E+04	1.897E+04	2.795E+04	1.599E+03	-0.791
	520.65	*	-1.726E+02	9.304E+02	1.487E+03	8.626E+01	-0.116
	574.64		-1.405E+04	1.857E+04	2.678E+04	1.574E+03	-0.525
	578.91		9.566E+03	8.056E+03	1.275E+04	7.501E+02	0.750
	585.48		8.970E+03	1.618E+04	2.402E+04	1.414E+03	0.373
	755.35		1.136E+04	1.277E+04	2.286E+04	1.490E+03	0.497
	817.79		-5.138E+03	1.046E+04	1.651E+04	1.145E+03	-0.311
SR-82	698.33		-1.571E+03	1.594E+03	2.474E+03	1.517E+02	-0.635
	776.49	*	-2.038E+00	1.573E+01	2.586E+01	1.722E+00	-0.079
	1395.20		-1.350E+02	5.117E+02	8.215E+02	6.554E+01	-0.164
RB-83	520.41	*	-7.792E-01	3.219E+00	5.122E+00	2.972E-01	-0.152
	529.64		4.513E+00	4.686E+00	8.124E+00	4.728E-01	0.555
	552.65		-7.428E-01	8.915E+00	1.429E+01	8.365E-01	-0.052
RB-84	881.50	*	4.792E-01	3.080E+00	5.149E+00	3.790E-01	0.093
KR-85	513.99	*	-2.678E+03	5.762E+02	7.110E+02	4.116E+01	-3.767
SR-85	513.99	*	-1.407E+01	3.027E+00	3.736E+00	2.163E-01	-3.767
RB-86	1076.63	*	1.255E+01	3.346E+01	5.652E+01	3.702E+00	0.222
Y-88	898.02		2.592E+00	1.821E+00	3.354E+00	2.521E-01	0.773

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	1836.01	*	-3.095E-01	1.588E+00	2.481E+00	1.424E-01	-0.125
ZR-88	392.90	*	-2.721E-01	1.371E+00	2.237E+00	1.204E-01	-0.122
Y-91	1204.90	*	4.339E+02	6.858E+02	1.182E+03	7.336E+01	0.367
NB-94	702.63	*	9.063E-01	1.514E+00	2.640E+00	1.627E-01	0.343
	871.10		7.853E-01	1.490E+00	2.572E+00	1.875E-01	0.305
NB-95	765.79	*	-7.729E-01	1.864E+00	2.988E+00	1.969E-01	-0.259
NB-95M	235.69	*	-9.713E+00	5.985E+00	8.656E+00	6.564E-01	-1.122
ZR-95	724.18		9.762E-01	3.822E+00	6.519E+00	4.755E-01	0.150
	756.15	*	8.932E-01	2.780E+00	4.766E+00	3.641E-01	0.187
NB-97	657.90	*	-9.098E+01	2.780E+00	Half-Life too short		
	1024.50		-7.797E+02	2.780E+00	Half-Life too short		
ZR-97	254.15		-3.051E+02	2.780E+00	Half-Life too short		
	355.39		-3.481E+02	2.780E+00	Half-Life too short		
	507.63	*	-7.011E+03	2.780E+00	Half-Life too short		
	602.52		1.959E+03	2.780E+00	Half-Life too short		
	1021.30		-1.453E+03	2.780E+00	Half-Life too short		
	1147.95		-1.458E+03	2.780E+00	Half-Life too short		
	1362.66		-1.431E+03	2.780E+00	Half-Life too short		
	1750.46		1.083E+03	2.780E+00	Half-Life too short		
MO-99	140.51		1.777E+03	2.100E+03	3.462E+03	9.330E+02	0.513
	181.06		4.717E+02	1.478E+03	2.160E+03	3.653E+02	0.218
	366.43		5.905E+03	6.958E+03	1.208E+04	6.951E+02	0.489
	739.58	*	2.644E+02	8.352E+02	1.431E+03	2.010E+02	0.185
	778.00		-2.656E+03	2.563E+03	3.862E+03	2.576E+02	-0.688
TC-99M	140.51	*	8.583E+14	2.563E+03	Half-Life too short		
RH-101	127.23		1.500E+00	1.332E+00	2.288E+00	1.463E-01	0.655
	198.01	*	5.212E-01	2.206E+00	2.570E+00	1.368E-01	0.203
	325.23		7.108E-01	9.279E+00	1.558E+01	9.689E-01	0.046
RH-102	418.52		-1.837E+00	1.207E+01	1.965E+01	1.080E+00	-0.094
	475.06	*	-1.084E+00	1.335E+00	2.049E+00	1.167E-01	-0.529
	631.29		4.082E-01	2.461E+00	3.986E+00	2.352E-01	0.102
	697.49		-1.624E+00	3.348E+00	5.412E+00	3.317E-01	-0.300
	766.84		-9.641E-01	3.984E+00	6.493E+00	4.282E-01	-0.148
	1046.59		2.219E+00	4.958E+00	8.413E+00	5.682E-01	0.264
	1112.84		4.628E+00	8.422E+00	1.445E+01	9.074E-01	0.320
RU-103	497.08	*	1.858E-01	1.825E+00	2.990E+00	3.774E-01	0.062
	610.33		-1.120E+00	6.488E+01	7.465E+01	1.154E+01	-0.015
RH-106	511.85		-3.832E+01	1.800E+01	2.541E+01	1.470E+00	-1.508
	621.84	*	-3.587E+00	1.448E+01	2.265E+01	2.670E+00	-0.158
	1050.47		4.868E+01	9.624E+01	1.644E+02	1.106E+01	0.296
RU-106	511.85		-3.832E+01	1.800E+01	2.541E+01	1.470E+00	-1.508
	621.84	*	-3.587E+00	1.447E+01	2.265E+01	1.337E+00	-0.158
	1050.47		4.868E+01	9.624E+01	1.644E+02	1.106E+01	0.296
AG-108M	433.93	*	-4.445E-01	1.485E+00	2.389E+00	1.451E-01	-0.186
	614.37		-3.322E-01	1.885E+00	2.977E+00	1.901E-01	-0.112
	722.95		-4.381E-01	1.684E+00	2.758E+00	1.863E-01	-0.159
CD-109	88.03	*	-3.228E+01	3.565E+01	5.021E+01	4.636E+00	-0.643
AG-110M	657.75	*	-3.360E+00	1.717E+00	2.482E+00	1.554E-01	-1.354
	677.61		-7.412E+00	1.189E+01	1.890E+01	1.198E+00	-0.392

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	706.67		-5.584E+00	9.559E+00	1.534E+01	9.994E-01	-0.364
	763.93		1.274E-01	6.189E+00	1.033E+01	7.118E-01	0.012
	884.67		-6.620E-01	2.017E+00	3.212E+00	2.475E-01	-0.206
	937.48		-1.278E+00	4.413E+00	7.016E+00	5.395E-01	-0.182
	1384.27		2.699E+00	6.497E+00	1.137E+01	9.399E-01	0.237
IN-111	171.28		-3.308E+01	7.627E+01	1.206E+02	6.011E+00	-0.274
	245.39	*	-1.781E+01	1.068E+02	1.372E+02	8.255E+00	-0.130
IN-113M	391.69	*	-6.909E-02	1.982E+00	3.268E+00	1.894E-01	-0.021
SN-113	391.69	*	-6.909E-02	1.982E+00	3.268E+00	1.894E-01	-0.021
IN-114M	190.27	*	-3.276E+00	8.742E+00	1.308E+01	6.824E-01	-0.250
CD-115	260.90		-3.478E+03	1.146E+04	1.912E+04	1.195E+03	-0.182
	492.35		-7.027E+02	3.430E+03	5.499E+03	3.156E+02	-0.128
	527.90	*	-8.706E+02	1.036E+03	1.567E+03	9.114E+01	-0.556
SN-117M	156.02		-8.776E+01	1.052E+02	1.636E+02	8.605E+00	-0.536
	158.56	*	1.402E+00	2.637E+00	4.381E+00	2.266E-01	0.320
SB-122	563.90	*	2.615E+01	1.721E+02	2.803E+02	1.645E+01	0.093
	692.80		2.362E+03	3.439E+03	6.045E+03	3.686E+02	0.391
I-123	159.00	*	4.748E+03	3.439E+03	Half-Life too short		
	528.96		3.628E+02	3.439E+03	Half-Life too short		
TE-123M	159.00	*	1.257E+00	1.218E+00	2.066E+00	1.083E-01	0.609
I-124	602.71	*	3.001E+01	4.798E+01	8.020E+01	4.730E+00	0.374
	722.78		-1.024E+02	2.574E+02	4.166E+02	2.624E+01	-0.246
	1325.50		7.755E+02	2.166E+03	3.754E+03	3.008E+02	0.207
	1376.25		-8.798E+02	1.694E+03	2.617E+03	2.101E+02	-0.336
	1509.49		-4.782E+02	1.045E+03	1.618E+03	1.229E+02	-0.296
	1691.02		-5.333E+01	2.804E+02	4.442E+02	2.971E+01	-0.120
SB-124	602.71		1.218E+00	1.948E+00	3.256E+00	1.921E-01	0.374
	645.85		7.706E+00	2.138E+01	3.700E+01	2.453E+00	0.208
	709.31		3.667E+01	1.243E+02	2.126E+02	1.320E+01	0.172
	713.82		-4.788E+01	7.305E+01	1.158E+02	1.212E+01	-0.414
	722.78		-6.024E+00	1.515E+01	2.452E+01	1.606E+00	-0.246
	968.20		9.029E+01	1.056E+02	1.856E+02	1.335E+01	0.486
	1045.16		4.208E+01	1.076E+02	1.818E+02	1.229E+01	0.232
	1325.50		4.875E+01	1.361E+02	2.359E+02	1.890E+01	0.207
	1368.21		-1.568E+01	7.108E+01	1.147E+02	1.504E+01	-0.137
	1436.60		-6.598E+01	1.836E+02	2.906E+02	2.284E+01	-0.227
	1691.02	*	-7.403E-01	3.892E+00	6.166E+00	4.392E-01	-0.120
SB-125	427.89	*	-8.217E-01	3.846E+00	6.223E+00	3.603E-01	-0.132
	463.38		-2.665E+00	1.236E+01	1.990E+01	1.322E+00	-0.134
	600.56		-4.346E-01	9.281E+00	1.483E+01	1.008E+00	-0.029
	635.90		-1.706E+00	1.181E+01	1.860E+01	1.279E+00	-0.092
TE-125M	109.28	*	3.871E+01	5.309E+02	7.176E+02	6.538E+01	0.054
I-126	388.63		4.191E+00	1.029E+01	1.742E+01	9.454E-01	0.241
	666.33	*	-1.886E+01	9.761E+00	1.410E+01	8.346E-01	-1.337
	753.82		8.207E+00	6.389E+01	1.078E+02	7.012E+00	0.076
SB-126	223.80		-1.868E+01	1.968E+02	3.113E+02	1.773E+01	-0.060
	278.60		2.826E+01	1.189E+02	2.029E+02	1.322E+01	0.139
	296.50		4.450E+01	6.435E+01	1.117E+02	7.194E+00	0.398
	414.70		1.441E+00	3.601E+00	6.082E+00	3.333E-01	0.237

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	415.30		-1.547E+01	2.978E+02	4.886E+02	2.679E+01	-0.032
	555.20		1.880E+01	2.069E+02	3.360E+02	1.968E+01	0.056
	573.80		-7.614E+01	5.456E+01	7.751E+01	4.557E+00	-0.982
	593.00		-1.796E+01	4.764E+01	7.406E+01	4.364E+00	-0.242
	656.30		-9.885E+01	1.669E+02	2.688E+02	1.584E+01	-0.368
	666.33		-7.923E+00	4.101E+00	5.924E+00	3.506E-01	-1.337
	675.00		-2.042E+01	9.013E+01	1.487E+02	8.888E+00	-0.137
	695.00		2.654E+00	3.851E+00	6.768E+00	4.136E-01	0.392
	697.00		-2.541E+00	1.342E+01	2.220E+01	1.360E+00	-0.114
	720.50	*	-4.174E+00	6.553E+00	1.037E+01	6.514E-01	-0.403
	856.80		-8.803E+00	2.330E+01	3.718E+01	2.676E+00	-0.237
	989.30		7.629E+01	5.867E+01	1.078E+02	7.637E+00	0.708
	1034.80		5.670E+01	3.997E+02	6.604E+02	4.509E+01	0.086
	1213.00		4.835E+01	1.847E+02	3.058E+02	1.934E+01	0.158
SN-126	64.28		-4.034E+01	3.718E+01	4.574E+01	7.463E+00	-0.882
	86.94		-6.159E+00	1.317E+01	2.110E+01	8.753E+00	-0.292
	87.57	*	-3.341E+00	3.312E+00	4.977E+00	4.592E-01	-0.671
SB-127	61.10		-6.535E+03	5.234E+03	8.220E+03	1.136E+03	-0.795
	252.40		-9.182E+01	2.883E+02	4.779E+02	1.997E+02	-0.192
	290.80		1.146E+03	1.406E+03	2.449E+03	2.554E+02	0.468
	411.60		4.630E+02	7.742E+02	1.319E+03	1.954E+02	0.351
	444.90		-6.648E+01	6.656E+02	1.083E+03	1.238E+02	-0.061
	473.00		-2.675E+01	1.153E+02	1.849E+02	2.189E+01	-0.145
	543.00		-9.685E+02	1.056E+03	1.557E+03	2.109E+02	-0.622
	603.60		2.756E+02	8.673E+02	1.420E+03	1.641E+02	0.194
	685.20	*	3.561E+01	8.295E+01	1.439E+02	1.498E+01	0.247
	698.50		-1.247E+03	1.040E+03	1.561E+03	2.367E+02	-0.799
	722.20		-1.390E+03	1.824E+03	2.850E+03	2.941E+02	-0.488
	783.80		7.695E+01	2.274E+02	3.883E+02	4.618E+01	0.198
XE-127	57.60		-3.841E+02	4.272E+02	6.896E+02	8.218E+01	-0.557
	145.22		5.181E+00	2.931E+01	4.814E+01	2.714E+00	0.108
	172.10		-2.350E+00	5.381E+00	8.503E+00	4.246E-01	-0.276
	202.84	*	1.135E-02	2.195E+00	3.513E+00	1.893E-01	0.003
	374.96		1.770E+00	9.140E+00	1.532E+01	8.631E-01	0.116
I-131	80.18		-1.132E+02	2.344E+02	3.837E+02	3.542E+01	-0.295
	284.30		-1.432E+01	7.254E+01	1.210E+02	8.602E+00	-0.118
	364.48	*	-2.563E-01	6.413E+00	1.062E+01	6.884E-01	-0.024
	636.97		1.391E+01	8.122E+01	1.316E+02	8.697E+00	0.106
	722.89		-9.896E+01	3.458E+02	5.651E+02	3.616E+01	-0.175
TE-132	49.72		-8.166E+02	2.845E+03	4.777E+03	6.950E+02	-0.171
	111.76		-5.940E+02	2.126E+03	3.465E+03	3.581E+02	-0.171
	116.30		6.969E+02	1.909E+03	3.195E+03	3.266E+02	0.218
	228.16	*	2.837E+01	5.135E+01	8.359E+01	1.240E+01	0.339
BA-133	53.15		3.227E+02	3.056E+02	5.385E+02	6.819E+01	0.599
	79.62		-7.885E+01	5.596E+01	8.547E+01	1.328E+01	-0.923
	81.00		2.244E+00	4.017E+00	6.861E+00	1.110E+00	0.327
	276.40		3.553E+00	1.572E+01	2.681E+01	3.561E+00	0.133
	302.84		-3.413E-01	6.272E+00	1.050E+01	1.257E+00	-0.032
	356.01	*	1.938E-01	2.110E+00	3.524E+00	4.090E-01	0.055

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	383.85		8.925E+00	1.371E+01	2.347E+01	2.515E+00	0.380
I-133	510.53		-3.575E+02	1.371E+01	Half-Life too short		
	529.87	*	1.905E+00	1.371E+01	Half-Life too short		
	706.58		-7.025E+01	1.371E+01	Half-Life too short		
	856.28		-4.998E+01	1.371E+01	Half-Life too short		
	875.33		-1.611E+01	1.371E+01	Half-Life too short		
	1236.41		-1.601E+01	1.371E+01	Half-Life too short		
	1298.22		-2.322E+01	1.371E+01	Half-Life too short		
CS-134	475.35		-1.753E+01	8.547E+01	1.374E+02	7.822E+00	-0.128
	563.23		6.641E+00	1.637E+01	2.718E+01	1.627E+00	0.244
	569.32		1.603E-01	1.213E+01	1.522E+01	9.203E-01	0.011
	604.70		-1.219E+00	1.711E+00	2.603E+00	1.544E-01	-0.468
	795.84	*	1.337E+00	1.822E+00	3.213E+00	2.207E-01	0.416
	801.93		-1.921E+01	2.850E+01	3.052E+01	2.103E+00	-0.630
	1038.57		1.478E+01	1.564E+02	2.570E+02	1.749E+01	0.058
	1167.94		-7.556E+01	9.039E+01	1.298E+02	7.543E+00	-0.582
	1365.15		-1.297E+00	4.633E+01	7.680E+01	6.507E+00	-0.017
CS-135	268.24	*	5.650E-01	6.395E+00	1.086E+01	8.788E-01	0.052
I-135	288.45		-1.184E+12	6.395E+00	Half-Life too short		
	417.63		-2.273E+14	6.395E+00	Half-Life too short		
	546.56		-2.443E+13	6.395E+00	Half-Life too short		
	836.80		7.108E+12	6.395E+00	Half-Life too short		
	1038.76		-8.534E+12	6.395E+00	Half-Life too short		
	1124.00		-1.330E+14	6.395E+00	Half-Life too short		
	1131.51		-3.992E+13	6.395E+00	Half-Life too short		
	1260.41	*	4.704E+13	6.395E+00	Half-Life too short		
	1457.56		1.992E+14	6.395E+00	Half-Life too short		
	1678.03		1.120E+14	6.395E+00	Half-Life too short		
	1706.46		3.101E+14	6.395E+00	Half-Life too short		
	1791.20		-1.473E+13	6.395E+00	Half-Life too short		
CS-136	66.91		3.180E-01	4.477E+01	7.552E+01	1.230E+01	0.004
	86.29		-1.183E+01	4.683E+01	7.724E+01	1.023E+01	-0.153
	153.22		2.527E-01	2.945E+01	4.788E+01	3.291E+00	0.005
	163.89		3.928E+01	5.111E+01	8.559E+01	5.674E+00	0.459
	176.55		-1.306E+01	1.758E+01	2.726E+01	1.597E+00	-0.479
	273.65		-2.299E+00	2.098E+01	3.526E+01	2.535E+00	-0.065
	340.57		-5.931E-01	5.900E+00	9.784E+00	6.282E-01	-0.061
	818.51		-6.698E-01	3.290E+00	5.344E+00	3.716E-01	-0.125
	1048.07	*	-8.362E-01	5.380E+00	8.605E+00	6.204E-01	-0.097
	1235.34		5.401E+00	2.173E+01	3.735E+01	3.923E+00	0.145
BA-137M	661.65	*	-1.282E+00	2.616E+00	3.384E+00	1.993E-01	-0.379
CS-137	661.65	*	-1.355E+00	2.765E+00	3.578E+00	2.115E-01	-0.379
CE-139	165.85	*	-6.982E-01	1.325E+00	2.091E+00	1.032E-01	-0.334
BA-140	162.64		-6.667E+00	3.642E+01	5.849E+01	3.425E+00	-0.114
	304.84		2.667E+01	6.521E+01	1.109E+02	3.042E+01	0.240
	423.70		1.559E+01	9.191E+01	1.526E+02	4.842E+01	0.102
	537.32	*	3.089E+00	1.286E+01	2.111E+01	6.867E+00	0.146
LA-140	328.77		-3.546E+00	1.401E+01	2.309E+01	1.580E+00	-0.154
	432.53		-4.530E+01	1.055E+02	1.682E+02	1.040E+01	-0.269

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		487.03		-6.315E-01	6.649E+00	1.075E+01	6.987E-01	-0.059
		751.79		-8.239E+01	7.953E+01	1.201E+02	9.217E+00	-0.686
		815.85		-3.348E+00	1.477E+01	2.396E+01	1.947E+00	-0.140
		867.82		2.413E+01	6.971E+01	1.185E+02	9.246E+00	0.204
		919.63		-2.362E+01	1.312E+02	2.116E+02	2.048E+01	-0.112
		925.24		2.362E+01	4.831E+01	8.339E+01	6.672E+00	0.283
		1596.49	*	-1.828E+00	4.818E+00	7.511E+00	5.413E-01	-0.243
CE-141		145.44	*	9.994E-01	2.628E+00	4.358E+00	2.557E-01	0.229
CE-143		57.37		-1.664E-01	2.628E+00	Half-Life too short		
		231.56		-1.555E-01	2.628E+00	Half-Life too short		
		293.26	*	-1.033E-02	2.628E+00	Half-Life too short		
		350.59		2.534E-01	2.628E+00	Half-Life too short		
		490.36		1.974E-01	2.628E+00	Half-Life too short		
		664.57		-3.124E-01	2.628E+00	Half-Life too short		
		721.93		-1.644E-01	2.628E+00	Half-Life too short		
CE-144		80.11		-7.762E+01	9.011E+01	1.446E+02	1.326E+01	-0.537
		133.54	*	-8.794E-02	8.396E+00	1.373E+01	1.967E+00	-0.006
PM-144		476.78		2.084E+00	3.013E+00	5.142E+00	3.527E-01	0.405
		618.01		2.720E-01	1.448E+00	2.353E+00	1.469E-01	0.116
		696.49	*	-3.031E-01	1.487E+00	2.456E+00	1.505E-01	-0.123
		778.57		-7.178E+01	9.537E+01	1.479E+02	9.878E+00	-0.485
PR-144		696.49	*	-2.056E+01	1.009E+02	1.667E+02	1.020E+01	-0.123
		1489.15		1.363E+02	5.486E+02	9.362E+02	7.186E+01	0.146
PM-146		453.90	*	-1.355E+00	2.034E+00	3.176E+00	2.702E-01	-0.427
		633.02		1.620E+00	6.047E+01	9.678E+01	3.565E+01	0.017
		735.90		-4.085E+00	6.080E+00	9.376E+00	2.626E+00	-0.436
		747.13		1.459E+00	3.593E+00	6.198E+00	7.950E-01	0.235
ND-147	+	91.11		9.598E-02	2.565E+01	2.319E+01	2.187E+00	0.004
		319.41		-2.692E+01	1.638E+02	2.717E+02	1.704E+01	-0.099
		439.89		-6.784E+01	3.059E+02	4.942E+02	2.759E+01	-0.137
		531.02	*	6.156E+00	2.923E+01	4.803E+01	6.500E+00	0.128
PM-149		285.90	*	-1.362E+04	9.694E+03	1.256E+04	1.819E+03	-1.084
EU-152		121.78		2.866E-01	3.026E+00	4.997E+00	4.146E-01	0.057
		244.69		-1.269E+01	1.866E+01	2.322E+01	1.395E+00	-0.546
		344.27	*	-1.823E+00	4.288E+00	6.973E+00	4.699E-01	-0.261
		443.98		-1.015E+01	4.284E+01	6.908E+01	3.864E+00	-0.147
		778.89		-8.770E+00	1.108E+01	1.713E+01	1.144E+00	-0.512
		867.32		9.460E+00	3.693E+01	6.227E+01	4.525E+00	0.152
		964.01		-1.059E+01	1.149E+01	1.707E+01	1.231E+00	-0.620
		1085.78		-1.049E+01	1.595E+01	2.385E+01	1.546E+00	-0.440
		1112.02		2.667E+00	1.210E+01	2.005E+01	1.261E+00	0.133
		1407.95		1.375E+00	7.931E+00	1.344E+01	1.068E+00	0.102
GD-153		69.67		-8.900E+00	7.779E+01	1.303E+02	1.268E+01	-0.068
		83.37		-9.785E+02	8.671E+02	1.035E+03	9.471E+01	-0.946
		97.43	*	-3.772E+00	4.386E+00	5.506E+00	4.380E-01	-0.685
		103.18		3.745E-01	4.513E+00	7.503E+00	5.604E-01	0.050
EU-154		123.07		-9.443E-02	2.175E+00	3.566E+00	3.541E-01	-0.026
		247.94		2.528E-01	1.703E+01	2.693E+01	2.612E+00	0.009
		591.81		-8.258E+00	2.770E+01	4.335E+01	4.261E+00	-0.190

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		723.30		1.830E+00	6.899E+00	1.178E+01	8.833E-01	0.155
		756.87		1.088E+01	2.942E+01	5.063E+01	5.351E+00	0.215
		873.19		-4.738E+00	1.262E+01	2.005E+01	2.277E+00	-0.236
		996.32		-8.924E+00	1.558E+01	2.380E+01	4.060E+00	-0.375
		1004.76		-5.565E+00	9.258E+00	1.415E+01	1.486E+00	-0.393
		1274.45	*	9.193E-01	4.439E+00	7.600E+00	7.821E-01	0.121
EU-155		48.70		-2.563E+02	2.371E+02	3.801E+02	4.526E+01	-0.674
		60.01		1.730E+02	3.050E+02	5.282E+02	6.030E+01	0.328
		86.54		-8.456E-01	3.774E+00	6.234E+00	5.787E-01	-0.136
		105.31	*	1.341E+00	4.644E+00	7.782E+00	5.799E-01	0.172
TB-160		86.79		-4.486E+00	1.028E+01	1.681E+01	1.547E+00	-0.267
		197.04		-1.365E+01	3.851E+01	4.342E+01	2.305E+00	-0.314
		215.65		5.031E+00	3.163E+01	5.085E+01	2.834E+00	0.099
		298.57		-1.855E+00	4.783E+00	7.881E+00	5.064E-01	-0.235
		879.36	*	1.911E+00	5.845E+00	9.933E+00	7.297E-01	0.192
		962.29		-7.858E+00	1.986E+01	3.115E+01	2.249E+00	-0.252
		966.15		2.881E+00	7.976E+00	1.348E+01	9.706E-01	0.214
		1177.93		-3.907E+00	1.294E+01	2.002E+01	1.167E+00	-0.195
		1271.85		3.602E+00	2.549E+01	4.337E+01	3.118E+00	0.083
HO-166M		80.57		-1.231E+00	1.137E+01	1.895E+01	1.735E+00	-0.065
	+	184.41		4.649E-01	2.424E+00	2.663E+00	1.369E-01	0.175
		280.46		1.469E+00	3.525E+00	6.065E+00	3.956E-01	0.242
		410.95		4.846E+00	1.027E+01	1.741E+01	9.517E-01	0.278
		711.68	*	3.353E-01	2.594E+00	4.386E+00	2.730E-01	0.076
		752.31		-1.542E+01	1.130E+01	1.648E+01	1.070E+00	-0.936
		810.29		-2.877E+00	3.120E+00	4.147E+00	2.856E-01	-0.694
TM-171		51.35		-2.637E+03	2.760E+03	4.458E+03	5.666E+02	-0.592
		52.39		6.971E+02	1.375E+03	2.385E+03	3.033E+02	0.292
		59.40		1.820E+03	1.661E+03	2.929E+03	3.388E+02	0.621
		66.72	*	3.747E+02	1.426E+03	2.432E+03	2.455E+02	0.154
HF-175		89.36		1.826E+01	5.971E+01	9.092E+01	8.185E+00	0.201
		343.40	*	5.175E-01	1.580E+00	2.681E+00	1.618E-01	0.193
		433.00		5.724E+00	9.827E+01	1.619E+02	8.993E+00	0.035
LU-176		88.36		-2.907E+00	7.981E+00	1.166E+01	1.070E+00	-0.249
		201.83		-1.499E+00	1.308E+00	1.974E+00	1.061E-01	-0.759
		306.84	*	2.119E-01	1.138E+00	1.926E+00	1.227E-01	0.110
		401.10		-3.468E+01	2.910E+02	4.765E+02	2.584E+01	-0.073
LU-177		112.95		-1.391E+00	8.946E+01	1.475E+02	1.024E+01	-0.009
		208.36	*	-1.510E+01	5.864E+01	9.245E+01	5.055E+00	-0.163
LU-177M		52.97		1.793E+02	1.406E+02	2.489E+02	3.156E+01	0.720
		54.07		1.004E+02	7.074E+01	1.256E+02	1.576E+01	0.799
		61.30		-1.080E+02	8.898E+01	1.409E+02	1.563E+01	-0.767
		121.62		-2.820E+00	1.586E+01	2.585E+01	1.726E+00	-0.109
		147.16		-7.673E+00	2.723E+01	4.375E+01	2.435E+00	-0.175
		171.86		-1.005E+01	2.092E+01	3.298E+01	1.646E+00	-0.305
		218.09		9.075E+00	3.556E+01	5.742E+01	3.221E+00	0.158
		268.79		-9.051E-01	3.255E+01	5.497E+01	3.502E+00	-0.016
		319.02		1.130E+00	1.093E+01	1.840E+01	1.155E+00	0.061
		367.43		3.617E+01	4.213E+01	7.315E+01	4.198E+00	0.494

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	413.65	*	1.167E+00	7.640E+00	1.270E+01	6.957E-01	0.092
HF-181	56.28		-6.686E+01	6.980E+01	1.123E+02	1.367E+01	-0.595
	57.53		-2.924E+01	3.560E+01	5.775E+01	6.890E+00	-0.506
	65.20		1.685E+01	5.209E+01	8.911E+01	9.201E+00	0.189
	133.02		-4.610E-01	2.770E+00	4.498E+00	2.754E-01	-0.102
	136.25		6.481E+00	2.047E+01	3.393E+01	2.031E+00	0.191
	345.85		-7.412E+00	8.685E+00	1.374E+01	8.256E-01	-0.539
	482.03	*	-9.733E-03	1.858E+00	3.026E+00	1.729E-01	-0.003
W-181	56.28		-2.555E+01	2.665E+01	4.288E+01	5.220E+00	-0.596
	57.53		-1.117E+01	1.361E+01	2.207E+01	2.634E+00	-0.506
	65.20	*	6.389E+00	1.975E+01	3.379E+01	3.489E+00	0.189
TA-182	67.75		-3.904E+00	5.556E+00	9.045E+00	9.001E-01	-0.432
	100.10		-5.264E+00	9.077E+00	1.256E+01	9.680E-01	-0.419
	152.43		1.195E+00	1.336E+01	2.181E+01	1.174E+00	0.055
	222.10		3.584E+00	1.491E+01	2.403E+01	1.362E+00	0.149
	1001.68		3.111E+01	8.452E+01	1.429E+02	1.003E+01	0.218
	1121.28		7.183E+00	5.596E+00	1.016E+01	6.312E-01	0.707
	1189.05		2.585E+00	1.022E+01	1.697E+01	1.015E+00	0.152
	1221.42	*	-9.115E-01	6.368E+00	1.052E+01	6.783E-01	-0.087
	1230.97		2.272E+01	1.777E+01	3.309E+01	2.179E+00	0.687
RE-183	57.98		-2.506E+00	1.323E+01	2.223E+01	2.632E+00	-0.113
	59.32		7.490E+00	6.984E+00	1.230E+01	1.425E+00	0.609
	67.20		1.699E+00	1.019E+01	1.730E+01	1.734E+00	0.098
	162.32	*	-1.242E+00	4.837E+00	7.742E+00	3.907E-01	-0.160
	208.81		-7.400E+00	4.275E+01	6.768E+01	3.705E+00	-0.109
	291.72		-2.145E+01	4.200E+01	6.891E+01	4.456E+00	-0.311
RE-184	57.98		-9.112E+00	4.811E+01	8.080E+01	9.569E+00	-0.113
	59.32		2.721E+01	2.537E+01	4.469E+01	5.177E+00	0.609
	67.20		6.174E+00	3.702E+01	6.287E+01	6.302E+00	0.098
	161.27		-1.259E+01	1.556E+01	2.424E+01	1.232E+00	-0.519
	216.55		-3.026E+00	1.131E+01	1.777E+01	9.925E-01	-0.170
	252.85	*	2.199E+00	1.012E+01	1.733E+01	1.062E+00	0.127
	318.01		-1.243E+01	1.949E+01	3.146E+01	1.977E+00	-0.395
	792.07		1.340E+01	4.189E+01	7.139E+01	4.829E+00	0.188
	903.28		-4.232E+01	4.607E+01	6.929E+01	5.164E+00	-0.611
	920.93		2.035E+00	1.821E+01	3.025E+01	2.235E+00	0.067
OS-185	59.72		1.753E+01	1.850E+01	3.246E+01	3.730E+00	0.540
	61.14		-1.235E+01	9.904E+00	1.564E+01	1.742E+00	-0.789
	69.30		-1.521E+00	1.430E+01	2.396E+01	2.341E+00	-0.063
	592.07		-3.296E+01	1.128E+02	1.766E+02	1.041E+01	-0.187
	646.12	*	1.198E+00	1.783E+00	3.155E+00	1.860E-01	0.380
	717.42		-5.445E+00	3.787E+01	6.265E+01	3.923E+00	-0.087
	874.81		-2.463E+00	2.519E+01	4.115E+01	3.010E+00	-0.060
	880.27		5.990E+00	3.259E+01	5.465E+01	4.018E+00	0.110
RE-188	155.03	*	-3.500E-01	7.106E+00	1.151E+01	6.092E-01	-0.030
	477.96		7.878E+01	1.412E+02	2.389E+02	1.362E+01	0.330
	633.10		-1.391E+00	1.246E+02	1.988E+02	1.173E+01	-0.007
W-188	63.58		-3.273E+03	3.979E+03	5.027E+03	5.336E+02	-0.651
	227.08		4.791E+02	5.756E+02	9.530E+02	5.472E+01	0.503

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	290.67	*	2.649E+02	3.269E+02	5.707E+02	3.694E+01	0.464
IR-192	295.96		2.192E+00	5.735E+00	7.844E+00	5.118E-01	0.280
	308.46		-1.451E+00	4.563E+00	7.532E+00	4.835E-01	-0.193
	316.51	*	-1.629E+00	1.543E+00	2.429E+00	1.536E-01	-0.670
	468.07		-5.791E-01	3.105E+00	5.005E+00	3.291E-01	-0.116
	604.41		4.986E+00	2.294E+01	3.731E+01	4.253E+00	0.134
	612.46		-2.918E+01	3.846E+01	5.836E+01	4.465E+00	-0.500
AU-195	65.12		2.739E+00	9.116E+00	1.558E+01	1.611E+00	0.176
	66.83		1.400E+00	4.742E+00	8.097E+00	8.159E-01	0.173
	75.70		-6.178E-01	7.561E+00	1.264E+01	1.174E+00	-0.049
	98.88	*	-2.317E+00	1.136E+01	1.602E+01	1.252E+00	-0.145
	129.76		-9.725E+01	1.187E+02	1.869E+02	1.172E+01	-0.520
TL-200	367.94	*	3.938E-02	1.187E+02	Half-Life too short		
	579.30		7.440E-01	1.187E+02	Half-Life too short		
	828.27		-3.687E-02	1.187E+02	Half-Life too short		
	1205.75		3.319E-01	1.187E+02	Half-Life too short		
TL-201	68.90		-3.007E+02	3.980E+02	6.460E+02	6.339E+01	-0.466
	70.82		8.762E+01	2.113E+02	3.618E+02	3.479E+01	0.242
	80.30		-1.328E+02	3.560E+02	5.860E+02	5.369E+01	-0.227
	135.34		-2.273E+02	1.852E+03	3.012E+03	1.814E+02	-0.075
	167.43	*	-1.940E+02	5.168E+02	8.208E+02	4.058E+01	-0.236
TL-202	68.90		-1.817E+01	2.405E+01	3.904E+01	3.831E+00	-0.466
	70.82		5.281E+00	1.274E+01	2.181E+01	2.097E+00	0.242
	80.30		-8.003E+00	2.146E+01	3.532E+01	3.237E+00	-0.227
	439.56	*	1.797E-01	3.522E+00	5.794E+00	3.232E-01	0.031
HG-203	70.83		2.091E+01	5.013E+01	8.575E+01	1.222E+01	0.244
	72.87		2.258E+00	2.715E+01	4.581E+01	6.303E+00	0.049
	82.60		8.494E+00	4.801E+01	8.087E+01	1.139E+01	0.105
	279.20	*	-4.070E-01	1.778E+00	2.966E+00	2.031E-01	-0.137
BI-207	72.80		1.653E+00	7.713E+00	1.309E+01	1.237E+00	0.126
	74.97		-3.021E+00	4.255E+00	6.897E+00	6.431E-01	-0.438
	84.90		-9.306E+00	1.071E+01	1.296E+01	1.189E+00	-0.718
	569.67		-7.352E-02	1.894E+00	2.371E+00	1.393E-01	-0.031
	1063.62	*	1.238E+00	2.267E+00	3.877E+00	2.575E-01	0.319
	1770.23		-4.314E+01	2.883E+01	3.653E+01	2.260E+00	-1.181
TL-207	81.07		4.947E+00	8.828E+00	1.512E+01	1.384E+00	0.327
	83.78		-9.034E+00	7.337E+00	8.743E+00	8.007E-01	-1.033
	94.90		3.906E+00	1.028E+01	1.566E+01	1.289E+00	0.249
	122.32		2.158E+01	7.273E+01	1.211E+02	9.031E+00	0.178
	144.24		-3.122E+01	4.015E+01	4.354E+01	3.105E+00	-0.717
	154.21		2.524E+00	1.546E+01	2.532E+01	1.677E+00	0.100
	269.46		-1.204E+00	7.489E+00	1.256E+01	8.317E-01	-0.096
	323.87	*	-2.055E+01	2.808E+01	4.471E+01	7.454E+00	-0.460
	338.28		-8.570E+01	5.911E+01	6.698E+01	7.164E+00	-1.279
	445.03		-1.019E+01	1.020E+02	1.660E+02	1.686E+01	-0.061
TL-208	72.80		1.804E+01	8.419E+01	1.428E+02	1.351E+01	0.126
	74.97		-3.295E+01	4.649E+01	7.522E+01	9.616E+00	-0.438
	277.35		7.050E+00	1.608E+01	2.766E+01	3.032E+00	0.255
	510.84		-2.247E+01	1.692E+01	2.451E+01	2.486E+00	-0.917

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	+	583.14	*	3.470E+00	3.573E+00	3.309E+00	2.237E-01	1.049
		763.13		4.100E+01	7.729E+01	1.347E+02	1.723E+01	0.304
		860.37		3.076E+00	1.268E+01	2.136E+01	1.702E+00	0.144
		1093.90		-3.224E+02	4.273E+02	6.178E+02	1.393E+02	-0.522
PO-209		260.50		-1.502E+02	4.077E+02	6.784E+02	4.237E+01	-0.221
		262.80		-4.058E+02	1.134E+03	1.886E+03	1.185E+02	-0.215
		896.60	*	2.042E+02	3.251E+02	5.645E+02	4.211E+01	0.362
BI-210		46.50	*	2.685E+02	3.913E+02	6.866E+02	6.990E+01	0.391
PB-210		46.50	*	2.685E+02	3.913E+02	6.866E+02	6.990E+01	0.391
PO-210		46.50	*	2.685E+02	3.911E+02	6.866E+02	6.442E+01	0.391
BI-211		72.87		1.096E+01	1.319E+02	2.225E+02	2.102E+01	0.049
		351.07	*	-7.537E-02	1.229E+01	1.687E+01	1.108E+00	-0.004
PB-211		404.84	*	2.507E+01	4.294E+01	6.851E+01	4.269E+01	0.366
		427.08		-3.914E+01	8.951E+01	1.371E+02	8.471E+01	-0.286
		831.96		1.493E+01	4.990E+01	8.335E+01	5.206E+01	0.179
BI-212		727.18	*	4.174E+00	1.237E+01	2.120E+01	1.721E+00	0.197
		785.46		-1.707E+01	7.637E+01	1.246E+02	8.374E+00	-0.137
		1620.62		1.822E+00	5.616E+01	9.256E+01	6.555E+00	0.020
PB-212		74.81		-1.256E+01	1.511E+01	2.426E+01	3.204E+00	-0.518
		77.11		7.367E+00	8.304E+00	1.442E+01	1.331E+00	0.511
		87.30		-9.913E+00	1.473E+01	2.372E+01	3.226E+00	-0.418
		115.19		-3.933E+01	1.551E+02	2.526E+02	1.733E+01	-0.156
		238.63	*	-2.679E+00	4.102E+00	4.724E+00	3.507E-01	-0.567
		300.09		1.100E+00	3.250E+01	5.470E+01	4.755E+00	0.020
PO-212		74.81		-1.256E+01	1.511E+01	2.426E+01	3.204E+00	-0.518
		77.11		7.367E+00	8.304E+00	1.442E+01	1.331E+00	0.511
		87.30		-9.913E+00	1.473E+01	2.372E+01	3.226E+00	-0.418
		115.19		-3.933E+01	1.551E+02	2.526E+02	1.733E+01	-0.156
		238.63	*	-2.679E+00	4.102E+00	4.724E+00	3.507E-01	-0.567
		300.09		1.100E+00	3.250E+01	5.470E+01	4.755E+00	0.020
BI-214		609.31	*	-1.891E+00	5.789E+00	6.521E+00	5.122E-01	-0.290
		1120.29		7.181E+00	1.150E+01	1.974E+01	1.794E+00	0.364
		1764.49		-7.077E+00	1.903E+01	2.399E+01	1.493E+00	-0.295
PB-214		74.81		-2.127E+01	2.555E+01	4.108E+01	4.894E+00	-0.518
		77.11		1.241E+01	1.402E+01	2.429E+01	2.908E+00	0.511
		87.30		-1.669E+01	2.477E+01	3.994E+01	4.800E+00	-0.418
		241.98		-1.163E+01	1.535E+01	2.328E+01	1.906E+00	-0.500
		295.21		6.717E-01	7.331E+00	9.852E+00	8.846E-01	0.068
		351.92	*	-2.181E+00	4.331E+00	5.791E+00	4.853E-01	-0.377
PO-214		74.81		-2.127E+01	2.555E+01	4.108E+01	4.894E+00	-0.518
		77.11		1.241E+01	1.402E+01	2.429E+01	2.908E+00	0.511
		87.30		-1.669E+01	2.477E+01	3.994E+01	4.800E+00	-0.418
		241.98		-1.163E+01	1.535E+01	2.328E+01	1.906E+00	-0.500
		295.21		6.717E-01	7.331E+00	9.852E+00	8.846E-01	0.068
		351.92	*	-2.181E+00	4.331E+00	5.791E+00	4.853E-01	-0.377
PO-215		81.07		4.947E+00	8.828E+00	1.512E+01	1.384E+00	0.327
		83.78		-9.034E+00	7.337E+00	8.743E+00	8.007E-01	-1.033
		94.90		3.906E+00	1.028E+01	1.566E+01	1.289E+00	0.249
		122.32		2.158E+01	7.273E+01	1.211E+02	9.031E+00	0.178

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		144.24		-3.122E+01	4.015E+01	4.354E+01	3.105E+00	-0.717
		154.21		2.524E+00	1.546E+01	2.532E+01	1.677E+00	0.100
		269.46		-1.204E+00	7.489E+00	1.256E+01	8.317E-01	-0.096
		323.87	*	-2.055E+01	2.808E+01	4.471E+01	7.454E+00	-0.460
		338.28		-8.570E+01	5.911E+01	6.698E+01	7.164E+00	-1.279
		445.03		-1.019E+01	1.020E+02	1.660E+02	1.686E+01	-0.061
PO-216		74.81		-1.256E+01	1.511E+01	2.426E+01	3.204E+00	-0.518
		77.11		7.367E+00	8.304E+00	1.442E+01	1.331E+00	0.511
		87.30		-9.913E+00	1.473E+01	2.372E+01	3.226E+00	-0.418
		115.19		-3.933E+01	1.551E+02	2.526E+02	1.733E+01	-0.156
		238.63	*	-2.679E+00	4.102E+00	4.724E+00	3.507E-01	-0.567
		300.09		1.100E+00	3.250E+01	5.470E+01	4.755E+00	0.020
PO-218		74.81		-2.127E+01	2.555E+01	4.108E+01	4.894E+00	-0.518
		77.11		1.241E+01	1.402E+01	2.429E+01	2.908E+00	0.511
		87.30		-1.669E+01	2.477E+01	3.994E+01	4.800E+00	-0.418
		241.98		-1.163E+01	1.535E+01	2.328E+01	1.906E+00	-0.500
		295.21		6.717E-01	7.331E+00	9.852E+00	8.846E-01	0.068
		351.92	*	-2.181E+00	4.331E+00	5.791E+00	4.853E-01	-0.377
RN-219		271.23		-7.359E+00	9.776E+00	1.588E+01	1.358E+00	-0.463
		401.81	*	-1.560E+01	1.826E+01	2.829E+01	3.805E+00	-0.551
RN-220		549.76	*	-9.730E+02	1.090E+03	1.619E+03	9.474E+01	-0.601
RA-223		81.07		4.947E+00	8.828E+00	1.512E+01	1.384E+00	0.327
		83.78		-9.034E+00	7.337E+00	8.743E+00	8.007E-01	-1.033
		94.90		3.906E+00	1.028E+01	1.566E+01	1.289E+00	0.249
		122.32		2.158E+01	7.273E+01	1.211E+02	9.031E+00	0.178
		144.24		-3.122E+01	4.015E+01	4.354E+01	3.105E+00	-0.717
		154.21		2.524E+00	1.546E+01	2.532E+01	1.677E+00	0.100
		269.46		-1.204E+00	7.489E+00	1.256E+01	8.317E-01	-0.096
		323.87	*	-2.055E+01	2.808E+01	4.471E+01	7.454E+00	-0.460
		338.28		-8.570E+01	5.911E+01	6.698E+01	7.164E+00	-1.279
		445.03		-1.019E+01	1.020E+02	1.660E+02	1.686E+01	-0.061
RA-224		240.98	*	-5.235E+01	3.188E+01	4.605E+01	2.741E+00	-1.137
AC-227		79.80		-8.185E+01	7.134E+01	1.095E+02	2.380E+01	-0.747
		236.00		-8.170E+00	1.039E+01	1.577E+01	1.655E+00	-0.518
		256.20	*	1.121E+01	1.669E+01	2.900E+01	4.096E+00	0.386
		286.10		-9.440E+01	7.717E+01	1.021E+02	1.217E+01	-0.925
		299.80		-8.036E+00	5.969E+01	9.960E+01	1.645E+01	-0.081
		304.40		2.483E+01	8.428E+01	1.433E+02	2.508E+01	0.173
		329.70		-1.544E+01	3.867E+01	6.313E+01	7.984E+00	-0.245
		334.20		1.514E+01	9.999E+01	1.682E+02	3.101E+01	0.090
PA-227		64.62	*	-1.000E+35	9.999E+01	Half-Life too short		
		110.05		-1.000E+35	9.999E+01	Half-Life too short		
TH-227		79.80		-8.185E+01	7.139E+01	1.095E+02	2.410E+01	-0.747
	+	94.00		6.366E-01	1.701E+02	1.441E+02	3.121E+01	0.004
		236.00		-8.170E+00	1.039E+01	1.577E+01	1.436E+00	-0.518
		256.20	*	1.121E+01	1.672E+01	2.900E+01	4.940E+00	0.386
		286.10		-9.440E+01	1.216E+02	1.021E+02	1.023E+02	-0.925
		299.80		-8.036E+00	5.969E+01	9.960E+01	1.645E+01	-0.081
		304.40		2.483E+01	8.428E+01	1.433E+02	2.508E+01	0.173

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		329.70		-1.544E+01	3.867E+01	6.313E+01	7.984E+00	-0.245
		334.20		1.514E+01	9.999E+01	1.682E+02	3.101E+01	0.090
AC-228		338.32		-2.067E+01	1.640E+01	1.613E+01	6.582E+00	-1.281
		911.07	*	-1.549E+00	7.978E+00	1.006E+01	1.042E+00	-0.154
		969.11		-7.200E-02	1.165E+01	1.700E+01	3.883E+00	-0.004
RA-228		338.32		-2.067E+01	1.640E+01	1.613E+01	6.582E+00	-1.281
		911.07	*	-1.549E+00	7.978E+00	1.006E+01	1.042E+00	-0.154
		969.11		-7.200E-02	1.165E+01	1.700E+01	3.883E+00	-0.004
TH-228		74.81		-1.256E+01	1.506E+01	2.426E+01	2.280E+00	-0.518
		77.11		7.367E+00	8.304E+00	1.442E+01	1.331E+00	0.511
		87.30		-9.913E+00	1.470E+01	2.372E+01	2.187E+00	-0.418
		238.63	*	-2.679E+00	4.102E+00	4.724E+00	3.507E-01	-0.567
		300.09		1.100E+00	3.251E+01	5.470E+01	3.227E+01	0.020
TH-229		85.43		-1.133E+01	1.047E+01	1.249E+01	1.146E+00	-0.907
		88.47		-1.452E+00	4.594E+00	6.736E+00	6.167E-01	-0.216
		100.00		-4.891E+00	9.314E+00	1.294E+01	9.984E-01	-0.378
		193.63	*	-1.886E+00	2.225E+01	3.553E+01	1.870E+00	-0.053
		210.97		1.743E+01	3.179E+01	5.211E+01	2.869E+00	0.334
TH-230		67.67	*	-3.876E+02	2.579E+03	9.366E+02	6.076E+03	-0.414
PA-231		283.67	*	2.043E+01	6.151E+01	1.054E+02	1.485E+01	0.194
		301.29		4.025E-01	2.411E+01	4.053E+01	4.378E+00	0.010
		330.00		-2.381E+01	8.715E+01	1.429E+02	4.486E+01	-0.167
TH-231		84.21	*	-2.214E+01	2.794E+01	3.381E+01	6.124E+00	-0.655
U-231		84.21		-3.626E+02	4.541E+02	5.537E+02	5.073E+01	-0.655
	+	92.29		9.228E-01	2.466E+02	2.449E+02	2.096E+01	0.004
		95.87	*	-8.967E+00	7.375E+01	1.091E+02	8.854E+00	-0.082
		108.00		-3.795E+01	1.291E+02	2.106E+02	1.510E+01	-0.180
TH-232		59.00	*	1.915E+03	2.025E+04	3.301E+03	3.475E+04	0.580
PA-233		75.28		-8.933E+01	1.243E+02	2.005E+02	3.158E+01	-0.445
		86.59		-1.460E+01	6.130E+01	1.010E+02	2.728E+01	-0.145
		300.12		2.879E-01	1.649E+01	2.773E+01	3.803E+00	0.010
		311.98	*	1.426E+00	2.903E+00	4.983E+00	3.320E-01	0.286
		340.50		-2.037E+00	2.535E+01	4.207E+01	9.692E+00	-0.048
		398.62		-3.508E+00	9.123E+01	1.502E+02	3.871E+01	-0.023
		415.76		-2.009E+01	7.013E+01	1.130E+02	2.317E+01	-0.178
PA-234		63.00		-1.390E+02	1.190E+02	1.450E+02	2.431E+01	-0.959
		94.67		3.687E+00	7.400E+00	1.134E+01	1.378E+00	0.325
		98.44		-2.747E+00	4.858E+00	6.387E+00	3.556E+00	-0.430
		99.86		-1.069E+01	2.366E+01	3.304E+01	2.554E+00	-0.324
		111.00		-5.359E+00	1.037E+01	1.364E+01	1.501E+00	-0.393
		131.20		-1.412E+00	4.273E+00	6.888E+00	4.273E-01	-0.205
		152.70		-1.453E+00	1.296E+01	2.094E+01	3.278E+00	-0.069
	+	186.00		1.674E+01	8.739E+01	9.778E+01	2.977E+01	0.171
		226.40		-4.258E+00	1.799E+01	2.823E+01	3.254E+00	-0.151
		227.20		1.706E+01	1.906E+01	3.164E+01	1.817E+00	0.539
		248.90		5.642E+00	3.749E+01	5.969E+01	1.287E+01	0.095
	.	293.70		-2.825E+01	3.578E+01	4.548E+01	7.426E+00	-0.621
		369.80		2.238E+01	3.859E+01	6.566E+01	1.366E+01	0.341
		568.70		1.172E+01	6.114E+01	7.785E+01	4.573E+00	0.151

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		569.50		9.629E-01	1.673E+01	2.108E+01	1.238E+00	0.046
		574.00		-8.468E+01	6.721E+01	9.655E+01	5.677E+00	-0.877
		699.00		-3.900E+01	3.245E+01	4.829E+01	8.737E+00	-0.808
		706.10		-3.283E+01	4.942E+01	7.520E+01	3.323E+01	-0.436
		733.00		2.387E+00	1.503E+01	2.544E+01	5.449E+00	0.094
		742.81		3.480E+01	5.892E+01	9.523E+01	6.378E+01	0.365
		796.30		5.438E+00	3.571E+01	6.004E+01	1.593E+01	0.091
		805.60		-3.335E-01	4.371E+01	7.248E+01	2.189E+01	-0.005
		819.60		-7.608E+00	4.783E+01	7.787E+01	2.934E+01	-0.098
		826.30		-1.186E+01	3.300E+01	5.204E+01	2.313E+01	-0.228
		831.60		8.470E+00	2.557E+01	4.336E+01	1.276E+01	0.195
		876.40		-2.181E+01	4.146E+01	5.396E+01	5.542E+01	-0.404
		880.51		3.761E+00	1.174E+01	1.993E+01	1.466E+00	0.189
		883.24		-2.822E+00	1.185E+01	1.881E+01	1.262E+01	-0.150
		899.00		4.549E+01	4.193E+01	6.728E+01	2.927E+01	0.676
		925.00		1.411E+01	4.447E+01	7.547E+01	5.566E+00	0.187
		926.50		7.694E-02	6.710E+00	1.103E+01	2.743E+00	0.007
		946.00	*	1.884E+00	1.336E+01	2.218E+01	4.034E+00	0.085
		949.00		2.636E+00	1.953E+01	3.240E+01	2.358E+00	0.081
		980.50		2.025E+01	2.660E+01	4.715E+01	3.362E+00	0.430
		1394.10		1.370E+01	4.868E+01	8.249E+01	5.362E+01	0.166
PA-234M		766.42		-5.892E+00	4.172E+02	6.940E+02	3.500E+02	-0.008
		1001.03	*	-6.396E+01	2.222E+02	3.196E+02	2.756E+01	-0.200
TH-234		63.29	*	-1.103E+02	1.004E+02	1.224E+02	2.332E+01	-0.901
	+	92.38		1.647E-01	4.402E+01	4.365E+01	7.878E+00	0.004
U-234		53.20	*	5.636E+03	5.662E+04	9.508E+03	9.509E+04	0.593
U-235		89.95		-4.516E-01	4.462E+01	6.665E+01	2.062E+01	-0.007
	+	93.35		1.981E-01	5.293E+01	5.073E+01	1.419E+01	0.004
		105.00		2.274E+01	4.500E+01	7.536E+01	2.223E+01	0.302
		143.76	*	-1.332E+01	1.273E+01	1.359E+01	2.211E+00	-0.980
		163.35		-6.528E+00	2.046E+01	3.259E+01	5.783E+00	-0.200
	+	185.71		6.199E-01	3.231E+00	3.620E+00	1.867E-01	0.171
		205.31		3.683E+01	2.322E+01	3.840E+01	6.861E+00	0.959
NP-236		94.67		2.812E+00	5.608E+00	8.601E+00	7.101E-01	0.327
		98.44		-2.077E+00	3.490E+00	4.828E+00	3.794E-01	-0.430
		111.00		-4.053E+00	7.836E+00	1.032E+01	7.248E-01	-0.393
		160.31	*	-2.844E+00	3.487E+00	5.434E+00	2.779E-01	-0.523
NP-237		86.50	*	-1.956E+00	9.214E+00	1.521E+01	3.437E+00	-0.129
		95.87		-5.391E+00	4.436E+01	6.557E+01	1.604E+01	-0.082
PU-237		59.54	*	1.427E+02	1.378E+02	2.425E+02	2.798E+01	0.588
U-238		63.29	*	-1.103E+02	1.004E+02	1.224E+02	2.332E+01	-0.901
	+	92.38		1.647E-01	4.402E+01	4.365E+01	3.731E+00	0.004
NP-239		99.55		-4.193E-01	7.842E+00	1.116E+01	8.655E-01	-0.038
		117.00	*	1.364E+00	8.002E+00	1.328E+01	9.033E-01	0.103
		209.75		1.218E+01	3.242E+01	5.271E+01	2.892E+00	0.231
		228.18		5.714E+00	1.022E+01	1.668E+01	9.606E-01	0.343
		277.60		5.107E+00	7.557E+00	1.315E+01	8.550E-01	0.389
		334.30		1.143E+01	5.680E+01	9.581E+01	5.875E+00	0.119
AM-241		59.54	*	9.973E+00	9.639E+00	1.695E+01	2.036E+00	0.588

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
AM-243	74.67	*	-1.896E+00	2.416E+00	3.902E+00	3.645E-01	-0.486
	86.72		-1.425E+02	3.450E+02	5.645E+02	5.197E+01	-0.252
	117.66		-1.585E+01	1.601E+02	2.625E+02	1.780E+01	-0.060
	142.18		-5.921E+02	7.239E+02	1.134E+03	6.522E+01	-0.522
CM-243	99.55		-4.316E-01	8.071E+00	1.148E+01	8.907E-01	-0.038
	103.76	*	2.295E+00	4.122E+00	6.991E+00	5.194E-01	0.328
	117.00		1.404E+00	8.234E+00	1.367E+01	9.295E-01	0.103
	209.75		1.201E+01	3.196E+01	5.197E+01	2.852E+00	0.231
	228.18		5.774E+00	1.032E+01	1.686E+01	9.707E-01	0.343
	277.60		5.150E+00	7.619E+00	1.325E+01	8.621E-01	0.389
AM-246	798.80		-1.181E+01	6.020E+00	8.124E+00	5.532E-01	-1.453
	1036.00		-1.188E+01	1.641E+01	1.952E+01	1.331E+00	-0.609
	1062.04		-5.647E-01	1.032E+01	1.665E+01	1.108E+00	-0.034
	1078.86	*	5.394E+00	5.549E+00	9.927E+00	6.487E-01	0.543
CM-247	278.00		1.527E+01	3.105E+01	5.359E+01	3.489E+00	0.285
	287.40		-5.879E+01	6.199E+01	8.468E+01	5.495E+00	-0.694
	402.60	*	-1.268E+00	1.661E+00	2.608E+00	1.416E-01	-0.486
CF-249	252.85		8.173E+00	3.760E+01	6.441E+01	3.949E+00	0.127
	333.44		5.365E+00	7.200E+00	1.248E+01	7.665E-01	0.430
	387.95	*	-1.937E-01	1.801E+00	2.959E+00	1.609E-01	-0.065
CF-251	176.60	*	-4.107E+00	5.355E+00	8.298E+00	4.187E-01	-0.495
	227.00		7.453E+00	1.713E+01	2.782E+01	1.597E+00	0.268
	285.00		-6.538E+01	7.081E+01	1.132E+02	7.359E+00	-0.578
ANH-511	511.00	*	-4.714E+00	3.573E+00	5.208E+00	3.012E-01	-0.905

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494001		
Acquisition date	: 4-JAN-2010 19:28:00	Detector SN#	:
Detector ID	: GAM04	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 08:20:01.81	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUI
Sample ID	: G243494001	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 6-MAY-2009 10:58:08	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	
K-40	6.237E+00	2.595E+01	2.699E+01	0.000E+00
RA-226	1.021E+01	5.265E+01	4.988E+01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Act error Ided	MDA (pCi/FILTER)	
BE-7	5.457E+00	1.463E+01	2.495E+01	0.000E+00 NOT IDENT.
NA-22	2.698E-01	1.552E+00	2.701E+00	0.000E+00 NOT IDENT.
NA-24	0.000E+00	3.696E+08	0.000E+00	0.000E+00 SHORT HLIF
AL-26	8.213E-01	1.464E+00	2.646E+00	0.000E+00 NOT IDENT.
TI-44	-4.258E-02	1.427E+00	2.438E+00	0.000E+00 NOT IDENT.
SC-46	2.558E-01	1.524E+00	2.603E+00	0.000E+00 NOT IDENT.
V-48	-2.440E+00	2.996E+00	4.526E+00	0.000E+00 NOT IDENT.
CR-51	5.964E+00	1.647E+01	2.865E+01	0.000E+00 NOT IDENT.
MN-52	6.365E+00	1.433E+01	2.549E+01	0.000E+00 NOT IDENT.
MN-54	-1.267E+00	1.516E+00	2.367E+00	0.000E+00 NOT IDENT.
CO-56	-6.375E-02	1.867E+00	3.140E+00	0.000E+00 NOT IDENT.
CO-57	2.249E-01	1.033E+00	1.750E+00	0.000E+00 NOT IDENT.
CO-58	-1.040E+00	2.036E+00	2.869E+00	0.000E+00 NOT IDENT.
FE-59	4.646E-01	3.334E+00	5.597E+00	0.000E+00 NOT IDENT.
CO-60	-2.845E+00	2.756E+00	2.922E+00	0.000E+00 NOT IDENT.
ZN-65	-1.714E+00	3.383E+00	5.264E+00	0.000E+00 NOT IDENT.
GE-68	1.355E+01	5.076E+01	8.629E+01	0.000E+00 NOT IDENT.
AS-73	9.052E+01	6.903E+01	1.248E+02	0.000E+00 NOT IDENT.
AS-74	1.500E+00	4.699E+00	7.871E+00	0.000E+00 NOT IDENT.
SE-75	3.940E-01	1.842E+00	3.212E+00	0.000E+00 NOT IDENT.
BR-77	-1.726E+02	9.118E+02	1.487E+03	0.000E+00 NOT IDENT.
SR-82	-2.038E+00	1.542E+01	2.586E+01	0.000E+00 NOT IDENT.
RB-83	-7.792E-01	3.155E+00	5.122E+00	0.000E+00 NOT IDENT.
RB-84	4.792E-01	3.018E+00	5.149E+00	0.000E+00 NOT IDENT.
KR-85	-2.678E+03	5.646E+02	7.110E+02	0.000E+00 NOT IDENT.

SR-85	-1.407E+01	2.967E+00	3.736E+00	0.000E+00	NOT IDENT.
RB-86	1.255E+01	3.279E+01	5.652E+01	0.000E+00	NOT IDENT.
Y-88	-3.095E-01	1.556E+00	2.481E+00	0.000E+00	NOT IDENT.
ZR-88	-2.721E-01	1.343E+00	2.237E+00	0.000E+00	NOT IDENT.
Y-91	4.339E+02	6.721E+02	1.182E+03	0.000E+00	NOT IDENT.
NB-94	9.063E-01	1.484E+00	2.640E+00	0.000E+00	NOT IDENT.
NB-95	-7.729E-01	1.827E+00	2.988E+00	0.000E+00	NOT IDENT.
NB-95M	-9.713E+00	5.865E+00	8.656E+00	0.000E+00	NOT IDENT.
ZR-95	8.932E-01	2.724E+00	4.766E+00	0.000E+00	NOT IDENT.
NB-97	0.000E+00	4.580E+07	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.311E+09	0.000E+00	0.000E+00	SHORT HLIF
MO-99	2.644E+02	8.185E+02	1.431E+03	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.006E+21	0.000E+00	0.000E+00	SHORT HLIF
RH-101	5.212E-01	2.162E+00	2.570E+00	0.000E+00	NOT IDENT.
RH-102	-1.084E+00	1.308E+00	2.049E+00	0.000E+00	NOT IDENT.
RU-103	1.858E-01	1.788E+00	2.990E+00	0.000E+00	NOT IDENT.
RH-106	-3.587E+00	1.419E+01	2.265E+01	0.000E+00	NOT IDENT.
RU-106	-3.587E+00	1.418E+01	2.265E+01	0.000E+00	NOT IDENT.
AG-108M	-4.445E-01	1.455E+00	2.389E+00	0.000E+00	NOT IDENT.
CD-109	-3.228E+01	3.494E+01	5.021E+01	0.000E+00	NOT IDENT.
AG-110M	-3.360E+00	1.682E+00	2.482E+00	0.000E+00	NOT IDENT.
IN-111	-1.781E+01	1.047E+02	1.372E+02	0.000E+00	NOT IDENT.
IN-113M	-6.909E-02	1.942E+00	3.268E+00	0.000E+00	NOT IDENT.
SN-113	-6.909E-02	1.942E+00	3.268E+00	0.000E+00	NOT IDENT.
IN-114M	-3.276E+00	8.567E+00	1.308E+01	0.000E+00	NOT IDENT.
CD-115	-8.706E+02	1.015E+03	1.567E+03	0.000E+00	NOT IDENT.
SN-117M	1.402E+00	2.585E+00	4.381E+00	0.000E+00	NOT IDENT.
SB-122	2.615E+01	1.686E+02	2.803E+02	0.000E+00	NOT IDENT.
I-123	0.000E+00	4.506E+09	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	1.257E+00	1.193E+00	2.066E+00	0.000E+00	NOT IDENT.
I-124	3.001E+01	4.702E+01	8.020E+01	0.000E+00	NOT IDENT.
SB-124	-7.403E-01	3.814E+00	6.166E+00	0.000E+00	NOT IDENT.
SB-125	-8.217E-01	3.769E+00	6.223E+00	0.000E+00	NOT IDENT.
TE-125M	3.871E+01	5.203E+02	7.176E+02	0.000E+00	NOT IDENT.
I-126	-1.886E+01	9.566E+00	1.410E+01	0.000E+00	NOT IDENT.
SB-126	-4.174E+00	6.422E+00	1.037E+01	0.000E+00	NOT IDENT.
SN-126	-3.341E+00	3.246E+00	4.977E+00	0.000E+00	NOT IDENT.
SB-127	3.561E+01	8.129E+01	1.439E+02	0.000E+00	NOT IDENT.
XE-127	1.135E-02	2.151E+00	3.513E+00	0.000E+00	NOT IDENT.
I-131	-2.563E-01	6.285E+00	1.062E+01	0.000E+00	NOT IDENT.
TE-132	2.837E+01	5.032E+01	8.359E+01	0.000E+00	NOT IDENT.
BA-133	1.938E-01	2.068E+00	3.524E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.674E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-134	1.337E+00	1.786E+00	3.213E+00	0.000E+00	NOT IDENT.
CS-135	5.650E-01	6.267E+00	1.086E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.446E+19	0.000E+00	0.000E+00	SHORT HLIF
CS-136	-8.362E-01	5.272E+00	8.605E+00	0.000E+00	NOT IDENT.
BA-137M	-1.282E+00	2.563E+00	3.384E+00	0.000E+00	NOT IDENT.
CS-137	-1.355E+00	2.710E+00	3.578E+00	0.000E+00	NOT IDENT.
CE-139	-6.982E-01	1.299E+00	2.091E+00	0.000E+00	NOT IDENT.
BA-140	3.089E+00	1.260E+01	2.111E+01	0.000E+00	NOT IDENT.
LA-140	-1.828E+00	4.722E+00	7.511E+00	0.000E+00	NOT IDENT.
CE-141	9.994E-01	2.575E+00	4.358E+00	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.756E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-8.794E-02	8.228E+00	1.373E+01	0.000E+00	NOT IDENT.
PM-144	-3.031E-01	1.457E+00	2.456E+00	0.000E+00	NOT IDENT.
PR-144	-2.056E+01	9.887E+01	1.667E+02	0.000E+00	NOT IDENT.
PM-146	-1.355E+00	1.994E+00	3.176E+00	0.000E+00	NOT IDENT.
ND-147	6.156E+00	2.865E+01	4.803E+01	0.000E+00	FAIL ABUN
PM-149	-1.362E+04	9.500E+03	1.256E+04	0.000E+00	NOT IDENT.
EU-152	-1.823E+00	4.202E+00	6.973E+00	0.000E+00	NOT IDENT.
GD-153	-3.772E+00	4.298E+00	5.506E+00	0.000E+00	NOT IDENT.
EU-154	9.193E-01	4.350E+00	7.600E+00	0.000E+00	NOT IDENT.
EU-155	1.341E+00	4.551E+00	7.782E+00	0.000E+00	NOT IDENT.
TB-160	1.911E+00	5.728E+00	9.933E+00	0.000E+00	NOT IDENT.
HO-166M	3.353E-01	2.542E+00	4.386E+00	0.000E+00	FAIL ABUN
TM-171	3.747E+02	1.398E+03	2.432E+03	0.000E+00	NOT IDENT.
HF-175	5.175E-01	1.549E+00	2.681E+00	0.000E+00	NOT IDENT.
LU-176	2.119E-01	1.115E+00	1.926E+00	0.000E+00	NOT IDENT.
LU-177	-1.510E+01	5.747E+01	9.245E+01	0.000E+00	NOT IDENT.
LU-177M	1.167E+00	7.488E+00	1.270E+01	0.000E+00	NOT IDENT.
HF-181	-9.733E-03	1.821E+00	3.026E+00	0.000E+00	NOT IDENT.
W-181	6.389E+00	1.936E+01	3.379E+01	0.000E+00	NOT IDENT.
TA-182	-9.115E-01	6.240E+00	1.052E+01	0.000E+00	NOT IDENT.
RE-183	-1.242E+00	4.741E+00	7.742E+00	0.000E+00	NOT IDENT.
RE-184	2.199E+00	9.913E+00	1.733E+01	0.000E+00	NOT IDENT.
OS-185	1.198E+00	1.748E+00	3.155E+00	0.000E+00	NOT IDENT.
RE-188	-3.500E-01	6.964E+00	1.151E+01	0.000E+00	NOT IDENT.

W-188	2.649E+02	3.204E+02	5.707E+02	0.000E+00	NOT IDENT.
IR-192	-1.629E+00	1.512E+00	2.429E+00	0.000E+00	NOT IDENT.
AU-195	-2.317E+00	1.113E+01	1.602E+01	0.000E+00	NOT IDENT.
TL-200	0.000E+00	9.178E+04	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-1.940E+02	5.064E+02	8.208E+02	0.000E+00	NOT IDENT.
TL-202	1.797E-01	3.451E+00	5.794E+00	0.000E+00	NOT IDENT.
HG-203	-4.070E-01	1.742E+00	2.966E+00	0.000E+00	NOT IDENT.
BI-207	1.238E+00	2.222E+00	3.877E+00	0.000E+00	NOT IDENT.
TL-207	-2.055E+01	2.752E+01	4.471E+01	0.000E+00	NOT IDENT.
TL-208	0.000E+00	3.502E+00	3.309E+00	0.000E+00	FAIL ABUN
PO-209	2.042E+02	3.186E+02	5.645E+02	0.000E+00	NOT IDENT.
BI-210	2.685E+02	3.834E+02	6.866E+02	0.000E+00	NOT IDENT.
PB-210	2.685E+02	3.834E+02	6.866E+02	0.000E+00	NOT IDENT.
PO-210	2.685E+02	3.833E+02	6.866E+02	0.000E+00	NOT IDENT.
BI-211	-7.537E-02	1.205E+01	1.687E+01	0.000E+00	NOT IDENT.
PB-211	2.507E+01	4.208E+01	6.851E+01	0.000E+00	NOT IDENT.
BI-212	4.174E+00	1.212E+01	2.120E+01	0.000E+00	NOT IDENT.
PB-212	-2.679E+00	4.019E+00	4.724E+00	0.000E+00	NOT IDENT.
PO-212	-2.679E+00	4.019E+00	4.724E+00	0.000E+00	NOT IDENT.
BI-214	-1.891E+00	5.673E+00	6.521E+00	0.000E+00	NOT IDENT.
PB-214	-2.181E+00	4.244E+00	5.791E+00	0.000E+00	NOT IDENT.
PO-214	-2.181E+00	4.244E+00	5.791E+00	0.000E+00	NOT IDENT.
PO-215	-2.055E+01	2.752E+01	4.471E+01	0.000E+00	NOT IDENT.
PO-216	-2.679E+00	4.019E+00	4.724E+00	0.000E+00	NOT IDENT.
PO-218	-2.181E+00	4.244E+00	5.791E+00	0.000E+00	NOT IDENT.
RN-219	-1.560E+01	1.789E+01	2.829E+01	0.000E+00	NOT IDENT.
RN-220	-9.730E+02	1.068E+03	1.619E+03	0.000E+00	NOT IDENT.
RA-223	-2.055E+01	2.752E+01	4.471E+01	0.000E+00	NOT IDENT.
RA-224	-5.235E+01	3.124E+01	4.605E+01	0.000E+00	NOT IDENT.
AC-227	1.121E+01	1.635E+01	2.900E+01	0.000E+00	NOT IDENT.
PA-227	0.000E+00	1.106E+41	0.000E+00	0.000E+00	SHORT HLIF
TH-227	1.121E+01	1.639E+01	2.900E+01	0.000E+00	FAIL ABUN
AC-228	-1.549E+00	7.818E+00	1.006E+01	0.000E+00	NOT IDENT.
RA-228	-1.549E+00	7.818E+00	1.006E+01	0.000E+00	NOT IDENT.
TH-228	-2.679E+00	4.019E+00	4.724E+00	0.000E+00	NOT IDENT.
TH-229	-1.886E+00	2.180E+01	3.553E+01	0.000E+00	NOT IDENT.
TH-230	-3.876E+02	2.528E+03	9.366E+02	0.000E+00	NOT IDENT.
PA-231	2.043E+01	6.028E+01	1.054E+02	0.000E+00	NOT IDENT.
TH-231	-2.214E+01	2.738E+01	3.381E+01	0.000E+00	NOT IDENT.
U-231	-8.967E+00	7.228E+01	1.091E+02	0.000E+00	FAIL ABUN
TH-232	1.915E+03	1.984E+04	3.301E+03	0.000E+00	NOT IDENT.
PA-233	1.426E+00	2.845E+00	4.983E+00	0.000E+00	NOT IDENT.
PA-234	1.884E+00	1.309E+01	2.218E+01	0.000E+00	FAIL ABUN
PA-234M	-6.396E+01	2.178E+02	3.196E+02	0.000E+00	NOT IDENT.
TH-234	-1.103E+02	9.840E+01	1.224E+02	0.000E+00	FAIL ABUN
U-234	5.636E+03	5.549E+04	9.508E+03	0.000E+00	NOT IDENT.
U-235	-1.332E+01	1.248E+01	1.359E+01	0.000E+00	FAIL ABUN
NP-236	-2.844E+00	3.417E+00	5.434E+00	0.000E+00	NOT IDENT.
NP-237	-1.956E+00	9.029E+00	1.521E+01	0.000E+00	NOT IDENT.
PU-237	1.427E+02	1.351E+02	2.425E+02	0.000E+00	NOT IDENT.
U-238	-1.103E+02	9.840E+01	1.224E+02	0.000E+00	FAIL ABUN
NP-239	1.364E+00	7.842E+00	1.328E+01	0.000E+00	NOT IDENT.
AM-241	9.973E+00	9.446E+00	1.695E+01	0.000E+00	NOT IDENT.
AM-243	-1.896E+00	2.368E+00	3.902E+00	0.000E+00	NOT IDENT.
CM-243	2.295E+00	4.040E+00	6.991E+00	0.000E+00	NOT IDENT.
AM-246	5.394E+00	5.438E+00	9.927E+00	0.000E+00	NOT IDENT.
CM-247	-1.268E+00	1.628E+00	2.608E+00	0.000E+00	NOT IDENT.
CF-249	-1.937E-01	1.765E+00	2.959E+00	0.000E+00	NOT IDENT.
CF-251	-4.107E+00	5.248E+00	8.298E+00	0.000E+00	NOT IDENT.
ANH-511	-4.714E+00	3.501E+00	5.208E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:48:12.09

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494001.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:00.
Sample ID : G243494001 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM04 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:01.81 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	92.53	159	423	1.03	185.11	181	10	5.31E-03	25.4	
2	0	185.43	119	314	1.41	370.93	367	8	3.96E-03	27.5	
3	0	238.44	66	327	0.76	476.96	472	10	2.19E-03	53.0	
4	0	511.13	568	179	2.85	1022.35	1016	15	1.89E-02	6.7	
5	0	582.54	88	124	1.90	1165.18	1158	15	2.93E-03	29.5	
6	0	609.15	48	166	1.12	1218.39	1212	13	1.59E-03	57.5	
7	0	660.99	61	138	1.43	1322.07	1314	15	2.04E-03	43.8	
8	0	1461.30	40	20	1.40	2922.48	2916	13	1.32E-03	28.0	

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:48:15.40

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494001.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:00.
Sample ID : G243494001 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM04 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:01.81 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	2-Sigma %Error
K-40	1460.81	6	10.67*	8.370E-01	6.237E+00	6.237E+00	424.49
RA-226	186.21	15	3.28*	4.101E+00	1.021E+01	1.021E+01	526.41

Flag: "*" = Keyline

Sample ID : G243494001 Acquisition date : 4-JAN-2010 19:28:00

Total number of lines in spectrum 4
Number of unidentified lines 0
Number of lines tentatively identified by NID 4 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	6.237E+00	6.237E+00	26.47E+00	424.49	
RA-226	1600.00Y	1.00	1.021E+01	1.021E+01	5.372E+01	526.41	
	Total Activity :		1.644E+01	1.644E+01			
	Grand Total Activity :		1.644E+01	1.644E+01			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	582.54	59	124	1.90	1165.18	1158	15	1.96E-03	****	1.84E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:48:20.33

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494001.CNF;1		
Acquisition date	: 4-JAN-2010 19:28:00.	Detector SN#	:
Detector ID	: GAM04	Sensitivity	: 5.00000
Geometry	: JAR	Energy tolerance	: 1.50000
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 08:20:01.81	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUID
Sample ID	: G243494001	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.00000E+00 FILTER

QC DATA

CALIB. DATE/TIME	: 6-MAY-2009 10:58:08.12	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
K-40	6.237E+00	2.647E+01	2.699E+01	2.172E+00	0.231
RA-226	1.021E+01	5.372E+01	4.988E+01	3.658E+01	0.205

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7	5.457E+00		1.493E+01	2.495E+01	1.663E+00	0.219
NA-22	2.698E-01		1.583E+00	2.701E+00	1.956E-01	0.100
NA-24	-1.249E+02		1.886E+02	Half-Life too short		
AL-26	8.213E-01		1.494E+00	2.646E+00	1.567E-01	0.310
TI-44	-4.258E-02		1.456E+00	2.438E+00	2.242E-01	-0.017
SC-46	2.558E-01		1.555E+00	2.603E+00	1.930E-01	0.098
V-48	-2.440E+00		3.057E+00	4.526E+00	3.221E-01	-0.539
CR-51	5.964E+00		1.680E+01	2.865E+01	1.972E+00	0.208
MN-52	6.365E+00		1.463E+01	2.549E+01	2.005E+00	0.250
MN-54	-1.267E+00		1.547E+00	2.367E+00	1.668E-01	-0.535

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CO-56	-6.375E-02		1.905E+00	3.140E+00	2.239E-01	-0.020
CO-57	2.249E-01		1.054E+00	1.750E+00	1.169E-01	0.129
CO-58	-1.040E+00		2.077E+00	2.869E+00	1.984E-01	-0.362
FE-59	4.646E-01		3.402E+00	5.597E+00	4.087E-01	0.083
CO-60	-2.845E+00		2.812E+00	2.922E+00	2.373E-01	-0.974
ZN-65	-1.714E+00		3.452E+00	5.264E+00	3.301E-01	-0.326
GE-68	1.355E+01		5.179E+01	8.629E+01	5.648E+00	0.157
AS-73	9.052E+01		7.044E+01	1.248E+02	1.577E+01	0.725
AS-74	1.500E+00		4.795E+00	7.871E+00	4.640E-01	0.191
SE-75	3.940E-01		1.879E+00	3.212E+00	2.044E-01	0.123
BR-77	-1.726E+02		9.304E+02	1.487E+03	8.626E+01	-0.116
SR-82	-2.038E+00		1.573E+01	2.586E+01	1.722E+00	-0.079
RB-83	-7.792E-01		3.219E+00	5.122E+00	2.972E-01	-0.152
RB-84	4.792E-01		3.080E+00	5.149E+00	3.790E-01	0.093
KR-85	-2.678E+03		5.762E+02	7.110E+02	4.116E+01	-3.767
SR-85	-1.407E+01		3.027E+00	3.736E+00	2.163E-01	-3.767
RB-86	1.255E+01		3.346E+01	5.652E+01	3.702E+00	0.222
Y-88	-3.095E-01		1.588E+00	2.481E+00	1.424E-01	-0.125
ZR-88	-2.721E-01		1.371E+00	2.237E+00	1.204E-01	-0.122
Y-91	4.339E+02		6.858E+02	1.182E+03	7.336E+01	0.367
NB-94	9.063E-01		1.514E+00	2.640E+00	1.627E-01	0.343
NB-95	-7.729E-01		1.864E+00	2.988E+00	1.969E-01	-0.259
NB-95M	-9.713E+00		5.985E+00	8.656E+00	6.564E-01	-1.122
ZR-95	8.932E-01		2.780E+00	4.766E+00	3.641E-01	0.187
NB-97	-9.098E+01		2.337E+01	Half-Life too short		
ZR-97	-7.011E+03		6.689E+02	Half-Life too short		
MO-99	2.644E+02		8.352E+02	1.431E+03	2.010E+02	0.185
TC-99M	8.583E+14		5.134E+14	Half-Life too short		
RH-101	5.212E-01		2.206E+00	2.570E+00	1.368E-01	0.203
RH-102	-1.084E+00		1.335E+00	2.049E+00	1.167E-01	-0.529
RU-103	1.858E-01		1.825E+00	2.990E+00	3.774E-01	0.062
RH-106	-3.587E+00		1.448E+01	2.265E+01	2.670E+00	-0.158
RU-106	-3.587E+00		1.447E+01	2.265E+01	1.337E+00	-0.158
AG-108M	-4.445E-01		1.485E+00	2.389E+00	1.451E-01	-0.186
CD-109	-3.228E+01		3.565E+01	5.021E+01	4.636E+00	-0.643
AG-110M	-3.360E+00		1.717E+00	2.482E+00	1.554E-01	-1.354
IN-111	-1.781E+01		1.068E+02	1.372E+02	8.255E+00	-0.130
IN-113M	-6.909E-02		1.982E+00	3.268E+00	1.894E-01	-0.021
SN-113	-6.909E-02		1.982E+00	3.268E+00	1.894E-01	-0.021
IN-114M	-3.276E+00		8.742E+00	1.308E+01	6.824E-01	-0.250
CD-115	-8.706E+02		1.036E+03	1.567E+03	9.114E+01	-0.556
SN-117M	1.402E+00		2.637E+00	4.381E+00	2.266E-01	0.320
SB-122	2.615E+01		1.721E+02	2.803E+02	1.645E+01	0.093
I-123	4.748E+03		2.299E+03	Half-Life too short		
TE-123M	1.257E+00		1.218E+00	2.066E+00	1.083E-01	0.609
I-124	3.001E+01		4.798E+01	8.020E+01	4.730E+00	0.374
SB-124	-7.403E-01		3.892E+00	6.166E+00	4.392E-01	-0.120
SB-125	-8.217E-01		3.846E+00	6.223E+00	3.603E-01	-0.132

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
TE-125M	3.871E+01		5.309E+02	7.176E+02	6.538E+01	0.054
I-126	-1.886E+01		9.761E+00	1.410E+01	8.346E-01	-1.337
SB-126	-4.174E+00		6.553E+00	1.037E+01	6.514E-01	-0.403
SN-126	-3.341E+00		3.312E+00	4.977E+00	4.592E-01	-0.671
SB-127	3.561E+01		8.295E+01	1.439E+02	1.498E+01	0.247
XE-127	1.135E-02		2.195E+00	3.513E+00	1.893E-01	0.003
I-131	-2.563E-01		6.413E+00	1.062E+01	6.884E-01	-0.024
TE-132	2.837E+01		5.135E+01	8.359E+01	1.240E+01	0.339
BA-133	1.938E-01		2.110E+00	3.524E+00	4.090E-01	0.055
I-133	1.905E+00		8.540E-01	Half-Life too short		
CS-134	1.337E+00		1.822E+00	3.213E+00	2.207E-01	0.416
CS-135	5.650E-01		6.395E+00	1.086E+01	8.788E-01	0.052
I-135	4.704E+13		3.289E+13	Half-Life too short		
CS-136	-8.362E-01		5.380E+00	8.605E+00	6.204E-01	-0.097
BA-137M	-1.282E+00		2.616E+00	3.384E+00	1.993E-01	-0.379
CS-137	-1.355E+00		2.765E+00	3.578E+00	2.115E-01	-0.379
CE-139	-6.982E-01		1.325E+00	2.091E+00	1.032E-01	-0.334
BA-140	3.089E+00		1.286E+01	2.111E+01	6.867E+00	0.146
LA-140	-1.828E+00		4.818E+00	7.511E+00	5.413E-01	-0.243
CE-141	9.994E-01		2.628E+00	4.358E+00	2.557E-01	0.229
CE-143	-1.033E-02		8.958E-03	Half-Life too short		
CE-144	-8.794E-02		8.396E+00	1.373E+01	1.967E+00	-0.006
PM-144	-3.031E-01		1.487E+00	2.456E+00	1.505E-01	-0.123
PR-144	-2.056E+01		1.009E+02	1.667E+02	1.020E+01	-0.123
PM-146	-1.355E+00		2.034E+00	3.176E+00	2.702E-01	-0.427
ND-147	6.156E+00		2.923E+01	4.803E+01	6.500E+00	0.128
PM-149	-1.362E+04		9.694E+03	1.256E+04	1.819E+03	-1.084
EU-152	-1.823E+00		4.288E+00	6.973E+00	4.699E-01	-0.261
GD-153	-3.772E+00		4.386E+00	5.506E+00	4.380E-01	-0.685
EU-154	9.193E-01		4.439E+00	7.600E+00	7.821E-01	0.121
EU-155	1.341E+00		4.644E+00	7.782E+00	5.799E-01	0.172
TB-160	1.911E+00		5.845E+00	9.933E+00	7.297E-01	0.192
HO-166M	3.353E-01		2.594E+00	4.386E+00	2.730E-01	0.076
TM-171	3.747E+02		1.426E+03	2.432E+03	2.455E+02	0.154
HF-175	5.175E-01		1.580E+00	2.681E+00	1.618E-01	0.193
LU-176	2.119E-01		1.138E+00	1.926E+00	1.227E-01	0.110
LU-177	-1.510E+01		5.864E+01	9.245E+01	5.055E+00	-0.163
LU-177M	1.167E+00		7.640E+00	1.270E+01	6.957E-01	0.092
HF-181	-9.733E-03		1.858E+00	3.026E+00	1.729E-01	-0.003
W-181	6.389E+00		1.975E+01	3.379E+01	3.489E+00	0.189
TA-182	-9.115E-01		6.368E+00	1.052E+01	6.783E-01	-0.087
RE-183	-1.242E+00		4.837E+00	7.742E+00	3.907E-01	-0.160
RE-184	2.199E+00		1.012E+01	1.733E+01	1.062E+00	0.127
OS-185	1.198E+00		1.783E+00	3.155E+00	1.860E-01	0.380
RE-188	-3.500E-01		7.106E+00	1.151E+01	6.092E-01	-0.030
W-188	2.649E+02		3.269E+02	5.707E+02	3.694E+01	0.464
IR-192	-1.629E+00		1.543E+00	2.429E+00	1.536E-01	-0.670
AU-195	-2.317E+00		1.136E+01	1.602E+01	1.252E+00	-0.145

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
TL-200	3.938E-02		4.683E-02	Half-Life too short		
TL-201	-1.940E+02		5.168E+02	8.208E+02	4.058E+01	-0.236
TL-202	1.797E-01		3.522E+00	5.794E+00	3.232E-01	0.031
HG-203	-4.070E-01		1.778E+00	2.966E+00	2.031E-01	-0.137
BI-207	1.238E+00		2.267E+00	3.877E+00	2.575E-01	0.319
TL-207	-2.055E+01		2.808E+01	4.471E+01	7.454E+00	-0.460
TL-208	3.470E+00	+	3.573E+00	3.309E+00	2.237E-01	1.049
PO-209	2.042E+02		3.251E+02	5.645E+02	4.211E+01	0.362
BI-210	2.685E+02		3.913E+02	6.866E+02	6.990E+01	0.391
PB-210	2.685E+02		3.913E+02	6.866E+02	6.990E+01	0.391
PO-210	2.685E+02		3.911E+02	6.866E+02	6.442E+01	0.391
BI-211	-7.537E-02		1.229E+01	1.687E+01	1.108E+00	-0.004
PB-211	2.507E+01		4.294E+01	6.851E+01	4.269E+01	0.366
BI-212	4.174E+00		1.237E+01	2.120E+01	1.721E+00	0.197
PB-212	-2.679E+00		4.102E+00	4.724E+00	3.507E-01	-0.567
PO-212	-2.679E+00		4.102E+00	4.724E+00	3.507E-01	-0.567
BI-214	-1.891E+00		5.789E+00	6.521E+00	5.122E-01	-0.290
PB-214	-2.181E+00		4.331E+00	5.791E+00	4.853E-01	-0.377
PO-214	-2.181E+00		4.331E+00	5.791E+00	4.853E-01	-0.377
PO-215	-2.055E+01		2.808E+01	4.471E+01	7.454E+00	-0.460
PO-216	-2.679E+00		4.102E+00	4.724E+00	3.507E-01	-0.567
PO-218	-2.181E+00		4.331E+00	5.791E+00	4.853E-01	-0.377
RN-219	-1.560E+01		1.826E+01	2.829E+01	3.805E+00	-0.551
RN-220	-9.730E+02		1.090E+03	1.619E+03	9.474E+01	-0.601
RA-223	-2.055E+01		2.808E+01	4.471E+01	7.454E+00	-0.460
RA-224	-5.235E+01		3.188E+01	4.605E+01	2.741E+00	-1.137
AC-227	1.121E+01		1.669E+01	2.900E+01	4.096E+00	0.386
PA-227	-1.000E+35		5.642E+34	Half-Life too short		
TH-227	1.121E+01		1.672E+01	2.900E+01	4.940E+00	0.386
AC-228	-1.549E+00		7.978E+00	1.006E+01	1.042E+00	-0.154
RA-228	-1.549E+00		7.978E+00	1.006E+01	1.042E+00	-0.154
TH-228	-2.679E+00		4.102E+00	4.724E+00	3.507E-01	-0.567
TH-229	-1.886E+00		2.225E+01	3.553E+01	1.870E+00	-0.053
TH-230	-3.876E+02		2.579E+03	9.366E+02	6.076E+03	-0.414
PA-231	2.043E+01		6.151E+01	1.054E+02	1.485E+01	0.194
TH-231	-2.214E+01		2.794E+01	3.381E+01	6.124E+00	-0.655
U-231	-8.967E+00		7.375E+01	1.091E+02	8.854E+00	-0.082
TH-232	1.915E+03		2.025E+04	3.301E+03	3.475E+04	0.580
PA-233	1.426E+00		2.903E+00	4.983E+00	3.320E-01	0.286
PA-234	1.884E+00		1.336E+01	2.218E+01	4.034E+00	0.085
PA-234M	-6.396E+01		2.222E+02	3.196E+02	2.756E+01	-0.200
TH-234	-1.103E+02		1.004E+02	1.224E+02	2.332E+01	-0.901
U-234	5.636E+03		5.662E+04	9.508E+03	9.509E+04	0.593
U-235	-1.332E+01		1.273E+01	1.359E+01	2.211E+00	-0.980
NP-236	-2.844E+00		3.487E+00	5.434E+00	2.779E-01	-0.523
NP-237	-1.956E+00		9.214E+00	1.521E+01	3.437E+00	-0.129
PU-237	1.427E+02		1.378E+02	2.425E+02	2.798E+01	0.588
U-238	-1.103E+02		1.004E+02	1.224E+02	2.332E+01	-0.901

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
NP-239	1.364E+00		8.002E+00	1.328E+01	9.033E-01	0.103
AM-241	9.973E+00		9.639E+00	1.695E+01	2.036E+00	0.588
AM-243	-1.896E+00		2.416E+00	3.902E+00	3.645E-01	-0.486
CM-243	2.295E+00		4.122E+00	6.991E+00	5.194E-01	0.328
AM-246	5.394E+00		5.549E+00	9.927E+00	6.487E-01	0.543
CM-247	-1.268E+00		1.661E+00	2.608E+00	1.416E-01	-0.486
CF-249	-1.937E-01		1.801E+00	2.959E+00	1.609E-01	-0.065
CF-251	-4.107E+00		5.355E+00	8.298E+00	4.187E-01	-0.495
ANH-511	-4.714E+00		3.573E+00	5.208E+00	3.012E-01	-0.905

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243494001		
Acquisition date	: 4-JAN-2010 19:28:00	Detector SN#	:
Detector ID	: GAM04	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 08:20:01.81	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUI
Sample ID	: G243494001	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 6-MAY-2009 10:58:08	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act Error	DLC (pCi/FILTER)	TPU
K-40	6.237E+00	2.595E+01	1.351E+01	1.324E+01
RA-226	1.021E+01	5.265E+01	2.495E+01	2.686E+01

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L Act error	DLC (pCi/FILTER)	TPU
BE-7	5.457E+00	1.463E+01	1.248E+01	7.465E+00 NOT IDENT.
NA-22	2.698E-01	1.552E+00	1.351E+00	7.917E-01 NOT IDENT.
NA-24	-1.249E+08	3.696E+08	0.000E+00	1.886E+08 SHORT HLIF
AL-26	8.213E-01	1.464E+00	1.324E+00	7.470E-01 NOT IDENT.
TI-44	-4.258E-02	1.427E+00	1.220E+00	7.282E-01 NOT IDENT.
SC-46	2.558E-01	1.524E+00	1.303E+00	7.775E-01 NOT IDENT.
V-48	-2.440E+00	2.996E+00	2.264E+00	1.529E+00 NOT IDENT.
CR-51	5.964E+00	1.647E+01	1.434E+01	8.402E+00 NOT IDENT.
MN-52	6.365E+00	1.433E+01	1.275E+01	7.313E+00 NOT IDENT.
MN-54	-1.267E+00	1.516E+00	1.184E+00	7.736E-01 NOT IDENT.
CO-56	-6.375E-02	1.867E+00	1.571E+00	9.524E-01 NOT IDENT.
CO-57	2.249E-01	1.033E+00	8.755E-01	5.272E-01 NOT IDENT.
CO-58	-1.040E+00	2.036E+00	1.435E+00	1.039E+00 NOT IDENT.
FE-59	4.646E-01	3.334E+00	2.800E+00	1.701E+00 NOT IDENT.
CO-60	-2.845E+00	2.756E+00	1.462E+00	1.407E+00 NOT IDENT.
ZN-65	-1.714E+00	3.383E+00	2.633E+00	1.726E+00 NOT IDENT.
GE-68	1.355E+01	5.076E+01	4.317E+01	2.590E+01 NOT IDENT.
AS-73	9.052E+01	6.903E+01	6.245E+01	3.523E+01 NOT IDENT.
AS-74	1.500E+00	4.699E+00	3.938E+00	2.398E+00 NOT IDENT.
SE-75	3.940E-01	1.842E+00	1.607E+00	9.396E-01 NOT IDENT.
BR-77	-1.726E+02	9.118E+02	7.437E+02	4.652E+02 NOT IDENT.
SR-82	-2.038E+00	1.542E+01	1.294E+01	7.866E+00 NOT IDENT.
RB-83	-7.792E-01	3.155E+00	2.563E+00	1.610E+00 NOT IDENT.
RB-84	4.792E-01	3.018E+00	2.576E+00	1.540E+00 NOT IDENT.
KR-85	-2.678E+03	5.646E+02	3.557E+02	2.893E+02 NOT IDENT.

SR-85	-1.407E+01	2.967E+00	1.869E+00	1.520E+00 NOT IDENT.
RB-86	1.255E+01	3.279E+01	2.828E+01	1.673E+01 NOT IDENT.
Y-88	-3.095E-01	1.556E+00	1.241E+00	7.941E-01 NOT IDENT.
ZR-88	-2.721E-01	1.343E+00	1.119E+00	6.854E-01 NOT IDENT.
Y-91	4.339E+02	6.721E+02	5.911E+02	3.429E+02 NOT IDENT.
NB-94	9.063E-01	1.484E+00	1.321E+00	7.572E-01 NOT IDENT.
NB-95	-7.729E-01	1.827E+00	1.495E+00	9.323E-01 NOT IDENT.
NB-95M	-9.713E+00	5.865E+00	4.331E+00	2.994E+00 NOT IDENT.
ZR-95	8.932E-01	2.724E+00	2.384E+00	1.390E+00 NOT IDENT.
NB-97	-9.098E+07	4.580E+07	0.000E+00	2.338E+07 SHORT HLIF
ZR-97	-7.011E+09	1.311E+09	0.000E+00	6.726E+08 SHORT HLIF
MO-99	2.644E+02	8.185E+02	7.157E+02	4.176E+02 NOT IDENT.
TC-99M	8.583E+20	1.006E+21	0.000E+00	0.000E+00 SHORT HLIF
RH-101	5.212E-01	2.162E+00	1.286E+00	1.103E+00 NOT IDENT.
RH-102	-1.084E+00	1.308E+00	1.025E+00	6.674E-01 NOT IDENT.
RU-103	1.858E-01	1.788E+00	1.496E+00	9.125E-01 NOT IDENT.
RH-106	-3.587E+00	1.419E+01	1.133E+01	7.239E+00 NOT IDENT.
RU-106	-3.587E+00	1.418E+01	1.133E+01	7.236E+00 NOT IDENT.
AG-108M	-4.445E-01	1.455E+00	1.195E+00	7.426E-01 NOT IDENT.
CD-109	-3.228E+01	3.494E+01	2.512E+01	1.783E+01 NOT IDENT.
AG-110M	-3.360E+00	1.682E+00	1.242E+00	8.590E-01 NOT IDENT.
IN-111	-1.781E+01	1.047E+02	6.863E+01	5.340E+01 NOT IDENT.
IN-113M	-6.909E-02	1.942E+00	1.635E+00	9.908E-01 NOT IDENT.
SN-113	-6.909E-02	1.942E+00	1.635E+00	9.908E-01 NOT IDENT.
IN-114M	-3.276E+00	8.567E+00	6.544E+00	4.371E+00 NOT IDENT.
CD-115	-8.706E+02	1.015E+03	7.840E+02	5.178E+02 NOT IDENT.
SN-117M	1.402E+00	2.585E+00	2.192E+00	1.319E+00 NOT IDENT.
SB-122	2.615E+01	1.686E+02	1.402E+02	8.603E+01 NOT IDENT.
I-123	4.748E+09	4.506E+09	0.000E+00	2.300E+09 SHORT HLIF
TE-123M	1.257E+00	1.193E+00	1.033E+00	6.090E-01 NOT IDENT.
I-124	3.001E+01	4.702E+01	4.012E+01	2.399E+01 NOT IDENT.
SB-124	-7.403E-01	3.814E+00	3.085E+00	1.946E+00 NOT IDENT.
SB-125	-8.217E-01	3.769E+00	3.113E+00	1.923E+00 NOT IDENT.
TE-125M	3.871E+01	5.203E+02	3.590E+02	2.655E+02 NOT IDENT.
I-126	-1.886E+01	9.566E+00	7.055E+00	4.884E+00 NOT IDENT.
SB-126	-4.174E+00	6.422E+00	5.186E+00	3.277E+00 NOT IDENT.
SN-126	-3.341E+00	3.246E+00	2.490E+00	1.656E+00 NOT IDENT.
SB-127	3.561E+01	8.129E+01	7.198E+01	4.148E+01 NOT IDENT.
XE-127	1.135E-02	2.151E+00	1.757E+00	1.098E+00 NOT IDENT.
I-131	-2.563E-01	6.285E+00	5.315E+00	3.207E+00 NOT IDENT.
TE-132	2.837E+01	5.032E+01	4.182E+01	2.568E+01 NOT IDENT.
BA-133	1.938E-01	2.068E+00	1.763E+00	1.055E+00 NOT IDENT.
I-133	1.905E+06	1.674E+06	0.000E+00	8.542E+05 SHORT HLIF
CS-134	1.337E+00	1.786E+00	1.607E+00	9.112E-01 NOT IDENT.
CS-135	5.650E-01	6.267E+00	5.433E+00	3.197E+00 NOT IDENT.
I-135	4.704E+19	6.446E+19	0.000E+00	0.000E+00 SHORT HLIF
CS-136	-8.362E-01	5.272E+00	4.305E+00	2.690E+00 NOT IDENT.
BA-137M	-1.282E+00	2.563E+00	1.693E+00	1.308E+00 NOT IDENT.
CS-137	-1.355E+00	2.710E+00	1.790E+00	1.383E+00 NOT IDENT.
CE-139	-6.982E-01	1.299E+00	1.046E+00	6.627E-01 NOT IDENT.
BA-140	3.089E+00	1.260E+01	1.056E+01	6.428E+00 NOT IDENT.
LA-140	-1.828E+00	4.722E+00	3.758E+00	2.409E+00 NOT IDENT.
CE-141	9.994E-01	2.575E+00	2.180E+00	1.314E+00 NOT IDENT.
CE-143	-1.033E+04	1.756E+04	0.000E+00	8.959E+03 SHORT HLIF
CE-144	-8.794E-02	8.228E+00	6.870E+00	4.198E+00 NOT IDENT.
PM-144	-3.031E-01	1.457E+00	1.229E+00	7.435E-01 NOT IDENT.
PR-144	-2.056E+01	9.887E+01	8.338E+01	5.044E+01 NOT IDENT.
PM-146	-1.355E+00	1.994E+00	1.589E+00	1.017E+00 NOT IDENT.
ND-147	6.156E+00	2.865E+01	2.403E+01	1.462E+01 FAIL ABUN
PM-149	-1.362E+04	9.500E+03	6.283E+03	4.849E+03 NOT IDENT.
EU-152	-1.823E+00	4.202E+00	3.488E+00	2.144E+00 NOT IDENT.
GD-153	-3.772E+00	4.298E+00	2.755E+00	2.193E+00 NOT IDENT.
EU-154	9.193E-01	4.350E+00	3.802E+00	2.219E+00 NOT IDENT.
EU-155	1.341E+00	4.551E+00	3.894E+00	2.322E+00 NOT IDENT.
TB-160	1.911E+00	5.728E+00	4.970E+00	2.923E+00 NOT IDENT.
HO-166M	3.353E-01	2.542E+00	2.194E+00	1.297E+00 FAIL ABUN
TM-171	3.747E+02	1.398E+03	1.217E+03	7.131E+02 NOT IDENT.
HF-175	5.175E-01	1.549E+00	1.341E+00	7.903E-01 NOT IDENT.
LU-176	2.119E-01	1.115E+00	9.637E-01	5.689E-01 NOT IDENT.
LU-177	-1.510E+01	5.747E+01	4.625E+01	2.932E+01 NOT IDENT.
LU-177M	1.167E+00	7.488E+00	6.355E+00	3.820E+00 NOT IDENT.
HF-181	-9.733E-03	1.821E+00	1.514E+00	9.289E-01 NOT IDENT.
W-181	6.389E+00	1.936E+01	1.690E+01	9.876E+00 NOT IDENT.
TA-182	-9.115E-01	6.240E+00	5.264E+00	3.184E+00 NOT IDENT.
RE-183	-1.242E+00	4.741E+00	3.873E+00	2.419E+00 NOT IDENT.
RE-184	2.199E+00	9.913E+00	8.670E+00	5.058E+00 NOT IDENT.
OS-185	1.198E+00	1.748E+00	1.578E+00	8.918E-01 NOT IDENT.
RE-188	-3.500E-01	6.964E+00	5.759E+00	3.553E+00 NOT IDENT.

W-188	2.649E+02	3.204E+02	2.855E+02	1.635E+02 NOT IDENT.
IR-192	-1.629E+00	1.512E+00	1.215E+00	7.715E-01 NOT IDENT.
AU-195	-2.317E+00	1.113E+01	8.016E+00	5.678E+00 NOT IDENT.
TL-200	3.938E+04	9.178E+04	0.000E+00	4.683E+04 SHORT HLIF
TL-201	-1.940E+02	5.064E+02	4.107E+02	2.584E+02 NOT IDENT.
TL-202	1.797E-01	3.451E+00	2.899E+00	1.761E+00 NOT IDENT.
HG-203	-4.070E-01	1.742E+00	1.484E+00	8.890E-01 NOT IDENT.
BI-207	1.238E+00	2.222E+00	1.940E+00	1.134E+00 NOT IDENT.
TL-207	-2.055E+01	2.752E+01	2.237E+01	1.404E+01 NOT IDENT.
TL-208	3.470E+00	3.502E+00	1.655E+00	1.787E+00 FAIL ABUN
PO-209	2.042E+02	3.186E+02	2.824E+02	1.626E+02 NOT IDENT.
BI-210	2.685E+02	3.834E+02	3.435E+02	1.956E+02 NOT IDENT.
PB-210	2.685E+02	3.834E+02	3.435E+02	1.956E+02 NOT IDENT.
PO-210	2.685E+02	3.833E+02	3.435E+02	1.956E+02 NOT IDENT.
BI-211	-7.537E-02	1.205E+01	8.439E+00	6.146E+00 NOT IDENT.
PB-211	2.507E+01	4.208E+01	3.428E+01	2.147E+01 NOT IDENT.
BI-212	4.174E+00	1.212E+01	1.061E+01	6.186E+00 NOT IDENT.
PB-212	-2.679E+00	4.019E+00	2.363E+00	2.051E+00 NOT IDENT.
PO-212	-2.679E+00	4.019E+00	2.363E+00	2.051E+00 NOT IDENT.
BI-214	-1.891E+00	5.673E+00	3.263E+00	2.895E+00 NOT IDENT.
PB-214	-2.181E+00	4.244E+00	2.897E+00	2.166E+00 NOT IDENT.
PO-214	-2.181E+00	4.244E+00	2.897E+00	2.166E+00 NOT IDENT.
PO-215	-2.055E+01	2.752E+01	2.237E+01	1.404E+01 NOT IDENT.
PO-216	-2.679E+00	4.019E+00	2.363E+00	2.051E+00 NOT IDENT.
PO-218	-2.181E+00	4.244E+00	2.897E+00	2.166E+00 NOT IDENT.
RN-219	-1.560E+01	1.789E+01	1.415E+01	9.130E+00 NOT IDENT.
RN-220	-9.730E+02	1.068E+03	8.100E+02	5.451E+02 NOT IDENT.
RA-223	-2.055E+01	2.752E+01	2.237E+01	1.404E+01 NOT IDENT.
RA-224	-5.235E+01	3.124E+01	2.304E+01	1.595E+01 NOT IDENT.
AC-227	1.121E+01	1.635E+01	1.451E+01	8.344E+00 NOT IDENT.
PA-227	-1.000E+41	1.106E+41	0.000E+00	0.000E+00 SHORT HLIF
TH-227	1.121E+01	1.639E+01	1.451E+01	8.361E+00 FAIL ABUN
AC-228	-1.549E+00	7.818E+00	5.034E+00	3.989E+00 NOT IDENT.
RA-228	-1.549E+00	7.818E+00	5.034E+00	3.989E+00 NOT IDENT.
TH-228	-2.679E+00	4.019E+00	2.363E+00	2.051E+00 NOT IDENT.
TH-229	-1.886E+00	2.180E+01	1.778E+01	1.112E+01 NOT IDENT.
TH-230	-3.876E+02	2.528E+03	4.686E+02	1.290E+03 NOT IDENT.
PA-231	2.043E+01	6.028E+01	5.272E+01	3.076E+01 NOT IDENT.
TH-231	-2.214E+01	2.738E+01	1.691E+01	1.397E+01 NOT IDENT.
U-231	-8.967E+00	7.228E+01	5.457E+01	3.688E+01 FAIL ABUN
TH-232	1.915E+03	1.984E+04	1.651E+03	1.012E+04 NOT IDENT.
PA-233	1.426E+00	2.845E+00	2.493E+00	1.452E+00 NOT IDENT.
PA-234	1.884E+00	1.309E+01	1.109E+01	6.681E+00 FAIL ABUN
PA-234M	-6.396E+01	2.178E+02	1.599E+02	1.111E+02 NOT IDENT.
TH-234	-1.103E+02	9.840E+01	6.123E+01	5.022E+01 FAIL ABUN
U-234	5.636E+03	5.549E+04	4.757E+03	2.831E+04 NOT IDENT.
U-235	-1.332E+01	1.248E+01	6.799E+00	6.368E+00 FAIL ABUN
NP-236	-2.844E+00	3.417E+00	2.719E+00	1.744E+00 NOT IDENT.
NP-237	-1.956E+00	9.029E+00	7.611E+00	4.607E+00 NOT IDENT.
PU-237	1.427E+02	1.351E+02	1.213E+02	6.894E+01 NOT IDENT.
U-238	-1.103E+02	9.840E+01	6.123E+01	5.022E+01 FAIL ABUN
NP-239	1.364E+00	7.842E+00	6.644E+00	4.001E+00 NOT IDENT.
AM-241	9.973E+00	9.446E+00	8.479E+00	4.820E+00 NOT IDENT.
AM-243	-1.896E+00	2.368E+00	1.952E+00	1.208E+00 NOT IDENT.
CM-243	2.295E+00	4.040E+00	3.498E+00	2.061E+00 NOT IDENT.
AM-246	5.394E+00	5.438E+00	4.967E+00	2.775E+00 NOT IDENT.
CM-247	-1.268E+00	1.628E+00	1.305E+00	8.305E-01 NOT IDENT.
CF-249	-1.937E-01	1.765E+00	1.481E+00	9.006E-01 NOT IDENT.
CF-251	-4.107E+00	5.248E+00	4.152E+00	2.678E+00 NOT IDENT.
ANH-511	-4.714E+00	3.501E+00	2.606E+00	1.787E+00 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	184.3495
46.50	184.3495
46.50	184.3495
48.70	206.1676
49.72	180.0681
51.35	220.7204
52.39	197.9240
52.97	181.7216
53.15	188.7713
53.20	188.7972
53.44	177.6035
54.07	178.7817
56.28	214.0585
56.28	214.0603
57.37	0.0000
57.53	211.2445
57.53	211.2457
57.60	214.8050
57.98	194.7494
57.98	194.7494
59.00	174.9419
59.32	175.9702
59.32	175.9702
59.40	176.0061
59.54	179.6079
59.54	179.6079
59.72	182.3461
60.01	194.8823
61.10	240.7219
61.14	240.7460
61.30	240.8432
63.00	222.2276
63.29	219.7068
63.29	219.7068
63.58	210.9257
64.28	221.1339
64.62	0.0000
65.12	217.0984
65.20	217.1403
65.20	217.1403
66.05	225.6750
66.72	208.9237
66.83	208.9791
66.91	221.6325
67.20	212.7683
67.20	212.7683
67.67	231.9585
67.75	232.0017
67.85	232.0566
68.90	241.6768
68.90	241.6768
69.30	217.4390
69.67	214.9066
70.82	210.0170
70.82	210.0170
70.83	210.0217
72.80	211.8725
72.80	211.8725
72.87	214.6457
72.87	214.6457
74.67	240.2639
74.81	240.3386
74.81	240.3386
74.81	240.3386
74.81	240.3386
74.81	240.3386
74.81	240.3386

74.81	240.3386
74.97	234.9167
74.97	234.9167
75.28	238.7499
75.70	223.3445
77.11	203.7456
77.11	203.7456
77.11	203.7456
77.11	203.7456
77.11	203.7456
77.11	203.7456
77.11	203.7456
78.38	227.4119
79.62	264.1593
79.80	258.6960
79.80	258.6960
80.11	254.2257
80.18	240.3432
80.30	240.4031
80.30	240.4031
80.57	237.7539
81.00	212.8693
81.07	212.8996
81.07	212.8996
81.07	212.8996
82.60	238.7578
83.37	238.1987
83.78	248.6836
83.78	248.6836
83.78	248.6836
84.21	227.3799
84.21	227.3799
84.90	226.7617
85.43	233.5692
86.29	233.0336
86.50	228.4305
86.54	228.4490
86.59	228.4713
86.72	234.1733
86.79	234.2050
86.94	234.2759
87.30	242.9182
87.30	242.9182
87.30	242.9182
87.30	242.9182
87.30	242.9182
87.30	242.9182
87.30	242.9182
87.57	256.6136
87.88	253.0940
88.03	253.1691
88.36	229.2746
88.47	229.3241
89.36	209.8707
89.95	220.0500
91.11	229.0816
92.29	224.3721
92.38	224.4105
92.38	224.4105
93.35	224.8247
94.00	230.3480
94.67	223.4728
94.67	223.4752
94.90	223.5716
94.90	223.5716
94.90	223.5716
95.87	239.7707
95.87	239.7707
96.73	231.5259
97.43	243.3437
98.44	226.0032
98.44	226.0032
98.88	211.7475
99.55	209.1150
99.55	209.1150
99.86	224.6593
100.00	224.7162
100.10	224.7588

103.18	230.8482
103.76	219.4341
105.00	218.9392
105.31	234.6357
108.00	250.4023
109.28	231.3450
110.05	0.0000
111.00	257.5824
111.00	257.5824
111.76	264.8010
112.95	254.4792
115.19	251.4627
115.19	251.4627
115.19	251.4627
116.30	229.1084
117.00	229.3692
117.00	229.3692
117.66	235.5788
121.11	231.8867
121.62	231.0740
121.78	220.1253
122.06	220.2227
122.32	220.3133
122.32	220.3133
122.32	220.3133
123.07	234.6094
127.23	219.9820
129.76	266.4164
131.20	240.5995
133.02	235.1451
133.54	232.2722
135.34	260.4681
136.00	254.5852
136.25	250.5877
136.48	254.7637
140.51	254.1936
140.51	0.0000
142.18	266.1465
142.65	278.7094
143.76	261.5703
144.24	236.9180
144.24	236.9180
144.24	236.9180
145.22	235.1721
145.44	222.8079
147.16	253.4667
152.43	216.5852
152.70	230.2722
153.22	224.1488
154.21	213.9568
154.21	213.9568
154.21	213.9568
155.03	234.1427
156.02	257.5810
158.56	238.4031
159.00	0.0000
159.00	221.6531
160.31	281.2423
161.27	276.3009
162.32	260.7744
162.64	255.5795
163.35	265.3682
163.89	228.3741
165.85	274.7365
167.43	263.5506
171.28	251.9585
171.86	252.1402
172.10	252.2143
176.55	250.3587
176.60	250.3752
181.06	245.7575
184.41	277.7831
185.71	260.2068
186.00	260.2941
186.21	255.4448
190.27	265.8672
192.34	226.4818
193.63	247.7348

197.04	255.3233
198.01	231.2598
198.60	221.4457
200.40	297.3343
201.83	291.1387
202.84	255.8652
205.31	205.2462
208.36	247.3368
208.81	248.5757
209.75	227.5325
209.75	227.5325
210.97	216.6067
215.65	199.6382
216.55	214.5038
218.09	193.3665
222.10	200.9850
223.80	209.2985
226.40	229.2452
227.00	214.5484
227.08	199.7286
227.20	199.7536
228.16	215.9434
228.18	215.9473
228.18	215.9473
231.56	0.0000
235.69	311.9709
236.00	275.2156
236.00	275.2156
238.63	234.3656
238.63	234.3656
238.63	234.3656
238.63	234.3656
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240.98	304.3318
241.98	246.7146
241.98	246.7146
241.98	246.7146
244.69	219.4887
245.39	202.2035
247.94	212.0168
248.90	195.8855
249.79	211.8054
252.40	208.8165
252.85	195.7392
252.85	195.7392
254.15	0.0000
256.20	190.1873
256.20	190.1873
260.50	196.2486
260.90	196.3197
262.80	194.0043
264.65	179.2436
268.24	180.7163
268.79	183.4782
269.46	182.6970
269.46	182.6970
269.46	182.6970
271.23	198.1591
273.65	191.4297
276.40	190.1000
277.35	182.1815
277.60	174.1429
277.60	174.1429
278.00	174.2021
278.60	185.0750
279.20	188.7680
279.53	195.1166
280.46	166.4791
281.68	165.7533
283.67	148.8918
284.30	154.3921
285.00	172.5517
285.90	188.0557
286.10	180.8533
286.10	180.8533
287.40	179.2441
288.45	0.0000
290.67	168.8492

290.80	168.8662
291.72	202.6144
293.26	0.0000
293.70	199.3142
295.21	169.4934
295.21	169.4934
295.21	169.4934
295.96	163.2184
296.50	164.2017
297.23	191.6872
298.57	185.5020
299.80	180.2026
299.80	180.2026
300.09	173.8429
300.09	173.8429
300.09	173.8429
300.09	173.8429
300.12	173.8458
301.29	179.5092
302.84	180.6535
303.76	176.2031
303.91	192.7446
304.40	179.9667
304.40	179.9667
304.84	175.4399
306.84	180.3256
308.46	192.5379
311.98	164.4441
316.51	178.0225
318.01	165.2372
319.02	143.9999
319.41	154.2673
320.08	145.0503
323.87	165.9977
323.87	165.9977
323.87	165.9977
325.23	151.2372
328.77	162.8860
329.70	166.7501
329.70	166.7501
330.00	166.7881
333.44	141.8620
334.20	161.6857
334.20	161.6857
334.30	161.6962
338.28	180.1000
338.28	180.1000
338.28	180.1000
338.32	180.1059
338.32	180.1059
340.50	158.6792
340.57	158.6869
343.40	142.9311
344.27	160.0724
345.85	163.1055
350.59	0.0000
351.07	151.3601
351.92	169.5530
351.92	169.5530
351.92	169.5530
355.39	0.0000
356.01	177.7013
364.48	145.1453
366.43	130.9075
367.43	131.9641
367.94	0.0000
369.80	130.2560
374.96	131.6960
383.85	129.5865
387.95	140.6975
388.63	128.0536
391.69	130.2785
391.69	130.2785
392.90	131.3644
398.62	126.9489
400.65	118.2513
401.10	128.1433
401.81	142.9977

402.60	147.0175
404.84	113.6383
410.95	111.1165
411.60	106.2016
413.65	117.2744
414.70	106.4155
415.30	111.4309
415.76	117.4346
417.63	0.0000
418.52	111.6616
423.70	108.0313
427.08	112.2717
427.89	107.3151
432.53	125.7343
433.00	115.7089
433.93	124.8363
439.47	114.1535
439.56	114.1604
439.89	122.2684
443.98	117.5098
444.90	115.5499
445.03	115.5586
445.03	115.5586
445.03	115.5586
453.90	132.4895
463.38	120.9421
468.07	119.2232
473.00	112.3530
475.06	122.8077
475.35	109.4095
476.78	95.0378
477.59	102.3173
477.96	98.2050
482.03	92.2185
484.57	106.8804
487.03	94.5616
490.36	0.0000
492.35	109.4396
497.08	91.9652
507.63	0.0000
510.53	0.0000
510.84	132.6878
511.00	132.7003
511.85	162.2644
511.85	162.2644
513.99	484.1996
513.99	484.1996
520.41	103.7422
520.65	100.5809
527.90	112.6638
528.96	0.0000
529.64	76.5989
529.87	0.0000
531.02	91.5587
537.32	85.4565
543.00	91.0699
546.56	0.0000
549.76	89.2412
552.65	89.3755
555.20	92.7266
563.23	90.9445
563.90	96.3904
568.70	82.5104
569.32	86.8823
569.50	85.8035
569.67	89.0694
573.80	115.3779
574.00	108.8593
574.64	95.8257
578.91	68.0938
579.30	0.0000
583.14	95.1377
585.48	84.0820
591.81	90.0554
592.07	86.7703
593.00	92.3057
595.88	96.8354
600.56	126.8341

602.52	0.0000
602.71	104.8862
602.71	104.8862
603.60	112.6644
604.41	116.0229
604.70	137.0365
609.31	116.2953
610.33	105.2718
612.46	150.8584
614.37	111.0260
618.01	83.4137
621.84	86.9050
621.84	86.9050
631.29	78.3377
633.02	75.0417
633.10	75.0438
634.78	82.9496
635.90	76.2634
636.97	70.6904
645.85	70.3028
646.12	64.9037
656.30	93.2784
657.75	135.0240
657.90	0.0000
661.65	78.0698
661.65	78.0698
664.57	0.0000
666.33	130.9957
666.33	130.9957
675.00	70.3170
677.61	69.4836
685.20	62.3754
692.80	74.5453
695.00	75.5377
696.49	85.7264
696.49	85.7264
697.00	89.4337
697.49	92.2192
698.33	100.5536
698.50	106.0970
699.00	106.1195
702.63	83.1797
706.10	99.9633
706.58	0.0000
706.67	99.0612
709.31	77.8559
711.68	75.1504
713.82	86.3610
717.42	72.5423
720.50	74.4980
721.93	0.0000
722.20	80.1421
722.78	76.4346
722.78	76.4346
722.89	75.5044
722.95	75.5064
723.30	66.1950
724.18	69.0173
727.18	72.8394
733.00	62.7176
735.90	70.2905
739.58	58.1946
742.81	53.5725
744.21	72.4112
747.13	54.6086
751.79	76.4082
752.31	81.1415
753.82	55.7000
755.35	49.1220
756.15	52.9184
756.87	51.9882
763.13	47.3804
763.93	58.7713
765.79	63.5584
766.42	60.7266
766.84	63.5846
776.49	58.1123
778.00	77.2110

778.57	72.4616
778.89	74.3780
783.80	63.0561
785.46	73.6124
792.07	65.1761
795.84	51.8339
796.30	59.5236
798.80	92.2547
801.93	52.9174
805.60	68.4077
810.29	66.5995
810.76	56.9575
815.85	57.0684
817.79	58.0781
818.51	53.2531
819.60	51.3373
826.30	56.3220
828.27	0.0000
831.60	55.4609
831.96	55.4678
834.83	73.0627
836.80	0.0000
846.75	75.3419
848.13	73.4235
856.28	0.0000
856.80	69.7277
860.37	62.9344
867.32	60.1362
867.82	58.1746
871.10	53.3079
873.19	59.2749
874.81	56.3432
875.33	0.0000
876.40	60.3313
879.36	48.5143
880.27	50.5107
880.51	50.5156
881.50	52.5148
883.24	53.5386
884.67	53.5663
889.25	44.7111
896.60	51.7994
898.02	41.8595
899.00	46.8589
903.28	76.8834
911.07	51.0610
911.07	51.0610
919.63	53.2200
920.93	46.2111
925.00	39.2342
925.24	37.2249
926.50	43.2803
935.52	43.4136
937.48	50.5139
944.10	51.6400
946.00	56.7383
949.00	55.7815
962.29	53.9912
964.01	69.3115
966.15	54.0597
968.20	50.0145
969.11	59.2178
969.11	59.2178
977.42	50.1652
980.50	30.7449
983.50	50.2657
989.30	33.9160
996.32	57.6844
1001.03	51.5820
1001.68	47.4656
1004.76	60.9403
1021.30	0.0000
1024.50	0.0000
1034.80	41.7090
1036.00	49.0264
1037.82	46.9666
1038.57	43.8457
1038.76	0.0000

1045.16	46.0281
1046.59	47.0940
1048.07	55.4921
1050.47	42.9599
1050.47	42.9599
1062.04	56.7817
1063.62	46.2902
1076.63	38.0232
1077.35	44.3707
1078.86	32.7649
1085.78	49.7791
1093.90	46.7135
1099.22	35.0915
1112.02	40.5605
1112.84	36.3010
1115.52	50.2198
1120.29	42.7988
1120.51	42.8027
1121.28	37.4609
1124.00	0.0000
1129.67	42.9160
1131.51	0.0000
1147.95	0.0000
1167.94	45.5581
1173.22	38.0215
1175.09	38.0420
1177.93	39.1605
1189.05	30.5525
1204.90	33.9744
1205.75	0.0000
1213.00	36.2468
1221.42	37.6150
1230.97	36.7936
1235.34	40.5195
1236.41	0.0000
1238.25	37.7869
1246.25	36.0214
1260.41	0.0000
1271.85	30.6864
1274.45	32.5690
1274.54	32.5690
1291.56	26.1714
1298.22	0.0000
1312.09	31.9483
1325.50	33.0005
1325.50	33.0005
1332.49	33.0596
1333.61	34.0137
1360.21	33.2896
1362.66	0.0000
1365.15	23.8078
1368.21	27.6383
1368.53	0.0000
1376.25	31.5122
1384.27	23.9207
1394.10	23.9777
1395.20	32.6193
1407.95	29.8332
1434.06	28.0831
1436.60	35.8513
1457.56	0.0000
1460.81	33.1339
1489.15	24.5239
1509.49	32.5220
1596.49	33.1584
1620.62	21.2111
1678.03	0.0000
1691.02	22.5532
1691.02	22.5532
1706.46	0.0000
1750.46	0.0000
1764.49	18.7302
1770.23	43.7534
1771.40	32.3018
1791.20	0.0000
1808.65	14.6950
1836.01	16.8841

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243494001

Total Uranium Activity	-3.3429E+02	ug/g
Total Uranium Counting Unc.	2.9279E+02	ug/g
Total Uranium Tpu	1.4942E-04	ug/g
Total Uranium Mda	1.8219E+02	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 937282	SAMPLE ID	: G243494001
ANALYST	: MXR1	DETECTOR	: GAM04
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 08:20:00.00
ANALYSIS DATE:	4-JAN-2010 19:28:00.33	SAMPLE ALQT:	1.000 FILTER

GROSS GAMMA ACTIVITY (pCi/FILTER)	: 3.881E+00
GROSS GAMMA ERROR (pCi/FILTER)	: 3.485E+01
GROSS GAMMA MDA (pCi/FILTER)	: 1.380E+01
GROSS GAMMA DLC (pCi/FILTER)	: 6.626E+00

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:49:10.77

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494002.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:21.
Sample ID : G243494002 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM22 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:04.20 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	77.27*	24	506	1.13	154.77	153	6	8.01E-04	180.9	
2	0	185.56*	118	1129	1.32	371.14	364	15	3.93E-03	73.9	
3	0	238.63*	19	580	1.26	477.17	473	8	6.49E-04	281.6	
4	0	300.38	97	457	1.36	600.57	595	10	3.23E-03	42.6	
5	0	353.14*	6	528	3.24	706.01	700	12	1.89E-04	*****	
6	0	510.99*	108	555	2.73	1021.48	1011	20	3.59E-03	76.4	
7	0	583.14*	10	276	1.45	1165.70	1161	11	3.24E-04	450.1	
8	0	859.08	77	202	1.85	1717.32	1709	17	2.57E-03	43.9	
9	0	1460.70*	5	77	2.42	2920.44	2911	16	1.67E-04	612.1	
10	0	1764.47*	50	86	3.83	3528.14	3515	23	1.66E-03	63.8	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 03:49:13

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494002.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:21
Sample ID : G243494002 Sample quantity : 1.0000 FILTER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA22 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:04.20 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
K-40	+	1460.81	*	2.643E+00	3.236E+01	2.549E+01	1.966E+00	0.104
TL-208		72.80		-2.477E+01	7.260E+01	1.180E+02	9.280E+00	-0.210
		74.97		1.390E-01	5.649E+01	6.942E+01	8.214E+00	0.002
		277.35		-5.194E+00	1.865E+01	2.957E+01	3.069E+00	-0.176
	+	510.84		1.320E+01	2.022E+01	1.031E+01	1.078E+00	1.280
	+	583.14	*	3.324E-01	2.992E+00	2.690E+00	2.050E-01	0.124
		763.13		-2.569E+01	8.989E+01	1.434E+02	1.945E+01	-0.179
	+	860.37		2.357E+01	2.082E+01	1.865E+01	1.696E+00	1.263
		1093.90		4.566E+01	4.024E+02	6.586E+02	1.489E+02	0.069
PB-212		74.81		5.386E-01	1.818E+01	2.237E+01	2.746E+00	0.024
	+	77.11		2.607E+00	9.435E+00	1.273E+01	1.030E+00	0.205
		87.30		-1.780E+01	1.834E+01	2.315E+01	3.088E+00	-0.769
		115.19		-6.267E+01	1.826E+02	2.876E+02	1.911E+01	-0.218
	+	238.63	*	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
	+	300.09		5.545E+01	4.741E+01	6.035E+01	4.851E+00	0.919
PO-212		74.81		5.386E-01	1.818E+01	2.237E+01	2.746E+00	0.024
	+	77.11		2.607E+00	9.435E+00	1.273E+01	1.030E+00	0.205
		87.30		-1.780E+01	1.834E+01	2.315E+01	3.088E+00	-0.769
		115.19		-6.267E+01	1.826E+02	2.876E+02	1.911E+01	-0.218
	+	238.63	*	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
	+	300.09		5.545E+01	4.741E+01	6.035E+01	4.851E+00	0.919
PO-216		74.81		5.386E-01	1.818E+01	2.237E+01	2.746E+00	0.024
	+	77.11		2.607E+00	9.435E+00	1.273E+01	1.030E+00	0.205
		87.30		-1.780E+01	1.834E+01	2.315E+01	3.088E+00	-0.769
		115.19		-6.267E+01	1.826E+02	2.876E+02	1.911E+01	-0.218
	+	238.63	*	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
	+	300.09		5.545E+01	4.741E+01	6.035E+01	4.851E+00	0.919
RA-226	+	186.21	*	5.474E+01	9.036E+01	5.625E+01	4.126E+01	0.973
TH-228		74.81		5.386E-01	1.818E+01	2.237E+01	1.799E+00	0.024
	+	77.11		2.607E+00	9.435E+00	1.273E+01	1.030E+00	0.205
		87.30		-1.780E+01	1.825E+01	2.315E+01	2.044E+00	-0.769
	+	238.63	*	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
	+	300.09		5.545E+01	5.740E+01	6.035E+01	3.555E+01	0.919
ANH-511	+	511.00	*	2.802E+00	4.285E+00	2.190E+00	1.383E-01	1.280

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7		477.59	*	3.465E+00	1.528E+01	2.492E+01	1.740E+00	0.139
NA-22		1274.54	*	-1.824E+00	1.605E+00	2.451E+00	1.689E-01	-0.744
NA-24		1368.53	*	1.452E+02	1.605E+00	Half-Life too short		
AL-26		1129.67		1.862E+01	6.445E+01	1.062E+02	6.486E+00	0.175
		1808.65	*	3.830E-01	1.506E+00	2.529E+00	1.491E-01	0.151
TI-44		67.85		-4.383E+00	2.317E+00	2.815E+00	2.163E-01	-1.557
	+	78.38	*	4.729E-01	1.711E+00	2.184E+00	1.783E-01	0.217
SC-46		889.25	*	-1.044E+00	1.679E+00	2.691E+00	2.308E-01	-0.388
		1120.51		1.298E+00	2.659E+00	3.792E+00	2.364E-01	0.342
V-48		944.10		-2.392E+01	3.813E+01	6.048E+01	4.978E+00	-0.396
		983.50	*	-2.684E+00	3.085E+00	4.794E+00	3.767E-01	-0.560
		1312.09		8.164E-01	3.510E+00	5.877E+00	4.363E-01	0.139
CR-51		320.08	*	-9.257E+00	1.847E+01	3.039E+01	1.884E+00	-0.305
MN-52		744.21		1.173E+00	1.370E+01	2.234E+01	1.760E+00	0.052
		848.13		-5.167E+02	4.162E+02	6.352E+02	5.328E+01	-0.813
		935.52		2.996E+00	1.267E+01	2.120E+01	1.761E+00	0.141
		1246.25		-1.377E+02	3.282E+02	5.301E+02	3.432E+01	-0.260
		1333.61		-1.826E+02	2.731E+02	4.290E+02	3.314E+01	-0.426
		1434.06	*	6.748E+00	1.323E+01	2.244E+01	1.684E+00	0.301
MN-54		834.83	*	2.514E-01	1.516E+00	2.549E+00	2.122E-01	0.099
CO-56		846.75	*	-8.544E-01	1.805E+00	2.940E+00	2.464E-01	-0.291
		977.42		-3.785E+01	1.182E+02	1.906E+02	1.509E+01	-0.199
		1037.82		-4.068E+00	1.203E+01	1.924E+01	1.503E+00	-0.211
		1175.09		-3.290E+01	7.700E+01	1.251E+02	6.879E+00	-0.263
		1238.25		4.347E+00	3.011E+00	5.362E+00	3.591E-01	0.811
		1360.21		-7.989E+00	4.060E+01	6.580E+01	5.051E+00	-0.121
		1771.40		-4.079E+00	1.434E+01	1.931E+01	1.179E+00	-0.211
CO-57		122.06	*	-6.218E-01	1.303E+00	2.034E+00	1.291E-01	-0.306
		136.48		4.040E+00	1.009E+01	1.722E+01	1.168E+00	0.235
CO-58		810.76	*	3.215E-01	1.667E+00	2.814E+00	2.317E-01	0.114
FE-59		142.65		-8.646E+01	1.800E+02	2.328E+02	1.327E+01	-0.371
		192.34		-4.536E+00	5.100E+01	7.767E+01	8.958E+00	-0.058
		1099.22	*	-1.830E+00	3.585E+00	5.633E+00	4.179E-01	-0.325
		1291.56		1.891E+00	4.618E+00	7.833E+00	6.656E-01	0.241
CO-60		1173.22		-1.867E-02	1.473E+00	2.455E+00	1.344E-01	-0.008
		1332.49	*	-1.222E+00	1.625E+00	2.539E+00	1.962E-01	-0.481
ZN-65		1115.52	*	-5.377E+00	3.850E+00	5.746E+00	3.628E-01	-0.936
GE-68		1077.35	*	3.009E+00	4.786E+01	7.820E+01	5.318E+00	0.038
AS-73		53.44	*	1.438E+01	4.289E+01	5.594E+01	4.184E+00	0.257
AS-74		595.88	*	-1.517E+00	4.977E+00	8.155E+00	5.668E-01	-0.186
		634.78		-5.086E+00	1.801E+01	2.932E+01	2.123E+00	-0.173
SE-75		66.05		-5.911E+02	2.633E+02	3.238E+02	3.122E+01	-1.825
		96.73		-2.599E+01	3.636E+01	5.712E+01	7.527E+00	-0.455
		121.11		4.391E+00	6.993E+00	1.128E+01	1.084E+00	0.389
		136.00		1.140E-01	1.909E+00	3.233E+00	1.930E-01	0.035
		198.60		-9.609E+01	1.348E+02	1.509E+02	1.007E+01	-0.637
		264.65	*	1.273E+00	2.184E+00	3.575E+00	1.969E-01	0.356
		279.53		3.789E+00	5.525E+00	9.026E+00	5.386E-01	0.420
		303.91		-2.656E+01	1.098E+02	1.589E+02	1.488E+01	-0.167

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		400.65		1.628E+01	1.210E+01	2.067E+01	1.842E+00	0.788
BR-77		87.88		-1.227E+04	1.663E+04	2.130E+04	1.891E+03	-0.576
		200.40		-6.762E+03	1.581E+04	2.569E+04	1.346E+03	-0.263
	+	239.00		2.354E+02	1.326E+03	1.687E+03	9.073E+01	0.140
		249.79		-1.510E+03	6.570E+03	1.053E+04	5.696E+02	-0.143
		281.68		-1.119E+03	9.073E+03	1.444E+04	7.908E+02	-0.077
		297.23		2.255E+03	5.272E+03	7.869E+03	4.323E+02	0.287
		303.76		-3.675E+03	1.821E+04	2.640E+04	1.452E+03	-0.139
		439.47		7.892E+03	1.298E+04	2.163E+04	1.250E+03	0.365
		484.57		-1.695E+04	2.037E+04	3.161E+04	1.935E+03	-0.536
		520.65	*	-1.962E+02	9.636E+02	1.530E+03	9.777E+01	-0.128
		574.64		-4.669E+02	1.885E+04	3.131E+04	2.127E+03	-0.015
		578.91		-2.433E+03	8.746E+03	1.231E+04	8.397E+02	-0.198
		585.48		3.142E+04	1.782E+04	2.765E+04	1.900E+03	1.137
		755.35		-4.325E+03	1.363E+04	2.172E+04	1.723E+03	-0.199
		817.79		-2.073E+03	1.112E+04	1.842E+04	1.519E+03	-0.113
SR-82		698.33		7.478E+02	1.660E+03	2.761E+03	2.110E+02	0.271
		776.49	*	-2.939E+00	1.775E+01	2.845E+01	2.288E+00	-0.103
		1395.20		-1.283E+02	4.932E+02	7.937E+02	6.034E+01	-0.162
RB-83		520.41	*	-3.554E-01	3.307E+00	5.275E+00	3.369E-01	-0.067
		529.64		1.168E+00	4.786E+00	8.093E+00	5.225E-01	0.144
		552.65		2.110E+00	8.706E+00	1.467E+01	9.725E-01	0.144
RB-84		881.50	*	1.704E+00	3.188E+00	5.424E+00	4.633E-01	0.314
KR-85		513.99	*	3.034E+03	4.961E+02	8.093E+02	5.130E+01	3.748
SR-85		513.99	*	1.594E+01	2.606E+00	4.252E+00	2.696E-01	3.748
RB-86		1076.63	*	-3.299E+00	3.257E+01	5.269E+01	3.588E+00	-0.063
Y-88		898.02		1.245E+00	1.769E+00	3.029E+00	2.622E-01	0.411
		1836.01	*	8.609E-01	1.724E+00	2.945E+00	1.694E-01	0.292
ZR-88		392.90	*	3.448E-01	1.425E+00	2.363E+00	1.283E-01	0.146
Y-91		1204.90	*	4.723E+02	6.462E+02	1.120E+03	6.609E+01	0.422
NB-94		702.63	*	-1.153E+00	1.488E+00	2.340E+00	1.793E-01	-0.493
		871.10		9.875E-01	1.442E+00	2.473E+00	2.101E-01	0.399
NB-95		765.79	*	1.856E+00	2.126E+00	3.577E+00	2.858E-01	0.519
NB-95M		235.69	*	8.769E-01	6.533E+00	9.324E+00	6.713E-01	0.094
ZR-95		724.18		-1.060E+00	4.201E+00	6.758E+00	5.808E-01	-0.157
		756.15	*	6.737E-01	2.975E+00	4.878E+00	4.332E-01	0.138
NB-97		657.90	*	1.849E+01	2.975E+00	Half-Life too short		
		1024.50		1.276E+02	2.975E+00	Half-Life too short		
ZR-97		254.15		1.407E+03	2.975E+00	Half-Life too short		
		355.39		2.167E+03	2.975E+00	Half-Life too short		
		507.63	*	5.318E+03	2.975E+00	Half-Life too short		
		602.52		-1.623E+03	2.975E+00	Half-Life too short		
		1021.30		1.582E+02	2.975E+00	Half-Life too short		
		1147.95		-1.338E+03	2.975E+00	Half-Life too short		
		1362.66		-1.851E+03	2.975E+00	Half-Life too short		
		1750.46		1.018E+03	2.975E+00	Half-Life too short		
MO-99		140.51		-4.938E+02	2.285E+03	3.828E+03	1.031E+03	-0.129
		181.06		-5.503E+02	1.677E+03	2.408E+03	4.079E+02	-0.229
		366.43		1.127E+02	7.118E+03	1.178E+04	6.447E+02	0.010

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		739.58	*	-3.414E+02	8.742E+02	1.389E+03	2.051E+02	-0.246
		778.00		-6.042E+02	2.690E+03	4.298E+03	3.460E+02	-0.141
TC-99M		140.51	*	-2.387E+14	2.690E+03	Half-Life too short		
RH-101		127.23		9.376E-01	1.574E+00	2.531E+00	1.557E-01	0.370
		198.01	*	-8.608E-01	2.433E+00	2.756E+00	1.442E-01	-0.312
		325.23		2.986E+00	1.035E+01	1.744E+01	9.599E-01	0.171
RH-102		418.52		1.784E+00	1.349E+01	2.217E+01	1.247E+00	0.080
		475.06	*	-1.738E+00	1.335E+00	2.029E+00	1.227E-01	-0.857
		631.29		-1.531E+00	2.509E+00	4.024E+00	2.904E-01	-0.380
		697.49		-1.531E-01	3.598E+00	5.868E+00	4.480E-01	-0.026
		766.84		1.665E+00	4.496E+00	7.404E+00	5.919E-01	0.225
		1046.59		2.296E+00	4.629E+00	7.766E+00	5.571E-01	0.296
		1112.84		-1.114E+01	9.320E+00	1.404E+01	8.899E-01	-0.793
RU-103		497.08	*	-5.379E-01	1.934E+00	3.072E+00	3.945E-01	-0.175
		610.33		-5.092E+01	5.563E+01	7.131E+01	1.136E+01	-0.714
RH-106	+	511.85		1.406E+01	2.150E+01	2.318E+01	1.466E+00	0.606
		621.84	*	-9.313E+00	1.471E+01	2.356E+01	2.934E+00	-0.395
		1050.47		4.617E+01	9.393E+01	1.575E+02	1.122E+01	0.293
RU-106	+	511.85		1.406E+01	2.150E+01	2.318E+01	1.466E+00	0.606
		621.84	*	-9.313E+00	1.467E+01	2.356E+01	1.683E+00	-0.395
		1050.47		4.617E+01	9.393E+01	1.575E+02	1.122E+01	0.293
AG-108M		433.93	*	-1.650E-01	1.520E+00	2.467E+00	1.540E-01	-0.067
		614.37		-3.986E+00	1.972E+00	2.976E+00	2.231E-01	-1.339
		722.95		-2.121E+00	1.894E+00	2.914E+00	2.373E-01	-0.728
CD-109		88.03	*	-3.025E+01	3.913E+01	5.001E+01	4.444E+00	-0.605
AG-110M		657.75	*	6.996E-01	1.449E+00	2.433E+00	1.876E-01	0.288
		677.61		-2.566E+00	1.254E+01	2.033E+01	1.587E+00	-0.126
		706.67		-1.453E+00	9.252E+00	1.499E+01	1.191E+00	-0.097
		763.93		1.817E+00	6.875E+00	1.127E+01	9.293E-01	0.161
		884.67		-2.657E-01	2.135E+00	3.520E+00	3.110E-01	-0.075
		937.48		1.019E+00	4.232E+00	7.078E+00	6.097E-01	0.144
		1384.27		-4.388E+00	7.215E+00	1.135E+01	8.965E-01	-0.387
IN-111		171.28		2.579E+01	8.635E+01	1.448E+02	7.431E+00	0.178
		245.39	*	1.603E+01	9.465E+01	1.539E+02	8.302E+00	0.104
IN-113M		391.69	*	9.498E-02	2.069E+00	3.408E+00	1.988E-01	0.028
SN-113		391.69	*	9.498E-02	2.069E+00	3.408E+00	1.988E-01	0.028
IN-114M		190.27	*	-3.930E+00	1.014E+01	1.447E+01	7.528E-01	-0.271
CD-115		260.90		2.288E+03	1.322E+04	2.139E+04	1.162E+03	0.107
		492.35		2.974E+03	3.399E+03	5.675E+03	3.506E+02	0.524
		527.90	*	2.822E+01	1.231E+03	1.689E+03	1.088E+02	0.017
SN-117M		156.02		-2.466E+01	1.211E+02	2.018E+02	1.082E+01	-0.122
		158.56	*	-1.542E+00	4.323E+00	4.969E+00	2.632E-01	-0.310
SB-122		563.90	*	-1.308E+02	1.652E+02	2.660E+02	1.785E+01	-0.492
		692.80		4.779E+03	3.659E+03	6.279E+03	4.779E+02	0.761
I-123		159.00	*	-4.222E+03	3.659E+03	Half-Life too short		
		528.96		-6.360E+04	3.659E+03	Half-Life too short		
TE-123M		159.00	*	-1.118E+00	2.020E+00	2.307E+00	1.239E-01	-0.485
I-124		602.71	*	-5.144E+01	5.029E+01	8.008E+01	5.606E+00	-0.642
		722.78		-2.881E+02	2.922E+02	4.532E+02	3.521E+01	-0.636

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	1325.50		1.970E+03	2.026E+03	3.542E+03	2.700E+02	0.556
	1376.25		-2.146E+03	2.646E+03	3.217E+03	2.459E+02	-0.667
	1509.49		4.062E+01	1.087E+03	1.773E+03	1.291E+02	0.023
	1691.02		-2.343E+01	2.578E+02	4.237E+02	2.766E+01	-0.055
SB-124	602.71		-2.088E+00	2.042E+00	3.251E+00	2.277E-01	-0.642
	645.85		-9.955E+00	2.310E+01	3.726E+01	2.954E+00	-0.267
	709.31		1.665E+02	1.238E+02	2.131E+02	1.641E+01	0.781
	713.82		-7.860E+01	7.762E+01	1.198E+02	1.367E+01	-0.656
	722.78		-1.695E+01	1.720E+01	2.667E+01	2.127E+00	-0.636
	968.20		-5.982E+01	1.467E+02	1.940E+02	1.553E+01	-0.308
	1045.16		1.043E+02	9.962E+01	1.720E+02	1.237E+01	0.606
	1325.50		1.238E+02	1.274E+02	2.226E+02	1.697E+01	0.556
	1368.21		3.225E+01	7.905E+01	1.332E+02	1.716E+01	0.242
	1436.60		9.995E+01	1.640E+02	2.798E+02	2.099E+01	0.357
	1691.02	*	-3.252E-01	3.578E+00	5.881E+00	4.100E-01	-0.055
SB-125	427.89	*	-3.772E+00	4.220E+00	6.631E+00	3.942E-01	-0.569
	463.38		-1.800E+00	1.252E+01	2.016E+01	1.392E+00	-0.089
	600.56		-6.975E+00	8.897E+00	1.429E+01	1.108E+00	-0.488
	635.90		-1.267E+00	1.263E+01	2.073E+01	1.672E+00	-0.061
TE-125M	109.28	*	2.480E+02	4.647E+02	7.536E+02	6.781E+01	0.329
I-126	388.63		2.444E+00	1.058E+01	1.755E+01	9.528E-01	0.139
	666.33	*	1.418E+00	8.751E+00	1.446E+01	1.080E+00	0.098
	753.82		1.731E+01	7.003E+01	1.149E+02	9.114E+00	0.151
SB-126	223.80		-7.475E+01	2.183E+02	3.521E+02	1.876E+01	-0.212
	278.60		8.988E+00	1.386E+02	2.222E+02	1.215E+01	0.040
	296.50		-6.481E+01	1.050E+02	1.180E+02	6.484E+00	-0.549
	414.70		-2.333E+00	3.998E+00	6.396E+00	3.579E-01	-0.365
	415.30		-3.817E+01	3.308E+02	5.389E+02	3.018E+01	-0.071
	555.20		-6.297E+01	2.004E+02	3.299E+02	2.193E+01	-0.191
	573.80		-1.534E+01	5.407E+01	8.892E+01	6.033E+00	-0.173
	593.00		-1.272E+01	5.104E+01	8.383E+01	5.808E+00	-0.152
	656.30		-6.632E+00	1.598E+02	2.620E+02	1.939E+01	-0.025
	666.33		5.955E-01	3.676E+00	6.076E+00	4.538E-01	0.098
	675.00		4.726E+00	9.418E+01	1.547E+02	1.163E+01	0.031
	695.00		4.914E+00	4.111E+00	7.025E+00	5.354E-01	0.700
	697.00		4.337E-01	1.440E+01	2.356E+01	1.798E+00	0.018
	720.50	*	7.396E+00	7.367E+00	1.250E+01	9.696E-01	0.592
	856.80		2.646E+00	2.657E+01	3.812E+01	3.213E+00	0.069
	989.30		4.773E+01	5.690E+01	9.764E+01	7.615E+00	0.489
	1034.80		-4.543E+01	3.869E+02	6.278E+02	4.589E+01	-0.072
	1213.00		5.387E+01	1.799E+02	3.043E+02	1.829E+01	0.177
SN-126	64.28		-2.860E+01	2.696E+01	3.647E+01	5.337E+00	-0.784
	86.94		-1.935E+01	1.814E+01	2.067E+01	8.557E+00	-0.936
	87.57	*	-3.486E+00	3.872E+00	4.934E+00	4.368E-01	-0.707
SB-127	61.10		-1.127E+04	3.706E+03	5.225E+03	5.823E+02	-2.157
	252.40		-3.686E+01	3.328E+02	5.346E+02	2.229E+02	-0.069
	290.80		-1.445E+03	1.529E+03	2.497E+03	2.458E+02	-0.579
	411.60		5.027E+02	8.464E+02	1.411E+03	2.096E+02	0.356
	444.90		-7.296E+02	7.030E+02	1.087E+03	1.255E+02	-0.671

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		473.00		-1.278E+02	1.682E+02	1.776E+02	2.133E+01	-0.720
		543.00		1.212E+03	1.134E+03	1.953E+03	2.710E+02	0.620
		603.60		-1.308E+03	9.231E+02	1.430E+03	1.739E+02	-0.914
		685.20	*	-2.110E+01	8.355E+01	1.349E+02	1.533E+01	-0.156
		698.50		4.372E+02	1.053E+03	1.747E+03	2.768E+02	0.250
		722.20		-1.600E+03	2.068E+03	3.237E+03	3.650E+02	-0.494
		783.80		-2.149E+02	3.397E+02	3.699E+02	4.705E+01	-0.581
XE-127		57.60		-9.453E+01	2.350E+02	3.860E+02	2.915E+01	-0.245
		145.22		-7.017E+01	4.651E+01	5.768E+01	3.249E+00	-1.217
		172.10		2.172E+00	6.050E+00	1.016E+01	5.215E-01	0.214
		202.84	*	9.236E-01	2.320E+00	3.852E+00	2.022E-01	0.240
		374.96		5.471E+00	9.872E+00	1.660E+01	9.058E-01	0.330
I-131		80.18		-6.039E+01	2.317E+02	3.341E+02	2.792E+01	-0.181
		284.30		-6.651E+01	9.456E+01	1.474E+02	9.117E+00	-0.451
		364.48	*	2.254E+00	6.514E+00	1.091E+01	6.776E-01	0.207
		636.97		3.865E+01	8.928E+01	1.496E+02	1.174E+01	0.258
		722.89		-4.186E+02	3.903E+02	6.024E+02	4.729E+01	-0.695
TE-132		49.72		-1.043E+03	1.191E+03	1.933E+03	2.030E+02	-0.540
		111.76		-1.648E+03	3.222E+03	3.831E+03	3.915E+02	-0.430
		116.30		-1.010E+02	2.278E+03	3.619E+03	3.643E+02	-0.028
		228.16	*	1.733E+01	5.342E+01	8.768E+01	1.287E+01	0.198
BA-133		53.15		8.873E+01	1.507E+02	2.373E+02	1.772E+01	0.374
		79.62		-1.195E+01	5.285E+01	7.633E+01	1.146E+01	-0.157
		81.00		-2.307E+00	4.172E+00	5.918E+00	9.306E-01	-0.390
		276.40		1.713E+00	1.782E+01	2.863E+01	3.670E+00	0.060
		302.84		-4.467E-01	7.414E+00	1.082E+01	1.246E+00	-0.041
		356.01	*	3.399E+00	2.278E+00	3.469E+00	3.956E-01	0.980
		383.85		2.935E+00	1.415E+01	2.348E+01	2.509E+00	0.125
I-133	+	510.53		1.827E+02	1.415E+01	Half-Life too short		
		529.87	*	1.091E-01	1.415E+01	Half-Life too short		
		706.58		-2.243E+01	1.415E+01	Half-Life too short		
		856.28		3.526E+01	1.415E+01	Half-Life too short		
		875.33		-3.047E+01	1.415E+01	Half-Life too short		
		1236.41		2.041E+02	1.415E+01	Half-Life too short		
		1298.22		-1.228E+01	1.415E+01	Half-Life too short		
CS-134		475.35		-8.751E+01	8.614E+01	1.327E+02	8.032E+00	-0.659
		563.23		-1.266E+01	1.575E+01	2.533E+01	1.725E+00	-0.500
		569.32		-1.468E+00	1.276E+01	1.518E+01	1.047E+00	-0.097
		604.70		-2.653E+00	1.767E+00	2.759E+00	1.943E-01	-0.961
		795.84	*	-1.150E+00	2.556E+00	3.045E+00	2.498E-01	-0.378
		801.93		2.072E+01	1.684E+01	2.873E+01	2.361E+00	0.721
		1038.57		-5.151E+01	1.465E+02	2.341E+02	1.701E+01	-0.220
		1167.94		-1.439E+01	8.516E+01	1.407E+02	7.814E+00	-0.102
		1365.15		-2.177E+01	6.603E+01	8.510E+01	6.898E+00	-0.256
CS-135		268.24	*	3.367E+00	7.517E+00	1.224E+01	9.052E-01	0.275
I-135		288.45		2.798E+14	7.517E+00	Half-Life too short		
		417.63		4.809E+13	7.517E+00	Half-Life too short		
		546.56		3.560E+13	7.517E+00	Half-Life too short		
		836.80		7.506E+13	7.517E+00	Half-Life too short		

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	1038.76		-4.667E+13	7.517E+00	Half-Life too short		
	1124.00		-6.264E+14	7.517E+00	Half-Life too short		
	1131.51		2.692E+13	7.517E+00	Half-Life too short		
	1260.41	*	1.574E+13	7.517E+00	Half-Life too short		
	1457.56		1.071E+15	7.517E+00	Half-Life too short		
	1678.03		1.626E+13	7.517E+00	Half-Life too short		
	1706.46		-1.582E+14	7.517E+00	Half-Life too short		
	1791.20		-5.632E+13	7.517E+00	Half-Life too short		
CS-136	66.91		-4.730E+01	4.461E+01	5.629E+01	8.400E+00	-0.840
	86.29		-3.414E+01	5.777E+01	7.445E+01	9.631E+00	-0.459
	153.22		1.920E+01	3.521E+01	5.982E+01	4.146E+00	0.321
	163.89		5.407E+01	5.883E+01	1.003E+02	6.778E+00	0.539
	176.55		-2.787E+01	2.499E+01	3.322E+01	1.977E+00	-0.839
	273.65		-1.507E+01	2.436E+01	3.821E+01	2.416E+00	-0.394
	340.57		8.932E+00	6.453E+00	1.116E+01	6.573E-01	0.800
	818.51		-9.066E-01	3.513E+00	5.797E+00	4.788E-01	-0.156
	1048.07	*	4.153E+00	4.923E+00	8.402E+00	6.382E-01	0.494
	1235.34		2.068E+01	2.219E+01	3.852E+01	3.968E+00	0.537
BA-137M	661.65	*	6.628E-02	1.489E+00	2.449E+00	1.823E-01	0.027
CS-137	661.65	*	7.007E-02	1.574E+00	2.589E+00	1.932E-01	0.027
CE-139	165.85	*	-7.664E-01	1.468E+00	2.415E+00	1.237E-01	-0.317
BA-140	162.64		2.542E+01	4.137E+01	7.012E+01	4.203E+00	0.363
	304.84		-3.072E-01	7.618E+01	1.114E+02	3.033E+01	-0.003
	423.70		8.221E-01	9.890E+01	1.616E+02	5.132E+01	0.005
	537.32	*	2.635E+00	1.313E+01	2.210E+01	7.216E+00	0.119
LA-140	328.77		7.578E+00	1.551E+01	2.626E+01	1.637E+00	0.289
	432.53		-3.081E+01	1.087E+02	1.752E+02	1.112E+01	-0.176
	487.03		-6.669E+00	7.093E+00	1.094E+01	7.509E-01	-0.610
	751.79		-1.626E+01	8.354E+01	1.341E+02	1.195E+01	-0.121
	815.85		-1.552E+01	1.549E+01	2.452E+01	2.273E+00	-0.633
	867.82		6.090E+00	7.403E+01	1.098E+02	9.817E+00	0.055
	919.63		-5.337E+01	1.284E+02	2.073E+02	2.177E+01	-0.257
	925.24		2.454E+01	5.134E+01	8.697E+01	7.784E+00	0.282
	1596.49	*	3.382E-01	4.675E+00	7.824E+00	5.443E-01	0.043
CE-141	145.44	*	-1.870E+00	3.135E+00	5.196E+00	3.047E-01	-0.360
CE-143	57.37		-1.045E-01	3.135E+00	Half-Life too short		
	231.56		-6.497E-02	3.135E+00	Half-Life too short		
	293.26	*	3.794E-03	3.135E+00	Half-Life too short		
	350.59		-3.704E-01	3.135E+00	Half-Life too short		
	490.36		2.204E-01	3.135E+00	Half-Life too short		
	664.57		-1.610E-02	3.135E+00	Half-Life too short		
	721.93		-1.120E-01	3.135E+00	Half-Life too short		
CE-144	80.11		-2.470E+01	8.774E+01	1.264E+02	1.046E+01	-0.195
	133.54	*	-3.099E+00	9.579E+00	1.607E+01	2.292E+00	-0.193
PM-144	476.78		-1.115E+00	3.091E+00	4.917E+00	3.522E-01	-0.227
	618.01		-6.095E-01	1.491E+00	2.420E+00	1.792E-01	-0.252
	696.49	*	6.783E-01	1.619E+00	2.690E+00	2.054E-01	0.252
	778.57		-4.018E+01	1.005E+02	1.590E+02	1.281E+01	-0.253
PR-144	696.49	*	4.602E+01	1.098E+02	1.825E+02	1.393E+01	0.252

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		1489.15		-2.553E+02	5.379E+02	8.433E+02	6.197E+01	-0.303
PM-146		453.90	*	-1.348E+00	2.097E+00	3.313E+00	2.877E-01	-0.407
		633.02		-1.804E+01	6.429E+01	1.041E+02	3.861E+01	-0.173
		735.90		-2.767E+00	6.411E+00	1.011E+01	2.870E+00	-0.274
		747.13		1.260E+00	3.929E+00	6.473E+00	8.806E-01	0.195
ND-147		91.11		5.185E+01	1.638E+01	2.543E+01	2.341E+00	2.039
		319.41		-8.988E+01	1.797E+02	2.957E+02	1.629E+01	-0.304
		439.89		1.029E+02	3.141E+02	5.178E+02	2.998E+01	0.199
		531.02	*	-1.536E+00	2.931E+01	4.898E+01	6.770E+00	-0.031
PM-149		285.90	*	-2.835E+03	9.768E+03	1.543E+04	2.169E+03	-0.184
EU-152		121.78		-1.176E+00	3.759E+00	5.901E+00	4.741E-01	-0.199
		244.69		-3.155E+00	1.653E+01	2.659E+01	1.434E+00	-0.119
		344.27	*	-1.215E+00	4.664E+00	7.691E+00	4.823E-01	-0.158
		443.98		-1.887E+01	4.450E+01	7.113E+01	4.137E+00	-0.265
		778.89		-4.428E+00	1.150E+01	1.822E+01	1.467E+00	-0.243
		867.32		7.034E+00	4.044E+01	5.827E+01	4.939E+00	0.121
		964.01		-1.460E+01	1.650E+01	1.923E+01	1.547E+00	-0.759
		1085.78		-1.113E+01	1.626E+01	2.342E+01	1.568E+00	-0.475
		1112.02		2.119E+00	1.246E+01	2.041E+01	1.296E+00	0.104
		1407.95		7.387E+00	7.751E+00	1.348E+01	1.021E+00	0.548
GD-153		69.67		-3.447E+01	6.103E+01	9.867E+01	7.637E+00	-0.349
		83.37		4.258E+01	7.140E+02	9.465E+02	8.056E+01	0.045
		97.43	*	-2.042E-01	3.644E+00	5.862E+00	4.586E-01	-0.035
		103.18		-1.787E+00	4.915E+00	7.796E+00	5.736E-01	-0.229
EU-154		123.07		-8.821E-01	2.606E+00	4.083E+00	3.969E-01	-0.216
		247.94		-9.554E-01	1.832E+01	2.955E+01	2.750E+00	-0.032
		591.81		-3.439E+01	3.097E+01	4.761E+01	4.988E+00	-0.722
		723.30		-1.050E+01	7.950E+00	1.208E+01	1.059E+00	-0.869
		756.87		-2.956E-01	3.198E+01	5.181E+01	5.957E+00	-0.006
		873.19		2.084E+00	1.267E+01	2.123E+01	2.582E+00	0.098
		996.32		-2.266E+01	1.566E+01	2.275E+01	3.947E+00	-0.996
		1004.76		-1.745E+00	8.977E+00	1.456E+01	1.592E+00	-0.120
		1274.45	*	-5.193E+00	4.488E+00	6.815E+00	6.847E-01	-0.762
EU-155		48.70		-3.877E+01	9.247E+01	1.533E+02	1.087E+01	-0.253
		60.01		-3.050E+02	1.905E+02	2.983E+02	2.259E+01	-1.022
		86.54		-2.510E+00	4.706E+00	6.095E+00	5.394E-01	-0.412
		105.31	*	-1.360E-01	5.047E+00	8.081E+00	5.928E-01	-0.017
TB-160		86.79		-1.426E+01	1.299E+01	1.649E+01	1.449E+00	-0.865
		197.04		-1.795E+01	4.238E+01	4.794E+01	2.506E+00	-0.374
		215.65		1.246E+01	3.672E+01	6.060E+01	3.210E+00	0.206
		298.57		-3.700E+00	6.184E+00	8.834E+00	4.854E-01	-0.419
		879.36	*	2.806E+00	6.167E+00	1.046E+01	8.924E-01	0.268
		962.29		-1.734E+01	2.235E+01	3.532E+01	2.848E+00	-0.491
		966.15		1.825E+01	8.571E+00	1.525E+01	1.224E+00	1.196
		1177.93		-4.037E+00	1.196E+01	1.952E+01	1.081E+00	-0.207
		1271.85		-2.326E+00	2.507E+01	4.125E+01	2.821E+00	-0.056
HO-166M		80.57		-1.504E+00	1.121E+01	1.625E+01	1.350E+00	-0.093
	+	184.41		2.494E+00	3.690E+00	3.201E+00	1.658E-01	0.779
		280.46		3.924E+00	4.227E+00	6.956E+00	3.807E-01	0.564

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	410.95		4.109E+00	1.105E+01	1.834E+01	1.021E+00	0.224
	711.68	*	-6.111E-01	2.740E+00	4.422E+00	3.410E-01	-0.138
	752.31		4.485E+00	1.159E+01	1.915E+01	1.517E+00	0.234
	810.29		-6.847E-01	2.509E+00	4.143E+00	3.401E-01	-0.165
TM-171	51.35		-1.743E+03	1.292E+03	1.893E+03	1.397E+02	-0.921
	52.39		-2.498E+02	6.718E+02	1.027E+03	7.637E+01	-0.243
	59.40		-1.147E+02	9.728E+02	1.611E+03	1.220E+02	-0.071
	66.72	*	-1.431E+03	1.427E+03	1.824E+03	1.396E+02	-0.785
HF-175	89.36		-3.693E+02	7.854E+01	9.008E+01	7.841E+00	-4.100
	343.40	*	-8.835E-01	1.778E+00	2.911E+00	1.600E-01	-0.304
	433.00		-3.654E+01	1.024E+02	1.646E+02	9.438E+00	-0.222
LU-176	88.36		-6.535E+00	9.133E+00	1.176E+01	1.039E+00	-0.556
	201.83		-7.314E-01	1.404E+00	2.273E+00	1.192E-01	-0.322
	306.84	*	-6.923E-01	1.218E+00	1.954E+00	1.075E-01	-0.354
	401.10		3.877E+02	3.097E+02	5.299E+02	2.910E+01	0.732
LU-177	112.95		-8.569E+01	1.375E+02	1.631E+02	1.102E+01	-0.525
	208.36	*	-2.878E+01	6.255E+01	1.011E+02	5.330E+00	-0.285
LU-177M	52.97		3.642E+01	6.905E+01	1.085E+02	8.100E+00	0.336
	54.07		5.844E+00	4.403E+01	5.739E+01	4.303E+00	0.102
	61.30		-1.140E+02	5.942E+01	9.189E+01	6.962E+00	-1.241
	121.62		-4.696E+00	1.950E+01	3.069E+01	1.949E+00	-0.153
	147.16		-1.823E+01	3.121E+01	5.170E+01	2.886E+00	-0.353
	171.86		1.204E+01	2.367E+01	3.987E+01	2.047E+00	0.302
	218.09		-3.277E+01	4.155E+01	6.623E+01	3.515E+00	-0.495
	268.79		1.650E+01	3.850E+01	6.264E+01	3.415E+00	0.263
	319.02		-4.731E+00	1.217E+01	2.011E+01	1.107E+00	-0.235
	367.43		-2.087E+01	4.300E+01	6.987E+01	3.821E+00	-0.299
	413.65	*	-1.068E+00	8.120E+00	1.323E+01	7.389E-01	-0.081
HF-181	56.28		-2.588E+01	3.713E+01	6.043E+01	4.555E+00	-0.428
	57.53		-1.484E+01	1.988E+01	3.226E+01	2.436E+00	-0.460
	65.20		-8.004E+01	5.150E+01	6.585E+01	5.018E+00	-1.216
	133.02		-1.076E+00	3.169E+00	5.321E+00	3.176E-01	-0.202
	136.25		3.235E+00	2.287E+01	3.881E+01	2.280E+00	0.083
	345.85		-4.774E+00	1.024E+01	1.577E+01	8.668E-01	-0.303
	482.03	*	8.725E-01	2.027E+00	3.331E+00	2.032E-01	0.262
W-181	56.28		-9.894E+00	1.418E+01	2.308E+01	1.739E+00	-0.429
	57.53		-5.677E+00	7.598E+00	1.233E+01	9.309E-01	-0.460
	65.20	*	-3.035E+01	1.953E+01	2.497E+01	1.903E+00	-1.216
TA-182	67.75		-1.016E+01	5.615E+00	6.861E+00	5.269E-01	-1.480
	100.10		-2.173E+00	8.130E+00	1.296E+01	9.843E-01	-0.168
	152.43		2.932E+00	1.627E+01	2.742E+01	1.494E+00	0.107
	222.10		2.545E+00	1.666E+01	2.728E+01	1.452E+00	0.093
	1001.68		4.757E+01	1.104E+02	1.532E+02	1.176E+01	0.310
	1121.28		2.784E+00	7.290E+00	1.033E+01	6.428E-01	0.270
	1189.05		-3.626E+00	1.025E+01	1.671E+01	9.502E-01	-0.217
	1221.42	*	-3.404E+00	6.517E+00	1.048E+01	6.424E-01	-0.325
	1230.97		-2.004E+01	1.649E+01	2.538E+01	1.589E+00	-0.790
RE-183	57.98		-8.456E-01	7.549E+00	1.252E+01	9.462E-01	-0.068
	59.32		-5.151E-01	4.085E+00	6.764E+00	5.120E-01	-0.076

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	67.20		-8.553E+00	1.010E+01	1.289E+01	9.879E-01	-0.664
	162.32	*	3.289E+00	5.456E+00	9.247E+00	4.813E-01	0.356
	208.81		-1.493E+01	4.540E+01	7.369E+01	3.885E+00	-0.203
	291.72		-4.447E+01	4.483E+01	7.328E+01	4.022E+00	-0.607
RE-184	57.98		-3.074E+00	2.744E+01	4.553E+01	3.440E+00	-0.068
	59.32		-1.871E+00	1.484E+01	2.457E+01	1.860E+00	-0.076
	67.20		-3.108E+01	3.671E+01	4.684E+01	3.590E+00	-0.664
	161.27		-7.345E+00	1.744E+01	2.883E+01	1.508E+00	-0.255
	216.55		-1.074E+01	1.300E+01	2.072E+01	1.098E+00	-0.518
	252.85	*	2.033E+00	1.181E+01	1.915E+01	1.037E+00	0.106
	318.01		8.313E+00	2.104E+01	3.565E+01	1.963E+00	0.233
	792.07		3.162E+01	4.121E+01	6.899E+01	5.602E+00	0.458
	903.28		-6.778E+01	4.287E+01	6.449E+01	5.529E+00	-1.051
	920.93		-5.429E+00	1.870E+01	3.042E+01	2.565E+00	-0.178
OS-185	59.72		-1.824E+01	1.155E+01	1.810E+01	1.371E+00	-1.008
	61.14		-2.128E+01	6.835E+00	9.964E+00	7.548E-01	-2.136
	69.30		-1.063E+01	1.115E+01	1.777E+01	1.373E+00	-0.598
	592.07		-1.130E+02	1.242E+02	1.982E+02	1.372E+01	-0.570
	646.12	*	-6.130E-01	1.934E+00	3.136E+00	2.297E-01	-0.195
	717.42		-1.331E-01	4.184E+01	6.815E+01	5.276E+00	-0.002
	874.81		-1.927E+01	2.602E+01	4.154E+01	3.536E+00	-0.464
	880.27		8.207E+00	3.416E+01	5.737E+01	4.897E+00	0.143
RE-188	155.03	*	-4.804E+00	8.283E+00	1.367E+01	7.358E-01	-0.352
	477.96		7.641E+01	1.447E+02	2.388E+02	1.450E+01	0.320
	633.10		-4.498E+01	1.326E+02	2.154E+02	1.557E+01	-0.209
W-188	63.58		-3.442E+03	2.880E+03	3.927E+03	2.983E+02	-0.877
	227.08		4.293E+01	6.175E+02	1.007E+03	5.377E+01	0.043
	290.67	*	-3.384E+02	3.555E+02	5.821E+02	3.194E+01	-0.581
IR-192	295.96		-2.782E+00	7.205E+00	8.202E+00	4.585E-01	-0.339
	308.46		1.727E+00	4.691E+00	7.958E+00	4.434E-01	0.217
	316.51	*	2.917E-01	1.636E+00	2.755E+00	1.525E-01	0.106
	468.07		-1.061E+00	3.115E+00	4.969E+00	3.408E-01	-0.213
	604.41		-3.740E+01	2.470E+01	3.809E+01	4.577E+00	-0.982
	612.46		-2.904E+01	3.578E+01	5.730E+01	4.921E+00	-0.507
AU-195	65.12		-1.684E+01	9.106E+00	1.154E+01	8.792E-01	-1.460
	66.83		-4.944E+00	4.743E+00	6.051E+00	4.633E-01	-0.817
	75.70		2.194E+00	9.394E+00	1.172E+01	9.382E-01	0.187
	98.88	*	-3.656E+00	1.031E+01	1.641E+01	1.263E+00	-0.223
	129.76		5.860E+00	1.307E+02	2.219E+02	1.347E+01	0.026
TL-200	367.94	*	-6.154E-02	1.307E+02	Half-Life too short		
	579.30		-1.649E-01	1.307E+02	Half-Life too short		
	828.27		-1.094E+00	1.307E+02	Half-Life too short		
	1205.75		2.001E-01	1.307E+02	Half-Life too short		
TL-201	68.90		-4.990E+02	3.051E+02	4.735E+02	3.652E+01	-1.054
	70.82		-6.709E+01	1.669E+02	2.710E+02	2.109E+01	-0.248
	80.30		-7.783E+01	3.511E+02	5.071E+02	4.204E+01	-0.153
	135.34		8.755E+01	2.037E+03	3.450E+03	2.036E+02	0.025
	167.43	*	-2.500E+02	5.776E+02	9.515E+02	4.873E+01	-0.263
TL-202	68.90		-3.016E+01	1.844E+01	2.861E+01	2.207E+00	-1.054

---- Non-Identified Nuclides ----

Nuclide		Line Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		70.82		-4.043E+00	1.006E+01	1.633E+01	1.271E+00	-0.248
		80.30		-4.692E+00	2.117E+01	3.057E+01	2.534E+00	-0.153
		439.56	*	1.904E+00	3.649E+00	6.060E+00	3.504E-01	0.314
HG-203		70.83		-1.558E+01	3.959E+01	6.425E+01	8.411E+00	-0.242
		72.87		-7.329E+00	2.348E+01	3.818E+01	4.857E+00	-0.192
		82.60		1.575E+01	4.371E+01	7.190E+01	9.807E+00	0.219
		279.20	*	1.083E+00	2.098E+00	3.411E+00	1.995E-01	0.317
BI-207		72.80		-2.269E+00	6.651E+00	1.081E+01	8.501E-01	-0.210
		74.97		1.274E-02	5.179E+00	6.365E+00	5.072E-01	0.002
		84.90		-1.805E+00	9.091E+00	1.200E+01	1.035E+00	-0.151
		569.67		-4.129E-01	1.986E+00	2.352E+00	1.588E-01	-0.176
		1063.62	*	2.641E-01	2.070E+00	3.400E+00	2.370E-01	0.078
		1770.23		1.073E+01	2.995E+01	4.336E+01	2.651E+00	0.247
TL-207		81.07		-4.954E+00	9.181E+00	1.307E+01	1.090E+00	-0.379
		83.78		2.004E+00	6.006E+00	8.029E+00	6.859E-01	0.250
		94.90		-6.852E+01	1.347E+01	1.697E+01	1.369E+00	-4.037
		122.32		-4.517E+01	8.950E+01	1.396E+02	9.995E+00	-0.324
		144.24		-1.921E+01	4.333E+01	5.572E+01	3.967E+00	-0.345
		154.21		-5.437E+00	1.884E+01	3.135E+01	2.097E+00	-0.173
		269.46		5.949E+00	8.935E+00	1.464E+01	8.390E-01	0.406
		323.87	*	-8.331E+00	3.124E+01	5.173E+01	8.491E+00	-0.161
		338.28		-5.492E+01	6.295E+01	7.770E+01	8.058E+00	-0.707
		445.03		-1.054E+02	1.078E+02	1.675E+02	1.722E+01	-0.630
PO-209		260.50		5.554E+01	4.745E+02	7.666E+02	4.166E+01	0.072
		262.80		-4.837E+02	1.335E+03	2.121E+03	1.154E+02	-0.228
		896.60	*	2.370E+02	3.167E+02	5.432E+02	4.676E+01	0.436
BI-210		46.50	*	-7.071E+01	1.832E+02	2.355E+02	1.802E+01	-0.300
PB-210		46.50	*	-7.071E+01	1.832E+02	2.355E+02	1.802E+01	-0.300
PO-210		46.50	*	-7.071E+01	1.832E+02	2.355E+02	1.543E+01	-0.300
BI-211		72.87		-3.559E+01	1.140E+02	1.854E+02	1.459E+01	-0.192
		351.07	*	-1.259E+01	1.596E+01	1.799E+01	1.107E+00	-0.700
PB-211		404.84	*	-2.158E+00	4.299E+01	7.035E+01	4.384E+01	-0.031
		427.08		-6.206E+01	1.002E+02	1.471E+02	9.090E+01	-0.422
		831.96		-5.546E+00	4.868E+01	8.060E+01	5.047E+01	-0.069
BI-212		727.18	*	9.064E-01	1.627E+01	2.171E+01	2.020E+00	0.042
		785.46		-3.544E+01	1.103E+02	1.230E+02	9.949E+00	-0.288
		1620.62		1.630E+00	5.711E+01	9.519E+01	6.524E+00	0.017
BI-214		609.31	*	-2.838E+00	4.894E+00	6.425E+00	5.622E-01	-0.442
		1120.29		6.059E+00	1.529E+01	2.171E+01	1.975E+00	0.279
	+	1764.49		1.975E+01	2.524E+01	2.868E+01	1.763E+00	0.689
PB-214		74.81		9.120E-01	3.078E+01	3.788E+01	4.119E+00	0.024
	+	77.11		4.392E+00	1.590E+01	2.148E+01	2.387E+00	0.204
		87.30		-2.997E+01	3.081E+01	3.897E+01	4.568E+00	-0.769
		241.98		-2.109E+00	1.909E+01	2.689E+01	2.091E+00	-0.078
		295.21		3.323E-01	9.198E+00	1.069E+01	8.893E-01	0.031
	+	351.92	*	3.187E-01	6.553E+00	6.332E+00	5.109E-01	0.050
PO-214		74.81		9.120E-01	3.078E+01	3.788E+01	4.119E+00	0.024
	+	77.11		4.392E+00	1.590E+01	2.148E+01	2.387E+00	0.204
		87.30		-2.997E+01	3.081E+01	3.897E+01	4.568E+00	-0.769

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		241.98		-2.109E+00	1.909E+01	2.689E+01	2.091E+00	-0.078
		295.21		3.323E-01	9.198E+00	1.069E+01	8.893E-01	0.031
	+	351.92	*	3.187E-01	6.553E+00	6.332E+00	5.109E-01	0.050
PO-215		81.07		-4.954E+00	9.181E+00	1.307E+01	1.090E+00	-0.379
		83.78		2.004E+00	6.006E+00	8.029E+00	6.859E-01	0.250
		94.90		-6.852E+01	1.347E+01	1.697E+01	1.369E+00	-4.037
		122.32		-4.517E+01	8.950E+01	1.396E+02	9.995E+00	-0.324
		144.24		-1.921E+01	4.333E+01	5.572E+01	3.967E+00	-0.345
		154.21		-5.437E+00	1.884E+01	3.135E+01	2.097E+00	-0.173
		269.46		5.949E+00	8.935E+00	1.464E+01	8.390E-01	0.406
		323.87	*	-8.331E+00	3.124E+01	5.173E+01	8.491E+00	-0.161
		338.28		-5.492E+01	6.295E+01	7.770E+01	8.058E+00	-0.707
		445.03		-1.054E+02	1.078E+02	1.675E+02	1.722E+01	-0.630
PO-218		74.81		9.120E-01	3.078E+01	3.788E+01	4.119E+00	0.024
	+	77.11		4.392E+00	1.590E+01	2.148E+01	2.387E+00	0.204
		87.30		-2.997E+01	3.081E+01	3.897E+01	4.568E+00	-0.769
		241.98		-2.109E+00	1.909E+01	2.689E+01	2.091E+00	-0.078
		295.21		3.323E-01	9.198E+00	1.069E+01	8.893E-01	0.031
	+	351.92	*	3.187E-01	6.553E+00	6.332E+00	5.109E-01	0.050
RN-219		271.23		7.771E+00	1.147E+01	1.878E+01	1.477E+00	0.414
		401.81	*	1.220E+01	1.919E+01	3.210E+01	4.328E+00	0.380
RN-220		549.76	*	-8.058E+02	1.173E+03	1.903E+03	1.257E+02	-0.423
RA-223		81.07		-4.954E+00	9.181E+00	1.307E+01	1.090E+00	-0.379
		83.78		2.004E+00	6.006E+00	8.029E+00	6.859E-01	0.250
		94.90		-6.852E+01	1.347E+01	1.697E+01	1.369E+00	-4.037
		122.32		-4.517E+01	8.950E+01	1.396E+02	9.995E+00	-0.324
		144.24		-1.921E+01	4.333E+01	5.572E+01	3.967E+00	-0.345
		154.21		-5.437E+00	1.884E+01	3.135E+01	2.097E+00	-0.173
		269.46		5.949E+00	8.935E+00	1.464E+01	8.390E-01	0.406
		323.87	*	-8.331E+00	3.124E+01	5.173E+01	8.491E+00	-0.161
		338.28		-5.492E+01	6.295E+01	7.770E+01	8.058E+00	-0.707
		445.03		-1.054E+02	1.078E+02	1.675E+02	1.722E+01	-0.630
RA-224		240.98	*	1.917E+01	3.803E+01	5.489E+01	2.955E+00	0.349
AC-227		79.80		-1.481E+01	6.705E+01	9.678E+01	2.067E+01	-0.153
		236.00		1.173E+01	1.178E+01	1.732E+01	1.770E+00	0.677
		256.20	*	8.863E+00	1.881E+01	3.071E+01	4.241E+00	0.289
		286.10		-2.491E+00	7.822E+01	1.247E+02	1.422E+01	-0.020
	+	299.80		1.010E+02	8.751E+01	1.097E+02	1.775E+01	0.920
		304.40		-8.291E+00	9.731E+01	1.418E+02	2.439E+01	-0.058
		329.70		6.544E+00	4.277E+01	7.171E+01	8.843E+00	0.091
		334.20		-9.305E+01	1.096E+02	1.757E+02	3.205E+01	-0.530
PA-227		64.62	*	-1.000E+35	1.096E+02	Half-Life too short		
		110.05		1.000E+35	1.096E+02	Half-Life too short		
TH-227		79.80		-1.481E+01	6.705E+01	9.678E+01	2.094E+01	-0.153
		94.00		-4.164E+02	1.549E+02	1.678E+02	3.624E+01	-2.482
		236.00		1.173E+01	1.176E+01	1.732E+01	1.522E+00	0.677
		256.20	*	8.863E+00	1.883E+01	3.071E+01	5.152E+00	0.289
		286.10		-2.491E+00	7.826E+01	1.247E+02	1.249E+02	-0.020
	+	299.80		1.010E+02	8.751E+01	1.097E+02	1.775E+01	0.920

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		304.40		-8.291E+00	9.731E+01	1.418E+02	2.439E+01	-0.058
		329.70		6.544E+00	4.277E+01	7.171E+01	8.843E+00	0.091
		334.20		-9.305E+01	1.096E+02	1.757E+02	3.205E+01	-0.530
AC-228		338.32		-1.319E+01	1.603E+01	1.872E+01	7.624E+00	-0.704
		911.07	*	-1.406E+00	1.004E+01	1.162E+01	1.297E+00	-0.121
		969.11		-1.067E+01	1.411E+01	1.795E+01	4.149E+00	-0.594
RA-228		338.32		-1.319E+01	1.603E+01	1.872E+01	7.624E+00	-0.704
		911.07	*	-1.406E+00	1.004E+01	1.162E+01	1.297E+00	-0.121
		969.11		-1.067E+01	1.411E+01	1.795E+01	4.149E+00	-0.594
TH-229		85.43		-4.415E+00	8.890E+00	1.157E+01	1.003E+00	-0.382
		88.47		-3.228E+00	5.261E+00	6.811E+00	6.011E-01	-0.474
		100.00		-1.767E-01	8.291E+00	1.333E+01	1.013E+00	-0.013
		193.63	*	-2.623E+01	2.489E+01	3.979E+01	2.075E+00	-0.659
		210.97		-2.163E+01	3.548E+01	5.707E+01	3.013E+00	-0.379
TH-230		67.67	*	-1.011E+03	6.583E+03	7.112E+02	4.613E+03	-1.421
PA-231		283.67	*	-2.155E+01	7.874E+01	1.246E+02	1.700E+01	-0.173
	+	301.29		4.040E+01	3.464E+01	4.408E+01	4.535E+00	0.916
		330.00		9.028E+00	9.542E+01	1.596E+02	4.990E+01	0.057
TH-231		84.21	*	4.122E-01	2.329E+01	3.095E+01	5.517E+00	0.013
U-231		84.21		6.751E+00	3.814E+02	5.069E+02	4.347E+01	0.013
		92.29		-1.208E+02	1.883E+02	2.691E+02	2.246E+01	-0.449
		95.87	*	-2.522E+02	8.173E+01	1.165E+02	9.282E+00	-2.165
		108.00		1.871E+01	1.437E+02	2.308E+02	1.624E+01	0.081
TH-232		59.00	*	4.187E+02	4.536E+03	1.804E+03	1.898E+04	0.232
PA-233		75.28		-3.096E+01	1.519E+02	1.857E+02	2.785E+01	-0.167
		86.59		-7.940E+01	8.013E+01	9.894E+01	2.658E+01	-0.802
	+	300.12		2.816E+01	2.426E+01	3.047E+01	4.056E+00	0.924
		311.98	*	-1.015E+00	3.039E+00	5.042E+00	2.965E-01	-0.201
		340.50		4.017E+01	2.915E+01	4.809E+01	1.101E+01	0.835
		398.62		-6.787E+00	9.770E+01	1.600E+02	4.126E+01	-0.042
		415.76		-7.234E-01	7.656E+01	1.252E+02	2.571E+01	-0.006
PA-234		63.00		-1.157E+02	8.464E+01	1.126E+02	1.683E+01	-1.028
		94.67		-2.405E+01	8.899E+00	1.258E+01	1.514E+00	-1.913
		98.44		-1.101E-01	4.163E+00	6.697E+00	3.727E+00	-0.016
		99.86		1.498E+00	2.105E+01	3.393E+01	2.584E+00	0.044
		111.00		2.746E+00	9.107E+00	1.466E+01	1.599E+00	0.187
		131.20		8.160E-01	4.822E+00	8.208E+00	4.946E-01	0.099
		152.70		7.927E+00	1.538E+01	2.605E+01	4.085E+00	0.304
	+	186.00		8.978E+01	1.355E+02	1.174E+02	3.574E+01	0.765
		226.40		5.390E+00	1.891E+01	3.105E+01	3.519E+00	0.174
		227.20		-5.941E+00	2.057E+01	3.319E+01	1.772E+00	-0.179
		248.90		-2.827E+00	4.121E+01	6.642E+01	1.420E+01	-0.043
		293.70		-2.117E+01	4.371E+01	5.101E+01	8.147E+00	-0.415
		369.80		1.110E+01	4.018E+01	6.694E+01	1.388E+01	0.166
		568.70		-9.491E+00	6.500E+01	7.773E+01	5.244E+00	-0.122
		569.50		-3.320E+00	1.763E+01	2.091E+01	1.412E+00	-0.159
		574.00		-2.382E+01	6.843E+01	1.122E+02	7.617E+00	-0.212
		699.00		4.376E+00	3.215E+01	5.280E+01	9.851E+00	0.083
		706.10		-9.554E+00	4.553E+01	7.324E+01	3.253E+01	-0.130

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		733.00		-5.914E+00	1.682E+01	2.680E+01	5.870E+00	-0.221
		742.81		7.657E-01	5.763E+01	9.363E+01	6.286E+01	0.008
		796.30		-8.603E+00	3.645E+01	5.792E+01	1.558E+01	-0.149
		805.60		-3.572E+01	8.270E+01	7.411E+01	2.263E+01	-0.482
		819.60		1.827E+01	5.205E+01	8.770E+01	3.328E+01	0.208
		826.30		-3.271E+01	3.711E+01	5.424E+01	2.423E+01	-0.603
		831.60		-1.080E+01	2.524E+01	4.089E+01	1.217E+01	-0.264
		876.40		-2.241E+01	4.265E+01	5.774E+01	5.936E+01	-0.388
		880.51		5.073E+00	1.214E+01	2.055E+01	1.754E+00	0.247
		883.24		1.208E+01	1.476E+01	2.144E+01	1.441E+01	0.563
		899.00		1.350E+01	3.545E+01	5.905E+01	2.581E+01	0.229
		925.00		2.851E+01	4.710E+01	8.028E+01	6.741E+00	0.355
		926.50		1.098E+00	7.020E+00	1.169E+01	2.945E+00	0.094
		946.00	*	-3.888E-01	1.149E+01	1.891E+01	3.514E+00	-0.021
		949.00		-9.384E+00	1.742E+01	2.781E+01	2.277E+00	-0.337
		980.50		-2.866E+00	2.817E+01	4.601E+01	3.629E+00	-0.062
		1394.10		-1.628E+01	5.129E+01	8.041E+01	5.224E+01	-0.202
PA-234M		766.42		3.605E+02	5.038E+02	7.880E+02	3.990E+02	0.457
		1001.03	*	7.144E+01	2.463E+02	3.389E+02	3.105E+01	0.211
TH-234		63.29	*	-9.067E+01	7.210E+01	9.592E+01	1.680E+01	-0.945
		92.38		-2.140E+01	3.376E+01	4.802E+01	8.619E+00	-0.446
U-234		53.20	*	1.547E+03	1.570E+04	4.200E+03	4.200E+04	0.368
U-235		89.95		-3.800E+02	1.302E+02	6.857E+01	2.116E+01	-5.542
		93.35		-2.728E+01	4.053E+01	5.683E+01	1.586E+01	-0.480
		105.00		2.697E+01	4.975E+01	8.005E+01	2.359E+01	0.337
		143.76	*	-9.042E+00	1.351E+01	1.722E+01	2.800E+00	-0.525
		163.35		2.698E+01	2.314E+01	3.893E+01	6.927E+00	0.693
	+	185.71		3.325E+00	4.920E+00	4.337E+00	2.248E-01	0.767
		205.31		-4.591E+01	3.287E+01	3.880E+01	6.912E+00	-1.183
NP-236		94.67		-1.808E+01	6.552E+00	9.552E+00	7.727E-01	-1.893
		98.44		-8.359E-02	3.147E+00	5.063E+00	3.915E-01	-0.017
		111.00		2.077E+00	6.887E+00	1.109E+01	7.612E-01	0.187
		160.31	*	-6.427E+00	5.618E+00	6.303E+00	3.311E-01	-1.020
NP-237		86.50	*	-6.224E+00	1.154E+01	1.484E+01	3.328E+00	-0.419
		95.87		-1.516E+02	6.032E+01	7.002E+01	1.710E+01	-2.165
PU-237		59.54	*	-8.351E+00	8.068E+01	1.337E+02	1.012E+01	-0.062
U-238		63.29	*	-9.067E+01	7.210E+01	9.592E+01	1.680E+01	-0.945
		92.38		-2.140E+01	3.359E+01	4.802E+01	4.003E+00	-0.446
NP-239		99.55		-1.196E+00	7.075E+00	1.132E+01	8.649E-01	-0.106
		117.00	*	-4.227E+00	9.707E+00	1.523E+01	9.985E-01	-0.278
		209.75		-8.709E+00	3.539E+01	5.756E+01	3.037E+00	-0.151
		228.18		3.406E+00	1.064E+01	1.748E+01	9.340E-01	0.195
		277.60		-1.338E+00	8.767E+00	1.396E+01	7.635E-01	-0.096
		334.30		-5.434E+01	6.145E+01	9.949E+01	5.474E+00	-0.546
AM-241		59.54	*	-5.836E-01	5.638E+00	9.342E+00	7.732E-01	-0.062
AM-243		74.67	*	1.551E-01	2.906E+00	3.581E+00	2.848E-01	0.043
		86.72		-4.667E+02	4.354E+02	5.538E+02	4.863E+01	-0.843
		117.66		-4.243E+01	1.932E+02	3.050E+02	1.990E+01	-0.139
		142.18		3.579E+02	8.484E+02	1.444E+03	8.250E+01	0.248

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CM-243	99.55		-1.231E+00	7.282E+00	1.165E+01	8.902E-01	-0.106
	103.76	*	1.995E+00	4.427E+00	7.198E+00	5.267E-01	0.277
	117.00		-4.350E+00	9.988E+00	1.567E+01	1.027E+00	-0.278
	209.75		-8.586E+00	3.489E+01	5.675E+01	2.994E+00	-0.151
	228.18		3.443E+00	1.076E+01	1.767E+01	9.439E-01	0.195
	277.60		-1.349E+00	8.840E+00	1.408E+01	7.698E-01	-0.096
AM-246	798.80		-1.318E+01	6.118E+00	8.553E+00	6.973E-01	-1.541
	1036.00		-2.779E+00	1.160E+01	1.869E+01	1.363E+00	-0.149
	1062.04		2.212E+00	8.950E+00	1.480E+01	1.034E+00	0.149
	1078.86	*	-6.382E+00	6.143E+00	8.711E+00	5.907E-01	-0.733
CM-247	278.00		5.902E+00	3.629E+01	5.839E+01	3.193E+00	0.101
	287.40		1.232E+01	6.216E+01	9.985E+01	5.474E+00	0.123
	402.60	*	4.652E-02	1.740E+00	2.859E+00	1.573E-01	0.016
CF-249	252.85		7.557E+00	4.389E+01	7.119E+01	3.855E+00	0.106
	333.44		-3.632E+00	7.989E+00	1.313E+01	7.225E-01	-0.277
	387.95	*	8.036E-01	1.826E+00	3.054E+00	1.658E-01	0.263
CF-251	176.60	*	-8.392E+00	7.621E+00	1.014E+01	5.225E-01	-0.827
	227.00		1.604E+00	1.811E+01	2.957E+01	1.578E+00	0.054
	285.00		-2.272E+01	8.930E+01	1.414E+02	7.747E+00	-0.161

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494002		
Acquisition date	: 4-JAN-2010 19:28:21	Detector SN#	:
Detector ID	: GAM22	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 08:20:04.20	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUI
Sample ID	: G243494002	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 3-DEC-2009 15:52:22	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	
K-40	2.643E+00	3.171E+01	2.549E+01	0.000E+00
TL-208	3.324E-01	2.932E+00	2.690E+00	0.000E+00
PB-212	7.571E-01	4.180E+00	4.505E+00	0.000E+00
PO-212	7.571E-01	4.180E+00	4.505E+00	0.000E+00
PO-216	7.571E-01	4.180E+00	4.505E+00	0.000E+00
RA-226	5.474E+01	8.855E+01	5.625E+01	0.000E+00
TH-228	7.571E-01	4.180E+00	4.505E+00	0.000E+00
ANH-511	2.802E+00	4.199E+00	2.190E+00	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)		
BE-7	3.465E+00		1.498E+01	2.492E+01	0.000E+00	NOT IDENT.
NA-22	-1.824E+00		1.573E+00	2.451E+00	0.000E+00	NOT IDENT.
NA-24	0.000E+00		4.171E+08	0.000E+00	0.000E+00	SHORT HLIF
AL-26	3.830E-01		1.476E+00	2.529E+00	0.000E+00	NOT IDENT.
TI-44	4.729E-01		1.677E+00	2.184E+00	0.000E+00	FAIL ABUN
SC-46	-1.044E+00		1.645E+00	2.691E+00	0.000E+00	NOT IDENT.
V-48	-2.684E+00		3.024E+00	4.794E+00	0.000E+00	NOT IDENT.
CR-51	-9.257E+00		1.810E+01	3.039E+01	0.000E+00	NOT IDENT.
MN-52	6.748E+00		1.297E+01	2.244E+01	0.000E+00	NOT IDENT.
MN-54	2.514E-01		1.486E+00	2.549E+00	0.000E+00	NOT IDENT.
CO-56	-8.544E-01		1.769E+00	2.940E+00	0.000E+00	NOT IDENT.
CO-57	-6.218E-01		1.277E+00	2.034E+00	0.000E+00	NOT IDENT.
CO-58	3.215E-01		1.633E+00	2.814E+00	0.000E+00	NOT IDENT.
FE-59	-1.830E+00		3.513E+00	5.633E+00	0.000E+00	NOT IDENT.
CO-60	-1.222E+00		1.593E+00	2.539E+00	0.000E+00	NOT IDENT.
ZN-65	-5.377E+00		3.773E+00	5.746E+00	0.000E+00	NOT IDENT.
GE-68	3.009E+00		4.690E+01	7.820E+01	0.000E+00	NOT IDENT.
AS-73	1.438E+01		4.203E+01	5.594E+01	0.000E+00	NOT IDENT.
AS-74	-1.517E+00		4.877E+00	8.155E+00	0.000E+00	NOT IDENT.

SE-75	1.273E+00	2.140E+00	3.575E+00	0.000E+00	NOT IDENT.
BR-77	-1.962E+02	9.443E+02	1.530E+03	0.000E+00	FAIL ABUN
SR-82	-2.939E+00	1.739E+01	2.845E+01	0.000E+00	NOT IDENT.
RB-83	-3.554E-01	3.241E+00	5.275E+00	0.000E+00	NOT IDENT.
RB-84	1.704E+00	3.124E+00	5.424E+00	0.000E+00	NOT IDENT.
KR-85	0.000E+00	4.861E+02	8.093E+02	0.000E+00	NOT IDENT.
SR-85	0.000E+00	2.554E+00	4.252E+00	0.000E+00	NOT IDENT.
RB-86	-3.299E+00	3.192E+01	5.269E+01	0.000E+00	NOT IDENT.
Y-88	8.609E-01	1.689E+00	2.945E+00	0.000E+00	NOT IDENT.
ZR-88	3.448E-01	1.396E+00	2.363E+00	0.000E+00	NOT IDENT.
Y-91	4.723E+02	6.333E+02	1.120E+03	0.000E+00	NOT IDENT.
NB-94	-1.153E+00	1.459E+00	2.340E+00	0.000E+00	NOT IDENT.
NB-95	1.856E+00	2.084E+00	3.577E+00	0.000E+00	NOT IDENT.
NB-95M	8.769E-01	6.402E+00	9.324E+00	0.000E+00	NOT IDENT.
ZR-95	6.737E-01	2.915E+00	4.878E+00	0.000E+00	NOT IDENT.
NB-97	0.000E+00	3.864E+07	0.000E+00	0.000E+00	SHORT HLIF
ZR-97	0.000E+00	1.080E+09	0.000E+00	0.000E+00	SHORT HLIF
MO-99	-3.414E+02	8.567E+02	1.389E+03	0.000E+00	NOT IDENT.
TC-99M	0.000E+00	1.083E+21	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-8.608E-01	2.384E+00	2.756E+00	0.000E+00	NOT IDENT.
RH-102	-1.738E+00	1.309E+00	2.029E+00	0.000E+00	NOT IDENT.
RU-103	-5.379E-01	1.895E+00	3.072E+00	0.000E+00	NOT IDENT.
RH-106	-9.313E+00	1.441E+01	2.356E+01	0.000E+00	FAIL ABUN
RU-106	-9.313E+00	1.438E+01	2.356E+01	0.000E+00	FAIL ABUN
AG-108M	-1.650E-01	1.490E+00	2.467E+00	0.000E+00	NOT IDENT.
CD-109	-3.025E+01	3.835E+01	5.001E+01	0.000E+00	NOT IDENT.
AG-110M	6.996E-01	1.420E+00	2.433E+00	0.000E+00	NOT IDENT.
IN-111	1.603E+01	9.276E+01	1.539E+02	0.000E+00	NOT IDENT.
IN-113M	9.498E-02	2.027E+00	3.408E+00	0.000E+00	NOT IDENT.
SN-113	9.498E-02	2.027E+00	3.408E+00	0.000E+00	NOT IDENT.
IN-114M	-3.930E+00	9.940E+00	1.447E+01	0.000E+00	NOT IDENT.
CD-115	2.822E+01	1.206E+03	1.689E+03	0.000E+00	NOT IDENT.
SN-117M	-1.542E+00	4.237E+00	4.969E+00	0.000E+00	NOT IDENT.
SB-122	-1.308E+02	1.619E+02	2.660E+02	0.000E+00	NOT IDENT.
I-123	0.000E+00	7.478E+09	0.000E+00	0.000E+00	SHORT HLIF
TE-123M	-1.118E+00	1.980E+00	2.307E+00	0.000E+00	NOT IDENT.
I-124	-5.144E+01	4.929E+01	8.008E+01	0.000E+00	NOT IDENT.
SB-124	-3.252E-01	3.507E+00	5.881E+00	0.000E+00	NOT IDENT.
SB-125	-3.772E+00	4.136E+00	6.631E+00	0.000E+00	NOT IDENT.
TE-125M	2.480E+02	4.554E+02	7.536E+02	0.000E+00	NOT IDENT.
I-126	1.418E+00	8.576E+00	1.446E+01	0.000E+00	NOT IDENT.
SB-126	7.396E+00	7.219E+00	1.250E+01	0.000E+00	NOT IDENT.
SN-126	-3.486E+00	3.795E+00	4.934E+00	0.000E+00	NOT IDENT.
SB-127	-2.110E+01	8.188E+01	1.349E+02	0.000E+00	NOT IDENT.
XE-127	9.236E-01	2.274E+00	3.852E+00	0.000E+00	NOT IDENT.
I-131	2.254E+00	6.384E+00	1.091E+01	0.000E+00	NOT IDENT.
TE-132	1.733E+01	5.235E+01	8.768E+01	0.000E+00	NOT IDENT.
BA-133	3.399E+00	2.232E+00	3.469E+00	0.000E+00	NOT IDENT.
I-133	0.000E+00	1.703E+06	0.000E+00	0.000E+00	SHORT HLIF
CS-134	-1.150E+00	2.504E+00	3.045E+00	0.000E+00	NOT IDENT.
CS-135	3.367E+00	7.366E+00	1.224E+01	0.000E+00	NOT IDENT.
I-135	0.000E+00	6.424E+19	0.000E+00	0.000E+00	SHORT HLIF
CS-136	4.153E+00	4.825E+00	8.402E+00	0.000E+00	NOT IDENT.
BA-137M	6.628E-02	1.459E+00	2.449E+00	0.000E+00	NOT IDENT.
CS-137	7.007E-02	1.542E+00	2.589E+00	0.000E+00	NOT IDENT.
CE-139	-7.664E-01	1.439E+00	2.415E+00	0.000E+00	NOT IDENT.
BA-140	2.635E+00	1.287E+01	2.210E+01	0.000E+00	NOT IDENT.
LA-140	3.382E-01	4.581E+00	7.824E+00	0.000E+00	NOT IDENT.
CE-141	-1.870E+00	3.072E+00	5.196E+00	0.000E+00	NOT IDENT.
CE-143	0.000E+00	1.964E+04	0.000E+00	0.000E+00	SHORT HLIF
CE-144	-3.099E+00	9.387E+00	1.607E+01	0.000E+00	NOT IDENT.
PM-144	6.783E-01	1.587E+00	2.690E+00	0.000E+00	NOT IDENT.
PR-144	4.602E+01	1.076E+02	1.825E+02	0.000E+00	NOT IDENT.
PM-146	-1.348E+00	2.055E+00	3.313E+00	0.000E+00	NOT IDENT.
ND-147	-1.536E+00	2.872E+01	4.898E+01	0.000E+00	NOT IDENT.
PM-149	-2.835E+03	9.572E+03	1.543E+04	0.000E+00	NOT IDENT.
EU-152	-1.215E+00	4.571E+00	7.691E+00	0.000E+00	NOT IDENT.
GD-153	-2.042E-01	3.571E+00	5.862E+00	0.000E+00	NOT IDENT.
EU-154	-5.193E+00	4.399E+00	6.815E+00	0.000E+00	NOT IDENT.
EU-155	-1.360E-01	4.946E+00	8.081E+00	0.000E+00	NOT IDENT.
TB-160	2.806E+00	6.044E+00	1.046E+01	0.000E+00	NOT IDENT.
HO-166M	-6.111E-01	2.685E+00	4.422E+00	0.000E+00	FAIL ABUN
TM-171	-1.431E+03	1.398E+03	1.824E+03	0.000E+00	NOT IDENT.
HF-175	-8.835E-01	1.743E+00	2.911E+00	0.000E+00	NOT IDENT.
LU-176	-6.923E-01	1.193E+00	1.954E+00	0.000E+00	NOT IDENT.
LU-177	-2.878E+01	6.129E+01	1.011E+02	0.000E+00	NOT IDENT.
LU-177M	-1.068E+00	7.957E+00	1.323E+01	0.000E+00	NOT IDENT.
HF-181	8.725E-01	1.987E+00	3.331E+00	0.000E+00	NOT IDENT.

W-181	-3.035E+01	1.914E+01	2.497E+01	0.000E+00	NOT IDENT.
TA-182	-3.404E+00	6.386E+00	1.048E+01	0.000E+00	NOT IDENT.
RE-183	3.289E+00	5.347E+00	9.247E+00	0.000E+00	NOT IDENT.
RE-184	2.033E+00	1.157E+01	1.915E+01	0.000E+00	NOT IDENT.
OS-185	-6.130E-01	1.895E+00	3.136E+00	0.000E+00	NOT IDENT.
RE-188	-4.804E+00	8.117E+00	1.367E+01	0.000E+00	NOT IDENT.
W-188	-3.384E+02	3.484E+02	5.821E+02	0.000E+00	NOT IDENT.
IR-192	2.917E-01	1.603E+00	2.755E+00	0.000E+00	NOT IDENT.
AU-195	-3.656E+00	1.010E+01	1.641E+01	0.000E+00	NOT IDENT.
TL-200	0.000E+00	9.376E+04	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-2.500E+02	5.660E+02	9.515E+02	0.000E+00	NOT IDENT.
TL-202	1.904E+00	3.576E+00	6.060E+00	0.000E+00	NOT IDENT.
HG-203	1.083E+00	2.056E+00	3.411E+00	0.000E+00	NOT IDENT.
BI-207	2.641E-01	2.029E+00	3.400E+00	0.000E+00	NOT IDENT.
TL-207	-8.331E+00	3.061E+01	5.173E+01	0.000E+00	NOT IDENT.
PO-209	2.370E+02	3.103E+02	5.432E+02	0.000E+00	NOT IDENT.
BI-210	-7.071E+01	1.796E+02	2.355E+02	0.000E+00	NOT IDENT.
PB-210	-7.071E+01	1.796E+02	2.355E+02	0.000E+00	NOT IDENT.
PO-210	-7.071E+01	1.796E+02	2.355E+02	0.000E+00	NOT IDENT.
BI-211	-1.259E+01	1.564E+01	1.799E+01	0.000E+00	NOT IDENT.
PB-211	-2.158E+00	4.213E+01	7.035E+01	0.000E+00	NOT IDENT.
BI-212	9.064E-01	1.595E+01	2.171E+01	0.000E+00	NOT IDENT.
BI-214	-2.838E+00	4.796E+00	6.425E+00	0.000E+00	FAIL ABUN
PB-214	3.187E-01	6.422E+00	6.332E+00	0.000E+00	FAIL ABUN
PO-214	3.187E-01	6.422E+00	6.332E+00	0.000E+00	FAIL ABUN
PO-215	-8.331E+00	3.061E+01	5.173E+01	0.000E+00	NOT IDENT.
PO-218	3.187E-01	6.422E+00	6.332E+00	0.000E+00	FAIL ABUN
RN-219	1.220E+01	1.881E+01	3.210E+01	0.000E+00	NOT IDENT.
RN-220	-8.058E+02	1.150E+03	1.903E+03	0.000E+00	NOT IDENT.
RA-223	-8.331E+00	3.061E+01	5.173E+01	0.000E+00	NOT IDENT.
RA-224	1.917E+01	3.727E+01	5.489E+01	0.000E+00	NOT IDENT.
AC-227	8.863E+00	1.844E+01	3.071E+01	0.000E+00	FAIL ABUN
PA-227	0.000E+00	4.479E+40	0.000E+00	0.000E+00	SHORT HLIF
TH-227	8.863E+00	1.845E+01	3.071E+01	0.000E+00	FAIL ABUN
AC-228	-1.406E+00	9.837E+00	1.162E+01	0.000E+00	NOT IDENT.
RA-228	-1.406E+00	9.837E+00	1.162E+01	0.000E+00	NOT IDENT.
TH-229	-2.623E+01	2.439E+01	3.979E+01	0.000E+00	NOT IDENT.
TH-230	-1.011E+03	6.451E+03	7.112E+02	0.000E+00	NOT IDENT.
PA-231	-2.155E+01	7.717E+01	1.246E+02	0.000E+00	FAIL ABUN
TH-231	4.122E-01	2.282E+01	3.095E+01	0.000E+00	NOT IDENT.
U-231	-2.522E+02	8.009E+01	1.165E+02	0.000E+00	NOT IDENT.
TH-232	4.187E+02	4.445E+03	1.804E+03	0.000E+00	NOT IDENT.
PA-233	-1.015E+00	2.978E+00	5.042E+00	0.000E+00	FAIL ABUN
PA-234	-3.888E-01	1.126E+01	1.891E+01	0.000E+00	FAIL ABUN
PA-234M	7.144E+01	2.413E+02	3.389E+02	0.000E+00	NOT IDENT.
TH-234	-9.067E+01	7.065E+01	9.592E+01	0.000E+00	NOT IDENT.
U-234	1.547E+03	1.539E+04	4.200E+03	0.000E+00	NOT IDENT.
U-235	-9.042E+00	1.324E+01	1.722E+01	0.000E+00	FAIL ABUN
NP-236	-6.427E+00	5.506E+00	6.303E+00	0.000E+00	NOT IDENT.
NP-237	-6.224E+00	1.131E+01	1.484E+01	0.000E+00	NOT IDENT.
PU-237	-8.351E+00	7.907E+01	1.337E+02	0.000E+00	NOT IDENT.
U-238	-9.067E+01	7.065E+01	9.592E+01	0.000E+00	NOT IDENT.
NP-239	-4.227E+00	9.512E+00	1.523E+01	0.000E+00	NOT IDENT.
AM-241	-5.836E-01	5.526E+00	9.342E+00	0.000E+00	NOT IDENT.
AM-243	1.551E-01	2.848E+00	3.581E+00	0.000E+00	NOT IDENT.
CM-243	1.995E+00	4.338E+00	7.198E+00	0.000E+00	NOT IDENT.
AM-246	-6.382E+00	6.020E+00	8.711E+00	0.000E+00	NOT IDENT.
CM-247	4.652E-02	1.706E+00	2.859E+00	0.000E+00	NOT IDENT.
CF-249	8.036E-01	1.790E+00	3.054E+00	0.000E+00	NOT IDENT.
CF-251	-8.392E+00	7.468E+00	1.014E+01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:49:08.43

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494002.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:21.
Sample ID : G243494002 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM22 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:04.20 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.40	234	1025	0.93	127.05	123	11	7.79E-03	27.2	
2	0	77.27	89	506	1.13	154.77	153	6	2.95E-03	41.8	
3	0	92.60	583	1049	1.16	185.40	181	10	1.94E-02	11.2	
4	0	185.56	571	1129	1.32	371.14	364	15	1.90E-02	13.5	
5	0	238.63	258	580	1.26	477.17	473	8	8.60E-03	17.3	
6	0	300.38	97	457	1.36	600.57	595	10	3.23E-03	42.6	
7	0	353.14	167	528	3.24	706.01	700	12	5.56E-03	28.8	
8	0	510.99	1254	555	2.73	1021.48	1011	20	4.18E-02	5.4	
9	0	583.14	133	276	1.45	1165.70	1161	11	4.45E-03	25.6	
10	0	609.18	125	332	1.98	1217.74	1213	11	4.18E-03	29.9	
11	0	859.08	77	202	1.85	1717.32	1709	17	2.57E-03	43.9	
12	0	911.60	144	199	1.88	1822.32	1815	17	4.80E-03	24.2	
13	0	1460.70	165	77	2.42	2920.44	2911	16	5.50E-03	14.2	
14	0	1764.47	174	86	3.83	3528.14	3515	23	5.80E-03	15.1	

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:49:11.74

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494002.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 4-JAN-2010 19:28:21.
Sample ID : G243494002 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM22 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:04.20 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	2-Sigma %Error
K-40	1460.81	5	10.67*	1.600E+00	2.643E+00	2.643E+00	1224.15
TL-208	72.80	------	2.03	4.255E+00	------ Line Not Found		------
	74.97	------	3.43	4.475E+00	------ Line Not Found		------
	277.35	------	6.80	4.903E+00	------ Line Not Found		------
	510.84	108	21.60	3.465E+00	1.297E+01	1.320E+01	153.15
	583.14	10	84.20*	3.181E+00	3.266E-01	3.324E-01	900.33
	763.13	------	1.64	2.632E+00	------ Line Not Found		------
	860.37	77	12.46	2.406E+00	2.316E+01	2.357E+01	88.33
	1093.90	------	0.37	1.989E+00	------ Line Not Found		------
PB-212	74.81	------	10.70	4.459E+00	------ Line Not Found		------
	77.11	24	18.00	4.693E+00	2.562E+00	2.607E+00	361.89
	87.30	------	8.00	5.457E+00	------ Line Not Found		------
	115.19	------	0.60	6.368E+00	------ Line Not Found		------
	238.63	19	44.60*	5.288E+00	7.441E-01	7.571E-01	563.31
	300.09	97	3.41	4.702E+00	5.450E+01	5.545E+01	85.51
PO-212	74.81	------	10.70	4.459E+00	------ Line Not Found		------
	77.11	24	18.00	4.693E+00	2.562E+00	2.607E+00	361.89
	87.30	------	8.00	5.457E+00	------ Line Not Found		------
	115.19	------	0.60	6.368E+00	------ Line Not Found		------
	238.63	19	44.60*	5.288E+00	7.441E-01	7.571E-01	563.31
	300.09	97	3.41	4.702E+00	5.450E+01	5.545E+01	85.51
PO-216	74.81	------	10.70	4.459E+00	------ Line Not Found		------
	77.11	24	18.00	4.693E+00	2.562E+00	2.607E+00	361.89
	87.30	------	8.00	5.457E+00	------ Line Not Found		------
	115.19	------	0.60	6.368E+00	------ Line Not Found		------
	238.63	19	44.60*	5.288E+00	7.441E-01	7.571E-01	563.31
	300.09	97	3.41	4.702E+00	5.450E+01	5.545E+01	85.51
RA-226	186.21	118	3.28*	5.913E+00	5.474E+01	5.474E+01	165.06
TH-228	74.81	------	10.70	4.459E+00	------ Line Not Found		------
	77.11	24	18.00	4.693E+00	2.562E+00	2.607E+00	361.89
	87.30	------	8.00	5.457E+00	------ Line Not Found		------
	238.63	19	44.60*	5.288E+00	7.441E-01	7.571E-01	563.31

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	2-Sigma %Error
	300.09	97	3.41	4.702E+00	5.450E+01	5.545E+01	103.52
ANH-511	511.00	108	100.00*	3.465E+00	2.802E+00	2.802E+00	152.92

Flag: "*" = Keyline

Total number of lines in spectrum	10	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	10	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
K-40	1.28E+09Y	1.00	2.643E+00	2.643E+00	32.36E+00	1224.15	
TL-208	1.91Y	1.02	3.266E-01	3.324E-01	29.92E-01	900.33	
PB-212	1.91Y	1.02	7.441E-01	7.571E-01	42.65E-01	563.31	
PO-212	1.91Y	1.02	7.441E-01	7.571E-01	42.65E-01	563.31	
PO-216	1.91Y	1.02	7.441E-01	7.571E-01	42.65E-01	563.31	
RA-226	1600.00Y	1.00	5.474E+01	5.474E+01	9.036E+01	165.06	
TH-228	1.91Y	1.02	7.441E-01	7.571E-01	42.65E-01	563.31	
ANH-511	1.00E+09Y	1.00	2.802E+00	2.802E+00	4.285E+00	152.92	
	Total Activity :		6.349E+01	6.355E+01			
	Grand Total Activity :		6.349E+01	6.355E+01			

Flags: "K" = Keyline not found
"E" = Manually edited
"M" = Manually accepted
"A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	353.14	6	528	3.24	706.01	700	12	1.89E-04	****	4.31E+00	T
0	1764.47	50	86	3.83	3528.14	3515	23	1.66E-03	****	1.43E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:49:16.66

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G243494002.CNF;1		
Acquisition date	: 4-JAN-2010 19:28:21.	Detector SN#	:
Detector ID	: GAM22	Sensitivity	: 5.00000
Geometry	: JAR	Energy tolerance	: 1.50000
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 08:20:04.20	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUID
Sample ID	: G243494002	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.00000E+00 FILTER

QC DATA

CALIB. DATE/TIME	: 3-DEC-2009 15:52:22.29	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
K-40	2.643E+00	3.236E+01	2.549E+01	1.966E+00	0.104
TL-208	3.324E-01	2.992E+00	2.690E+00	2.050E-01	0.124
PB-212	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
PO-212	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
PO-216	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
RA-226	5.474E+01	9.036E+01	5.625E+01	4.126E+01	0.973
TH-228	7.571E-01	4.265E+00	4.505E+00	3.154E-01	0.168
ANH-511	2.802E+00	4.285E+00	2.190E+00	1.383E-01	1.280

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7	3.465E+00		1.528E+01	2.492E+01	1.740E+00	0.139
NA-22	-1.824E+00		1.605E+00	2.451E+00	1.689E-01	-0.744
NA-24	1.452E+02		2.128E+02	Half-Life too short		
AL-26	3.830E-01		1.506E+00	2.529E+00	1.491E-01	0.151

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
TI-44	4.729E-01	+	1.711E+00	2.184E+00	1.783E-01	0.217
SC-46	-1.044E+00		1.679E+00	2.691E+00	2.308E-01	-0.388
V-48	-2.684E+00		3.085E+00	4.794E+00	3.767E-01	-0.560
CR-51	-9.257E+00		1.847E+01	3.039E+01	1.884E+00	-0.305
MN-52	6.748E+00		1.323E+01	2.244E+01	1.684E+00	0.301
MN-54	2.514E-01		1.516E+00	2.549E+00	2.122E-01	0.099
CO-56	-8.544E-01		1.805E+00	2.940E+00	2.464E-01	-0.291
CO-57	-6.218E-01		1.303E+00	2.034E+00	1.291E-01	-0.306
CO-58	3.215E-01		1.667E+00	2.814E+00	2.317E-01	0.114
FE-59	-1.830E+00		3.585E+00	5.633E+00	4.179E-01	-0.325
CO-60	-1.222E+00		1.625E+00	2.539E+00	1.962E-01	-0.481
ZN-65	-5.377E+00		3.850E+00	5.746E+00	3.628E-01	-0.936
GE-68	3.009E+00		4.786E+01	7.820E+01	5.318E+00	0.038
AS-73	1.438E+01		4.289E+01	5.594E+01	4.184E+00	0.257
AS-74	-1.517E+00		4.977E+00	8.155E+00	5.668E-01	-0.186
SE-75	1.273E+00		2.184E+00	3.575E+00	1.969E-01	0.356
BR-77	-1.962E+02		9.636E+02	1.530E+03	9.777E+01	-0.128
SR-82	-2.939E+00		1.775E+01	2.845E+01	2.288E+00	-0.103
RB-83	-3.554E-01		3.307E+00	5.275E+00	3.369E-01	-0.067
RB-84	1.704E+00		3.188E+00	5.424E+00	4.633E-01	0.314
KR-85	3.034E+03		4.961E+02	8.093E+02	5.130E+01	3.748
SR-85	1.594E+01		2.606E+00	4.252E+00	2.696E-01	3.748
RB-86	-3.299E+00		3.257E+01	5.269E+01	3.588E+00	-0.063
Y-88	8.609E-01		1.724E+00	2.945E+00	1.694E-01	0.292
ZR-88	3.448E-01		1.425E+00	2.363E+00	1.283E-01	0.146
Y-91	4.723E+02		6.462E+02	1.120E+03	6.609E+01	0.422
NB-94	-1.153E+00		1.488E+00	2.340E+00	1.793E-01	-0.493
NB-95	1.856E+00		2.126E+00	3.577E+00	2.858E-01	0.519
NB-95M	8.769E-01		6.533E+00	9.324E+00	6.713E-01	0.094
ZR-95	6.737E-01		2.975E+00	4.878E+00	4.332E-01	0.138
NB-97	1.849E+01		1.971E+01	Half-Life too short		
ZR-97	5.318E+03		5.509E+02	Half-Life too short		
MO-99	-3.414E+02		8.742E+02	1.389E+03	2.051E+02	-0.246
TC-99M	-2.387E+14		5.527E+14	Half-Life too short		
RH-101	-8.608E-01		2.433E+00	2.756E+00	1.442E-01	-0.312
RH-102	-1.738E+00		1.335E+00	2.029E+00	1.227E-01	-0.857
RU-103	-5.379E-01		1.934E+00	3.072E+00	3.945E-01	-0.175
RH-106	-9.313E+00		1.471E+01	2.356E+01	2.934E+00	-0.395
RU-106	-9.313E+00		1.467E+01	2.356E+01	1.683E+00	-0.395
AG-108M	-1.650E-01		1.520E+00	2.467E+00	1.540E-01	-0.067
CD-109	-3.025E+01		3.913E+01	5.001E+01	4.444E+00	-0.605
AG-110M	6.996E-01		1.449E+00	2.433E+00	1.876E-01	0.288
IN-111	1.603E+01		9.465E+01	1.539E+02	8.302E+00	0.104
IN-113M	9.498E-02		2.069E+00	3.408E+00	1.988E-01	0.028
SN-113	9.498E-02		2.069E+00	3.408E+00	1.988E-01	0.028
IN-114M	-3.930E+00		1.014E+01	1.447E+01	7.528E-01	-0.271
CD-115	2.822E+01		1.231E+03	1.689E+03	1.088E+02	0.017
SN-117M	-1.542E+00		4.323E+00	4.969E+00	2.632E-01	-0.310

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
SB-122	-1.308E+02		1.652E+02	2.660E+02	1.785E+01	-0.492
I-123	-4.222E+03		3.815E+03	Half-Life too short		
TE-123M	-1.118E+00		2.020E+00	2.307E+00	1.239E-01	-0.485
I-124	-5.144E+01		5.029E+01	8.008E+01	5.606E+00	-0.642
SB-124	-3.252E-01		3.578E+00	5.881E+00	4.100E-01	-0.055
SB-125	-3.772E+00		4.220E+00	6.631E+00	3.942E-01	-0.569
TE-125M	2.480E+02		4.647E+02	7.536E+02	6.781E+01	0.329
I-126	1.418E+00		8.751E+00	1.446E+01	1.080E+00	0.098
SB-126	7.396E+00		7.367E+00	1.250E+01	9.696E-01	0.592
SN-126	-3.486E+00		3.872E+00	4.934E+00	4.368E-01	-0.707
SB-127	-2.110E+01		8.355E+01	1.349E+02	1.533E+01	-0.156
XE-127	9.236E-01		2.320E+00	3.852E+00	2.022E-01	0.240
I-131	2.254E+00		6.514E+00	1.091E+01	6.776E-01	0.207
TE-132	1.733E+01		5.342E+01	8.768E+01	1.287E+01	0.198
BA-133	3.399E+00		2.278E+00	3.469E+00	3.956E-01	0.980
I-133	1.091E-01		8.688E-01	Half-Life too short		
CS-134	-1.150E+00		2.556E+00	3.045E+00	2.498E-01	-0.378
CS-135	3.367E+00		7.517E+00	1.224E+01	9.052E-01	0.275
I-135	1.574E+13		3.277E+13	Half-Life too short		
CS-136	4.153E+00		4.923E+00	8.402E+00	6.382E-01	0.494
BA-137M	6.628E-02		1.489E+00	2.449E+00	1.823E-01	0.027
CS-137	7.007E-02		1.574E+00	2.589E+00	1.932E-01	0.027
CE-139	-7.664E-01		1.468E+00	2.415E+00	1.237E-01	-0.317
BA-140	2.635E+00		1.313E+01	2.210E+01	7.216E+00	0.119
LA-140	3.382E-01		4.675E+00	7.824E+00	5.443E-01	0.043
CE-141	-1.870E+00		3.135E+00	5.196E+00	3.047E-01	-0.360
CE-143	3.794E-03		1.002E-02	Half-Life too short		
CE-144	-3.099E+00		9.579E+00	1.607E+01	2.292E+00	-0.193
PM-144	6.783E-01		1.619E+00	2.690E+00	2.054E-01	0.252
PR-144	4.602E+01		1.098E+02	1.825E+02	1.393E+01	0.252
PM-146	-1.348E+00		2.097E+00	3.313E+00	2.877E-01	-0.407
ND-147	-1.536E+00		2.931E+01	4.898E+01	6.770E+00	-0.031
PM-149	-2.835E+03		9.768E+03	1.543E+04	2.169E+03	-0.184
EU-152	-1.215E+00		4.664E+00	7.691E+00	4.823E-01	-0.158
GD-153	-2.042E-01		3.644E+00	5.862E+00	4.586E-01	-0.035
EU-154	-5.193E+00		4.488E+00	6.815E+00	6.847E-01	-0.762
EU-155	-1.360E-01		5.047E+00	8.081E+00	5.928E-01	-0.017
TB-160	2.806E+00		6.167E+00	1.046E+01	8.924E-01	0.268
HO-166M	-6.111E-01		2.740E+00	4.422E+00	3.410E-01	-0.138
TM-171	-1.431E+03		1.427E+03	1.824E+03	1.396E+02	-0.785
HF-175	-8.835E-01		1.778E+00	2.911E+00	1.600E-01	-0.304
LU-176	-6.923E-01		1.218E+00	1.954E+00	1.075E-01	-0.354
LU-177	-2.878E+01		6.255E+01	1.011E+02	5.330E+00	-0.285
LU-177M	-1.068E+00		8.120E+00	1.323E+01	7.389E-01	-0.081
HF-181	8.725E-01		2.027E+00	3.331E+00	2.032E-01	0.262
W-181	-3.035E+01		1.953E+01	2.497E+01	1.903E+00	-1.216
TA-182	-3.404E+00		6.517E+00	1.048E+01	6.424E-01	-0.325
RE-183	3.289E+00		5.456E+00	9.247E+00	4.813E-01	0.356

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
RE-184	2.033E+00		1.181E+01	1.915E+01	1.037E+00	0.106
OS-185	-6.130E-01		1.934E+00	3.136E+00	2.297E-01	-0.195
RE-188	-4.804E+00		8.283E+00	1.367E+01	7.358E-01	-0.352
W-188	-3.384E+02		3.555E+02	5.821E+02	3.194E+01	-0.581
IR-192	2.917E-01		1.636E+00	2.755E+00	1.525E-01	0.106
AU-195	-3.656E+00		1.031E+01	1.641E+01	1.263E+00	-0.223
TL-200	-6.154E-02		4.784E-02	Half-Life too short		
TL-201	-2.500E+02		5.776E+02	9.515E+02	4.873E+01	-0.263
TL-202	1.904E+00		3.649E+00	6.060E+00	3.504E-01	0.314
HG-203	1.083E+00		2.098E+00	3.411E+00	1.995E-01	0.317
BI-207	2.641E-01		2.070E+00	3.400E+00	2.370E-01	0.078
TL-207	-8.331E+00		3.124E+01	5.173E+01	8.491E+00	-0.161
PO-209	2.370E+02		3.167E+02	5.432E+02	4.676E+01	0.436
BI-210	-7.071E+01		1.832E+02	2.355E+02	1.802E+01	-0.300
PB-210	-7.071E+01		1.832E+02	2.355E+02	1.802E+01	-0.300
PO-210	-7.071E+01		1.832E+02	2.355E+02	1.543E+01	-0.300
BI-211	-1.259E+01		1.596E+01	1.799E+01	1.107E+00	-0.700
PB-211	-2.158E+00		4.299E+01	7.035E+01	4.384E+01	-0.031
BI-212	9.064E-01		1.627E+01	2.171E+01	2.020E+00	0.042
BI-214	-2.838E+00		4.894E+00	6.425E+00	5.622E-01	-0.442
PB-214	3.187E-01	+	6.553E+00	6.332E+00	5.109E-01	0.050
PO-214	3.187E-01	+	6.553E+00	6.332E+00	5.109E-01	0.050
PO-215	-8.331E+00		3.124E+01	5.173E+01	8.491E+00	-0.161
PO-218	3.187E-01	+	6.553E+00	6.332E+00	5.109E-01	0.050
RN-219	1.220E+01		1.919E+01	3.210E+01	4.328E+00	0.380
RN-220	-8.058E+02		1.173E+03	1.903E+03	1.257E+02	-0.423
RA-223	-8.331E+00		3.124E+01	5.173E+01	8.491E+00	-0.161
RA-224	1.917E+01		3.803E+01	5.489E+01	2.955E+00	0.349
AC-227	8.863E+00		1.881E+01	3.071E+01	4.241E+00	0.289
PA-227	-1.000E+35		2.285E+34	Half-Life too short		
TH-227	8.863E+00		1.883E+01	3.071E+01	5.152E+00	0.289
AC-228	-1.406E+00		1.004E+01	1.162E+01	1.297E+00	-0.121
RA-228	-1.406E+00		1.004E+01	1.162E+01	1.297E+00	-0.121
TH-229	-2.623E+01		2.489E+01	3.979E+01	2.075E+00	-0.659
TH-230	-1.011E+03		6.583E+03	7.112E+02	4.613E+03	-1.421
PA-231	-2.155E+01		7.874E+01	1.246E+02	1.700E+01	-0.173
TH-231	4.122E-01		2.329E+01	3.095E+01	5.517E+00	0.013
U-231	-2.522E+02		8.173E+01	1.165E+02	9.282E+00	-2.165
TH-232	4.187E+02		4.536E+03	1.804E+03	1.898E+04	0.232
PA-233	-1.015E+00		3.039E+00	5.042E+00	2.965E-01	-0.201
PA-234	-3.888E-01		1.149E+01	1.891E+01	3.514E+00	-0.021
PA-234M	7.144E+01		2.463E+02	3.389E+02	3.105E+01	0.211
TH-234	-9.067E+01		7.210E+01	9.592E+01	1.680E+01	-0.945
U-234	1.547E+03		1.570E+04	4.200E+03	4.200E+04	0.368
U-235	-9.042E+00		1.351E+01	1.722E+01	2.800E+00	-0.525
NP-236	-6.427E+00		5.618E+00	6.303E+00	3.311E-01	-1.020
NP-237	-6.224E+00		1.154E+01	1.484E+01	3.328E+00	-0.419
PU-237	-8.351E+00		8.068E+01	1.337E+02	1.012E+01	-0.062

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
U-238	-9.067E+01		7.210E+01	9.592E+01	1.680E+01	-0.945
NP-239	-4.227E+00		9.707E+00	1.523E+01	9.985E-01	-0.278
AM-241	-5.836E-01		5.638E+00	9.342E+00	7.732E-01	-0.062
AM-243	1.551E-01		2.906E+00	3.581E+00	2.848E-01	0.043
CM-243	1.995E+00		4.427E+00	7.198E+00	5.267E-01	0.277
AM-246	-6.382E+00		6.143E+00	8.711E+00	5.907E-01	-0.733
CM-247	4.652E-02		1.740E+00	2.859E+00	1.573E-01	0.016
CF-249	8.036E-01		1.826E+00	3.054E+00	1.658E-01	0.263
CF-251	-8.392E+00		7.621E+00	1.014E+01	5.225E-01	-0.827

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G243494002		
Acquisition date	: 4-JAN-2010 19:28:21	Detector SN#	:
Detector ID	: GAM22	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 08:20:04.20	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUI
Sample ID	: G243494002	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 3-DEC-2009 15:52:22	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act Error	DLC (pCi/FILTER)	TPU
K-40	2.643E+00	3.171E+01	1.275E+01	1.618E+01
TL-208	3.324E-01	2.932E+00	1.346E+00	1.496E+00
PB-212	7.571E-01	4.180E+00	2.254E+00	2.132E+00
PO-212	7.571E-01	4.180E+00	2.254E+00	2.132E+00
PO-216	7.571E-01	4.180E+00	2.254E+00	2.132E+00
RA-226	5.474E+01	8.855E+01	2.814E+01	4.518E+01
TH-228	7.571E-01	4.180E+00	2.254E+00	2.132E+00
ANH-511	2.802E+00	4.199E+00	1.095E+00	2.143E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L Act error	DLC (pCi/FILTER)	TPU
BE-7	3.465E+00	1.498E+01	1.247E+01	7.640E+00 NOT IDENT.
NA-22	-1.824E+00	1.573E+00	1.226E+00	8.029E-01 NOT IDENT.
NA-24	1.452E+08	4.171E+08	0.000E+00	2.128E+08 SHORT HLIF
AL-26	3.830E-01	1.476E+00	1.265E+00	7.528E-01 NOT IDENT.
TI-44	4.729E-01	1.677E+00	1.093E+00	8.556E-01 FAIL ABUN
SC-46	-1.044E+00	1.645E+00	1.346E+00	8.396E-01 NOT IDENT.
V-48	-2.684E+00	3.024E+00	2.398E+00	1.543E+00 NOT IDENT.
CR-51	-9.257E+00	1.810E+01	1.520E+01	9.235E+00 NOT IDENT.
MN-52	6.748E+00	1.297E+01	1.122E+01	6.616E+00 NOT IDENT.
MN-54	2.514E-01	1.486E+00	1.275E+00	7.580E-01 NOT IDENT.
CO-56	-8.544E-01	1.769E+00	1.471E+00	9.024E-01 NOT IDENT.
CO-57	-6.218E-01	1.277E+00	1.018E+00	6.515E-01 NOT IDENT.
CO-58	3.215E-01	1.633E+00	1.408E+00	8.334E-01 NOT IDENT.
FE-59	-1.830E+00	3.513E+00	2.818E+00	1.793E+00 NOT IDENT.
CO-60	-1.222E+00	1.593E+00	1.270E+00	8.127E-01 NOT IDENT.
ZN-65	-5.377E+00	3.773E+00	2.875E+00	1.926E+00 NOT IDENT.
GE-68	3.009E+00	4.690E+01	3.912E+01	2.393E+01 NOT IDENT.
AS-73	1.438E+01	4.203E+01	2.799E+01	2.144E+01 NOT IDENT.
AS-74	-1.517E+00	4.877E+00	4.080E+00	2.488E+00 NOT IDENT.

SE-75	1.273E+00	2.140E+00	1.789E+00	1.092E+00 NOT IDENT.
BR-77	-1.962E+02	9.443E+02	7.656E+02	4.818E+02 FAIL ABUN
SR-82	-2.939E+00	1.739E+01	1.423E+01	8.873E+00 NOT IDENT.
RB-83	-3.554E-01	3.241E+00	2.639E+00	1.653E+00 NOT IDENT.
RB-84	1.704E+00	3.124E+00	2.714E+00	1.594E+00 NOT IDENT.
KR-85	3.034E+03	4.861E+02	4.049E+02	2.499E+02 NOT IDENT.
SR-85	1.594E+01	2.554E+00	2.127E+00	1.313E+00 NOT IDENT.
RB-86	-3.299E+00	3.192E+01	2.636E+01	1.629E+01 NOT IDENT.
Y-88	8.609E-01	1.689E+00	1.474E+00	8.618E-01 NOT IDENT.
ZR-88	3.448E-01	1.396E+00	1.182E+00	7.123E-01 NOT IDENT.
Y-91	4.723E+02	6.333E+02	5.603E+02	3.232E+02 NOT IDENT.
NB-94	-1.153E+00	1.459E+00	1.171E+00	7.443E-01 NOT IDENT.
NB-95	1.856E+00	2.084E+00	1.790E+00	1.063E+00 NOT IDENT.
NB-95M	8.769E-01	6.402E+00	4.665E+00	3.267E+00 NOT IDENT.
ZR-95	6.737E-01	2.915E+00	2.441E+00	1.487E+00 NOT IDENT.
NB-97	1.849E+07	3.864E+07	0.000E+00	1.972E+07 SHORT HLIF
ZR-97	5.318E+09	1.080E+09	0.000E+00	5.535E+08 SHORT HLIF
MO-99	-3.414E+02	8.567E+02	6.949E+02	4.371E+02 NOT IDENT.
TC-99M	-2.387E+20	1.083E+21	0.000E+00	0.000E+00 SHORT HLIF
RH-101	-8.608E-01	2.384E+00	1.379E+00	1.216E+00 NOT IDENT.
RH-102	-1.738E+00	1.309E+00	1.015E+00	6.679E-01 NOT IDENT.
RU-103	-5.379E-01	1.895E+00	1.537E+00	9.668E-01 NOT IDENT.
RH-106	-9.313E+00	1.441E+01	1.179E+01	7.353E+00 FAIL ABUN
RU-106	-9.313E+00	1.438E+01	1.179E+01	7.338E+00 FAIL ABUN
AG-108M	-1.650E-01	1.490E+00	1.234E+00	7.601E-01 NOT IDENT.
CD-109	-3.025E+01	3.835E+01	2.502E+01	1.957E+01 NOT IDENT.
AG-110M	6.996E-01	1.420E+00	1.217E+00	7.246E-01 NOT IDENT.
IN-111	1.603E+01	9.276E+01	7.698E+01	4.733E+01 NOT IDENT.
IN-113M	9.498E-02	2.027E+00	1.705E+00	1.034E+00 NOT IDENT.
SN-113	9.498E-02	2.027E+00	1.705E+00	1.034E+00 NOT IDENT.
IN-114M	-3.930E+00	9.940E+00	7.241E+00	5.071E+00 NOT IDENT.
CD-115	2.822E+01	1.206E+03	8.450E+02	6.154E+02 NOT IDENT.
SN-117M	-1.542E+00	4.237E+00	2.486E+00	2.162E+00 NOT IDENT.
SB-122	-1.308E+02	1.619E+02	1.331E+02	8.263E+01 NOT IDENT.
I-123	-4.222E+09	7.478E+09	0.000E+00	3.816E+09 SHORT HLIF
TE-123M	-1.118E+00	1.980E+00	1.154E+00	1.010E+00 NOT IDENT.
I-124	-5.144E+01	4.929E+01	4.006E+01	2.515E+01 NOT IDENT.
SB-124	-3.252E-01	3.507E+00	2.942E+00	1.789E+00 NOT IDENT.
SB-125	-3.772E+00	4.136E+00	3.317E+00	2.110E+00 NOT IDENT.
TE-125M	2.480E+02	4.554E+02	3.770E+02	2.323E+02 NOT IDENT.
I-126	1.418E+00	8.576E+00	7.235E+00	4.376E+00 NOT IDENT.
SB-126	7.396E+00	7.219E+00	6.254E+00	3.684E+00 NOT IDENT.
SN-126	-3.486E+00	3.795E+00	2.468E+00	1.936E+00 NOT IDENT.
SB-127	-2.110E+01	8.188E+01	6.750E+01	4.178E+01 NOT IDENT.
XE-127	9.236E-01	2.274E+00	1.927E+00	1.160E+00 NOT IDENT.
I-131	2.254E+00	6.384E+00	5.458E+00	3.257E+00 NOT IDENT.
TE-132	1.733E+01	5.235E+01	4.387E+01	2.671E+01 NOT IDENT.
BA-133	3.399E+00	2.232E+00	1.735E+00	1.140E+00 NOT IDENT.
I-133	1.091E+05	1.703E+06	0.000E+00	8.688E+05 SHORT HLIF
CS-134	-1.150E+00	2.504E+00	1.523E+00	1.278E+00 NOT IDENT.
CS-135	3.367E+00	7.366E+00	6.122E+00	3.759E+00 NOT IDENT.
I-135	1.574E+19	6.424E+19	0.000E+00	0.000E+00 SHORT HLIF
CS-136	4.153E+00	4.825E+00	4.204E+00	2.462E+00 NOT IDENT.
BA-137M	6.628E-02	1.459E+00	1.225E+00	7.444E-01 NOT IDENT.
CS-137	7.007E-02	1.542E+00	1.295E+00	7.869E-01 NOT IDENT.
CE-139	-7.664E-01	1.439E+00	1.208E+00	7.342E-01 NOT IDENT.
BA-140	2.635E+00	1.287E+01	1.105E+01	6.566E+00 NOT IDENT.
LA-140	3.382E-01	4.581E+00	3.914E+00	2.337E+00 NOT IDENT.
CE-141	-1.870E+00	3.072E+00	2.600E+00	1.568E+00 NOT IDENT.
CE-143	3.794E+03	1.964E+04	0.000E+00	1.002E+04 SHORT HLIF
CE-144	-3.099E+00	9.387E+00	8.039E+00	4.790E+00 NOT IDENT.
PM-144	6.783E-01	1.587E+00	1.346E+00	8.095E-01 NOT IDENT.
PR-144	4.602E+01	1.076E+02	9.131E+01	5.492E+01 NOT IDENT.
PM-146	-1.348E+00	2.055E+00	1.657E+00	1.049E+00 NOT IDENT.
ND-147	-1.536E+00	2.872E+01	2.451E+01	1.465E+01 NOT IDENT.
PM-149	-2.835E+03	9.572E+03	7.720E+03	4.884E+03 NOT IDENT.
EU-152	-1.215E+00	4.571E+00	3.848E+00	2.332E+00 NOT IDENT.
GD-153	-2.042E-01	3.571E+00	2.933E+00	1.822E+00 NOT IDENT.
EU-154	-5.193E+00	4.399E+00	3.410E+00	2.245E+00 NOT IDENT.
EU-155	-1.360E-01	4.946E+00	4.043E+00	2.523E+00 NOT IDENT.
TB-160	2.806E+00	6.044E+00	5.233E+00	3.084E+00 NOT IDENT.
HO-166M	-6.111E-01	2.685E+00	2.212E+00	1.370E+00 FAIL ABUN
TM-171	-1.431E+03	1.398E+03	9.127E+02	7.135E+02 NOT IDENT.
HF-175	-8.835E-01	1.743E+00	1.456E+00	8.892E-01 NOT IDENT.
LU-176	-6.923E-01	1.193E+00	9.776E-01	6.090E-01 NOT IDENT.
LU-177	-2.878E+01	6.129E+01	5.059E+01	3.127E+01 NOT IDENT.
LU-177M	-1.068E+00	7.957E+00	6.616E+00	4.060E+00 NOT IDENT.
HF-181	8.725E-01	1.987E+00	1.667E+00	1.014E+00 NOT IDENT.

W-181	-3.035E+01	1.914E+01	1.249E+01	9.769E+00	NOT IDENT.
TA-182	-3.404E+00	6.386E+00	5.245E+00	3.259E+00	NOT IDENT.
RE-183	3.289E+00	5.347E+00	4.626E+00	2.728E+00	NOT IDENT.
RE-184	2.033E+00	1.157E+01	9.583E+00	5.904E+00	NOT IDENT.
OS-185	-6.130E-01	1.895E+00	1.569E+00	9.668E-01	NOT IDENT.
RE-188	-4.804E+00	8.117E+00	6.838E+00	4.142E+00	NOT IDENT.
W-188	-3.384E+02	3.484E+02	2.912E+02	1.778E+02	NOT IDENT.
IR-192	2.917E-01	1.603E+00	1.378E+00	8.181E-01	NOT IDENT.
AU-195	-3.656E+00	1.010E+01	8.209E+00	5.156E+00	NOT IDENT.
TL-200	-6.154E+04	9.376E+04	0.000E+00	4.784E+04	SHORT HLIF
TL-201	-2.500E+02	5.660E+02	4.760E+02	2.888E+02	NOT IDENT.
TL-202	1.904E+00	3.576E+00	3.032E+00	1.825E+00	NOT IDENT.
HG-203	1.083E+00	2.056E+00	1.707E+00	1.049E+00	NOT IDENT.
BI-207	2.641E-01	2.029E+00	1.701E+00	1.035E+00	NOT IDENT.
TL-207	-8.331E+00	3.061E+01	2.588E+01	1.562E+01	NOT IDENT.
PO-209	2.370E+02	3.103E+02	2.718E+02	1.584E+02	NOT IDENT.
BI-210	-7.071E+01	1.796E+02	1.178E+02	9.162E+01	NOT IDENT.
PB-210	-7.071E+01	1.796E+02	1.178E+02	9.162E+01	NOT IDENT.
PO-210	-7.071E+01	1.796E+02	1.178E+02	9.161E+01	NOT IDENT.
BI-211	-1.259E+01	1.564E+01	8.999E+00	7.979E+00	NOT IDENT.
PB-211	-2.158E+00	4.213E+01	3.519E+01	2.150E+01	NOT IDENT.
BI-212	9.064E-01	1.595E+01	1.086E+01	8.137E+00	NOT IDENT.
BI-214	-2.838E+00	4.796E+00	3.214E+00	2.447E+00	FAIL ABUN
PB-214	3.187E-01	6.422E+00	3.168E+00	3.276E+00	FAIL ABUN
PO-214	3.187E-01	6.422E+00	3.168E+00	3.276E+00	FAIL ABUN
PO-215	-8.331E+00	3.061E+01	2.588E+01	1.562E+01	NOT IDENT.
PO-218	3.187E-01	6.422E+00	3.168E+00	3.276E+00	FAIL ABUN
RN-219	1.220E+01	1.881E+01	1.606E+01	9.597E+00	NOT IDENT.
RN-220	-8.058E+02	1.150E+03	9.521E+02	5.868E+02	NOT IDENT.
RA-223	-8.331E+00	3.061E+01	2.588E+01	1.562E+01	NOT IDENT.
RA-224	1.917E+01	3.727E+01	2.746E+01	1.902E+01	NOT IDENT.
AC-227	8.863E+00	1.844E+01	1.537E+01	9.407E+00	FAIL ABUN
PA-227	-1.000E+41	4.479E+40	0.000E+00	0.000E+00	SHORT HLIF
TH-227	8.863E+00	1.845E+01	1.537E+01	9.416E+00	FAIL ABUN
AC-228	-1.406E+00	9.837E+00	5.812E+00	5.019E+00	NOT IDENT.
RA-228	-1.406E+00	9.837E+00	5.812E+00	5.019E+00	NOT IDENT.
TH-229	-2.623E+01	2.439E+01	1.991E+01	1.245E+01	NOT IDENT.
TH-230	-1.011E+03	6.451E+03	3.558E+02	3.291E+03	NOT IDENT.
PA-231	-2.155E+01	7.717E+01	6.232E+01	3.937E+01	FAIL ABUN
TH-231	4.122E-01	2.282E+01	1.549E+01	1.164E+01	NOT IDENT.
U-231	-2.522E+02	8.009E+01	5.827E+01	4.094E+01	NOT IDENT.
TH-232	4.187E+02	4.445E+03	9.023E+02	2.268E+03	NOT IDENT.
PA-233	-1.015E+00	2.978E+00	2.522E+00	1.520E+00	FAIL ABUN
PA-234	-3.888E-01	1.126E+01	9.461E+00	5.746E+00	FAIL ABUN
PA-234M	7.144E+01	2.413E+02	1.696E+02	1.231E+02	NOT IDENT.
TH-234	-9.067E+01	7.065E+01	4.799E+01	3.606E+01	NOT IDENT.
U-234	1.547E+03	1.539E+04	2.101E+03	7.850E+03	NOT IDENT.
U-235	-9.042E+00	1.324E+01	8.616E+00	6.755E+00	FAIL ABUN
NP-236	-6.427E+00	5.506E+00	3.153E+00	2.810E+00	NOT IDENT.
NP-237	-6.224E+00	1.131E+01	7.426E+00	5.770E+00	NOT IDENT.
PU-237	-8.351E+00	7.907E+01	6.688E+01	4.034E+01	NOT IDENT.
U-238	-9.067E+01	7.065E+01	4.799E+01	3.606E+01	NOT IDENT.
NP-239	-4.227E+00	9.512E+00	7.619E+00	4.853E+00	NOT IDENT.
AM-241	-5.836E-01	5.526E+00	4.674E+00	2.819E+00	NOT IDENT.
AM-243	1.551E-01	2.848E+00	1.792E+00	1.453E+00	NOT IDENT.
CM-243	1.995E+00	4.338E+00	3.601E+00	2.213E+00	NOT IDENT.
AM-246	-6.382E+00	6.020E+00	4.358E+00	3.072E+00	NOT IDENT.
CM-247	4.652E-02	1.706E+00	1.430E+00	8.702E-01	NOT IDENT.
CF-249	8.036E-01	1.790E+00	1.528E+00	9.132E-01	NOT IDENT.
CF-251	-8.392E+00	7.468E+00	5.075E+00	3.811E+00	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	438.0388
46.50	438.0388
46.50	438.0388
48.70	446.2205
49.72	441.8873
51.35	452.5138
52.39	436.9593
52.97	398.9996
53.15	394.6566
53.20	394.7417
53.44	377.4422
54.07	402.7582
56.28	462.1588
56.28	462.1638
57.37	0.0000
57.53	467.3868
57.53	467.3906
57.60	447.6063
57.98	443.5488
57.98	443.5488
59.00	418.6697
59.32	452.6275
59.32	452.6275
59.40	452.7709
59.54	453.0229
59.54	453.0229
59.72	550.9028
60.01	551.5356
61.10	686.6051
61.14	686.7113
61.30	621.6971
63.00	552.1578
63.29	549.8588
63.29	549.8588
63.58	552.4046
64.28	528.5556
64.62	0.0000
65.12	699.1450
65.20	668.0975
65.20	668.0975
66.05	721.1495
66.72	563.7992
66.83	564.0269
66.91	564.1934
67.20	530.3506
67.20	530.3506
67.67	581.5225
67.75	581.6876
67.85	581.8991
68.90	596.9641
68.90	596.9641
69.30	562.1233
69.67	544.0031
70.82	541.2186
70.82	541.2186
70.83	541.2380
72.80	595.1143
72.80	595.1143
72.87	595.2591
72.87	595.2591
74.67	587.7902
74.81	588.0655
74.81	588.0655
74.81	588.0655
74.81	588.0655
74.81	588.0655
74.81	588.0655

74.81	588.0655
74.97	588.3822
74.97	588.3822
75.28	616.3164
75.70	601.9761
77.11	632.2729
77.11	632.2729
77.11	632.2729
77.11	632.2729
77.11	632.2729
77.11	632.2729
77.11	632.2729
78.38	501.4747
79.62	531.1950
79.80	531.5004
79.80	531.5004
80.11	542.8215
80.18	542.9424
80.30	543.1492
80.30	543.1492
80.57	543.6138
81.00	584.5630
81.07	584.6928
81.07	584.6928
81.07	584.6928
82.60	557.4531
83.37	541.1237
83.78	526.2134
83.78	526.2134
83.78	526.2134
84.21	559.1920
84.21	559.1920
84.90	571.8507
85.43	577.9993
86.29	593.1243
86.50	593.4985
86.54	593.5705
86.59	637.7123
86.72	637.9628
86.79	637.0431
86.94	637.3333
87.30	610.6901
87.30	610.6901
87.30	610.6901
87.30	610.6901
87.30	610.6901
87.30	610.6901
87.30	610.6901
87.57	611.1807
87.88	597.0042
88.03	597.2695
88.36	610.5051
88.47	610.7053
89.36	1000.4193
89.95	1206.5957
91.11	671.7668
92.29	663.3838
92.38	663.5546
92.38	663.5546
93.35	649.3401
94.00	763.0656
94.67	1003.9379
94.67	1003.9522
94.90	1204.4443
94.90	1204.4443
94.90	1204.4443
95.87	914.6674
95.87	914.6674
96.73	673.8704
97.43	619.9835
98.44	594.5698
98.44	594.5726
98.88	601.8010
99.55	586.5704
99.55	586.5704
99.86	570.7210
100.00	570.9369
100.10	583.0854

103.18	608.7440
103.76	560.1490
105.00	578.5194
105.31	606.6064
108.00	626.3736
109.28	633.9789
110.05	0.0000
111.00	656.8834
111.00	656.8834
111.76	677.2126
112.95	689.3342
115.19	695.3595
115.19	695.3595
115.19	695.3595
116.30	675.6425
117.00	697.2451
117.00	697.2451
117.66	681.2512
121.11	632.8059
121.62	679.5472
121.78	679.7967
122.06	685.9905
122.32	686.3998
122.32	686.3998
122.32	686.3998
123.07	663.3581
127.23	639.3426
129.76	664.0148
131.20	648.4866
133.02	677.5844
133.54	673.0307
135.34	680.0674
136.00	697.0428
136.25	697.4131
136.48	684.3867
140.51	750.3737
140.51	0.0000
142.18	724.0980
142.65	693.1992
143.76	693.8590
144.24	667.3665
144.24	667.3665
144.24	667.3665
145.22	729.4777
145.44	734.3413
147.16	725.0249
152.43	692.9827
152.70	670.3252
153.22	670.9973
154.21	708.2894
154.21	708.2894
154.21	708.2894
155.03	705.7017
156.02	695.9149
158.56	673.1901
159.00	0.0000
159.00	686.7878
160.31	737.0449
161.27	718.7051
162.32	678.8384
162.64	678.3034
163.35	641.6100
163.89	667.6293
165.85	719.0840
167.43	707.8870
171.28	665.1055
171.86	654.3358
172.10	654.6131
176.55	729.8959
176.60	729.9596
181.06	702.3767
184.41	674.3611
185.71	675.8129
186.00	676.1403
186.21	676.3726
190.27	665.9152
192.34	663.4021
193.63	720.1741

197.04	655.4504
198.01	648.4769
198.60	676.9901
200.40	704.8925
201.83	705.4556
202.84	626.2614
205.31	672.9589
208.36	636.6014
208.81	635.0078
209.75	643.0017
209.75	643.0017
210.97	664.4932
215.65	609.7596
216.55	657.6837
218.09	644.7838
222.10	583.4580
223.80	598.3292
226.40	562.0874
227.00	574.0005
227.08	574.0637
227.20	597.0438
228.16	560.3496
228.18	560.3660
228.18	560.3660
231.56	0.0000
235.69	589.3475
236.00	559.2773
236.00	559.2773
238.63	621.2823
238.63	621.2823
238.63	621.2823
238.63	621.2823
239.00	629.2031
240.98	673.2717
241.98	647.0023
241.98	647.0023
241.98	647.0023
244.69	627.3853
245.39	606.6419
247.94	583.0001
248.90	571.9462
249.79	574.7507
252.40	567.0099
252.85	556.5702
252.85	556.5702
254.15	0.0000
256.20	524.3615
256.20	524.3615
260.50	528.2996
260.90	520.9534
262.80	551.6231
264.65	498.2560
268.24	513.6246
268.79	522.7604
269.46	514.3958
269.46	514.3958
269.46	514.3958
271.23	509.9952
273.65	556.7794
276.40	526.4748
277.35	553.7000
277.60	540.5406
277.60	540.5406
278.00	527.4750
278.60	544.5209
279.20	527.1167
279.53	527.3192
280.46	502.2825
281.68	557.6553
283.67	550.0091
284.30	568.3141
285.00	538.5488
285.90	548.0806
286.10	530.2701
286.10	530.2701
287.40	513.0999
288.45	0.0000
290.67	556.2791

290.80	556.3620
291.72	558.7548
293.26	0.0000
293.70	496.2924
295.21	451.6146
295.21	451.6146
295.21	451.6146
295.96	473.1616
296.50	482.5239
297.23	478.3782
298.57	564.0017
299.80	507.3854
299.80	507.3854
300.09	515.7564
300.09	515.7564
300.09	515.7564
300.09	515.7564
300.12	515.7703
301.29	441.0121
302.84	464.6236
303.76	463.5703
303.91	463.6445
304.40	460.8461
304.40	460.8461
304.84	468.7009
306.84	505.9431
308.46	469.9491
311.98	478.2015
316.51	436.9284
318.01	431.1258
319.02	458.5586
319.41	465.2649
320.08	467.4507
323.87	484.2781
323.87	484.2781
323.87	484.2781
325.23	462.4918
328.77	467.9510
329.70	483.4499
329.70	483.4499
330.00	484.5413
333.44	493.8047
334.20	511.1961
334.20	511.1961
334.30	512.1940
338.28	481.9985
338.28	481.9985
338.28	481.9985
338.32	482.0233
338.32	482.0233
340.50	426.9720
340.57	426.9995
343.40	491.1548
344.27	464.8496
345.85	479.2041
350.59	0.0000
351.07	493.2813
351.92	468.0424
351.92	468.0424
351.92	468.0424
355.39	0.0000
356.01	354.0356
364.48	373.7859
366.43	393.0037
367.43	408.9904
367.94	0.0000
369.80	389.3521
374.96	392.2104
383.85	387.4823
387.95	362.0583
388.63	367.2568
391.69	370.2573
391.69	370.2573
392.90	357.6679
398.62	384.5802
400.65	341.0029
401.10	342.1458
401.81	362.4961

402.60	390.9602
404.84	379.6030
410.95	355.2167
411.60	351.3513
413.65	364.1706
414.70	385.8796
415.30	367.7379
415.76	361.7689
417.63	0.0000
418.52	362.6096
423.70	344.6953
427.08	345.6633
427.89	360.3052
432.53	349.2804
433.00	351.4841
433.93	343.4733
439.47	316.9625
439.56	321.1420
439.89	331.6245
443.98	345.2307
444.90	368.4481
445.03	368.4868
445.03	368.4868
445.03	368.4868
453.90	372.1321
463.38	335.7058
468.07	331.6028
473.00	324.3137
475.06	337.6401
475.35	322.7551
476.78	315.6125
477.59	307.2393
477.96	296.6186
482.03	294.2991
484.57	313.1518
487.03	316.9544
490.36	0.0000
492.35	270.5780
497.08	299.7491
507.63	0.0000
510.53	0.0000
510.84	327.9510
511.00	327.9875
511.85	328.1828
511.85	328.1828
513.99	329.7803
513.99	329.7803
520.41	302.5573
520.65	302.6108
527.90	280.2713
528.96	0.0000
529.64	285.2346
529.87	0.0000
531.02	297.5611
537.32	284.8766
543.00	259.8049
546.56	0.0000
549.76	302.2877
552.65	259.6035
555.20	285.4803
563.23	301.1917
563.90	306.0654
568.70	287.0573
569.32	276.7081
569.50	280.5477
569.67	280.5777
573.80	309.9309
574.00	313.7856
574.64	305.3320
578.91	303.4318
579.30	0.0000
583.14	285.8804
585.48	296.4613
591.81	354.6144
592.07	344.4056
593.00	328.1991
595.88	357.7977
600.56	392.7805

602.52	0.0000
602.71	431.1729
602.71	431.1729
603.60	457.6420
604.41	476.3423
604.70	473.5052
609.31	355.8884
610.33	368.7946
612.46	409.3246
614.37	431.3101
618.01	303.8570
621.84	293.7502
621.84	293.7502
631.29	285.5192
633.02	280.8683
633.10	283.8469
634.78	281.1572
635.90	280.3515
636.97	275.5736
645.85	265.0421
646.12	259.1060
656.30	230.5522
657.75	213.6890
657.90	0.0000
661.65	233.2650
661.65	233.2650
664.57	0.0000
666.33	241.9482
666.33	241.9482
675.00	216.7865
677.61	208.9840
685.20	207.8267
692.80	247.5636
695.00	256.0527
696.49	281.8873
696.49	281.8873
697.00	296.3203
697.49	295.3711
698.33	270.8804
698.50	270.9072
699.00	269.9506
702.63	279.7363
706.10	252.4369
706.58	0.0000
706.67	257.6701
709.31	209.5213
711.68	260.4236
713.82	283.4823
717.42	258.1085
720.50	229.4574
721.93	0.0000
722.20	289.9325
722.78	297.2999
722.78	297.2999
722.89	297.3174
722.95	297.3232
723.30	302.5803
724.18	266.3073
727.18	250.0537
733.00	248.7205
735.90	221.8857
739.58	210.7695
742.81	206.9197
744.21	213.3705
747.13	206.3200
751.79	219.4723
752.31	200.5336
753.82	201.7406
755.35	209.2954
756.15	190.3455
756.87	199.9358
763.13	222.8516
763.93	214.4483
765.79	212.5203
766.42	215.7742
766.84	226.4512
776.49	222.1955
778.00	223.4274

778.57	223.4912
778.89	221.3862
783.80	211.2002
785.46	199.5701
792.07	187.2928
795.84	189.7894
796.30	198.4611
798.80	258.0949
801.93	173.0436
805.60	182.9423
810.29	211.2726
810.76	192.7016
815.85	217.4258
817.79	201.7467
818.51	198.0771
819.60	185.0898
826.30	210.0547
828.27	0.0000
831.60	198.3497
831.96	193.6818
834.83	200.5307
836.80	0.0000
846.75	233.8152
848.13	248.8985
856.28	0.0000
856.80	206.3551
860.37	171.6813
867.32	182.2510
867.82	182.8484
871.10	171.3117
873.19	183.9241
874.81	211.8546
875.33	0.0000
876.40	203.3712
879.36	184.4263
880.27	188.3438
880.51	184.5201
881.50	183.6390
883.24	171.2704
884.67	191.5979
889.25	192.9478
896.60	172.2730
898.02	169.4733
899.00	174.3875
903.28	222.2711
911.07	148.0266
911.07	148.0266
919.63	173.9802
920.93	174.0764
925.00	148.9040
925.24	150.8794
926.50	157.8218
935.52	143.6602
937.48	144.7621
944.10	158.9841
946.00	147.2513
949.00	164.2544
962.29	231.8095
964.01	238.9369
966.15	176.3703
968.20	183.4962
969.11	189.5527
969.11	189.5527
977.42	156.1523
980.50	145.3211
983.50	164.5605
989.30	135.7745
996.32	197.6748
1001.03	137.4159
1001.68	135.4301
1004.76	181.1289
1021.30	0.0000
1024.50	0.0000
1034.80	141.2729
1036.00	146.4563
1037.82	142.4566
1038.57	141.4750
1038.76	0.0000

1045.16	129.4937
1046.59	147.0448
1048.07	140.9563
1050.47	149.3188
1050.47	149.3188
1062.04	142.7264
1063.62	147.9874
1076.63	138.3020
1077.35	138.3391
1078.86	142.5809
1085.78	137.7225
1093.90	125.5748
1099.22	148.8841
1112.02	154.8340
1112.84	198.0780
1115.52	224.6336
1120.29	144.7263
1120.51	140.5146
1121.28	141.6085
1124.00	0.0000
1129.67	140.9692
1131.51	0.0000
1147.95	0.0000
1167.94	131.5790
1173.22	120.5156
1175.09	133.7837
1177.93	123.5401
1189.05	129.6834
1204.90	120.8570
1205.75	0.0000
1213.00	133.5870
1221.42	140.6567
1230.97	170.8513
1235.34	137.4533
1236.41	0.0000
1238.25	126.0387
1246.25	133.1147
1260.41	0.0000
1271.85	108.9238
1274.45	139.1859
1274.54	139.1902
1291.56	103.7291
1298.22	0.0000
1312.09	115.2254
1325.50	95.9225
1325.50	95.9225
1332.49	128.8297
1333.61	122.9253
1360.21	99.9298
1362.66	0.0000
1365.15	100.0763
1368.21	107.1796
1368.53	0.0000
1376.25	111.4505
1384.27	126.8113
1394.10	105.9805
1395.20	103.9933
1407.95	91.2057
1434.06	84.7427
1436.60	84.8060
1457.56	0.0000
1460.81	107.9042
1489.15	96.4256
1509.49	111.5585
1596.49	107.1606
1620.62	83.9705
1678.03	0.0000
1691.02	69.9199
1691.02	69.9199
1706.46	0.0000
1750.46	0.0000
1764.49	79.0690
1770.23	90.8537
1771.40	85.5328
1791.20	0.0000
1808.65	66.9037
1836.01	65.3139

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G243494002

Total Uranium Activity	-2.7394E+02	ug/g
Total Uranium Counting Unc.	2.1028E+02	ug/g
Total Uranium Tpu	1.0732E-04	ug/g
Total Uranium Mda	1.4282E+02	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 937282	SAMPLE ID	: G243494002
ANALYST	: MXR1	DETECTOR	: GAM22
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 08:20:00.00
ANALYSIS DATE:	4-JAN-2010 19:28:21.14	SAMPLE ALQT:	1.000 FILTER

GROSS GAMMA ACTIVITY	(pCi/FILTER)	: 1.393E+01
GROSS GAMMA ERROR	(pCi/FILTER)	: 2.298E+01
GROSS GAMMA MDA	(pCi/FILTER)	: 2.956E+01
GROSS GAMMA DLC	(pCi/FILTER)	: 1.438E+01

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:50:02.65

```
*****************************************************************************
*                          GEL Laboratories LLC                             *
*                            2040 Savage Road                               *
*                          Charleston, SC 29414                             *
*****************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005628.CNF;1
Sample date       : 4-JAN-2010 00:00:00. Acquisition date : 4-JAN-2010 19:28:43.
Sample ID         : G1202005628          Sample quantity  : 1.00000E+00 FILTER
Detector name     : GAM23                Detector geometry: JAR
Elapsed live time: 0 08:20:00.00         Elapsed real time: 0 08:20:03.65  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 937282               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*****************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	238.29*	0	299	0.95	476.59	473	9	1.32E-05	*****	
2	0	510.42*	55	286	2.41	1020.84	1012	19	1.84E-03	101.2	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 03:50:05

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005628.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 4-JAN-2010 00:00:00 Acquisition date : 4-JAN-2010 19:28:43
Sample ID : G1202005628 Sample quantity : 1.0000 FILTER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA23 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:03.65 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
ANH-511	+	511.00	*	2.601E+00	5.266E+00	2.410E+00	1.357E-01	1.079

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7		477.59	*	2.741E+00	1.422E+01	2.369E+01	1.545E+00	0.116
NA-22		1274.54	*	9.038E-01	1.935E+00	3.311E+00	2.385E-01	0.273
NA-24		1368.53	*	2.213E+00	5.189E+00	8.875E+00	6.609E-01	0.249
AL-26		1129.67		2.131E+01	7.624E+01	1.286E+02	9.132E+00	0.166
		1808.65	*	-5.639E-01	1.963E+00	3.121E+00	1.856E-01	-0.181
K-40		1460.81	*	6.279E+00	2.878E+01	3.907E+01	2.950E+00	0.161
TI-44		67.85		-4.228E-01	2.983E+00	4.150E+00	3.328E-01	-0.102
		78.38	*	4.422E-03	1.666E+00	2.775E+00	2.077E-01	0.002
SC-46		889.25	*	3.274E-01	1.691E+00	2.864E+00	2.404E-01	0.114
		1120.51		-4.104E-04	1.997E+00	3.282E+00	2.357E-01	0.000
V-48		944.10		-9.274E+00	2.203E+01	3.508E+01	2.921E+00	-0.264
		983.50	*	-5.706E-01	1.804E+00	2.898E+00	2.357E-01	-0.197
		1312.09		-6.678E-01	2.056E+00	3.215E+00	2.369E-01	-0.208
CR-51		320.08	*	-1.145E+01	1.454E+01	2.350E+01	1.512E+00	-0.487
MN-52		744.21		-4.264E+00	4.361E+00	3.210E+00	2.148E-01	-1.328
		848.13		3.429E+01	5.684E+01	9.938E+01	7.844E+00	0.345
		935.52		8.475E-01	1.929E+00	3.331E+00	2.785E-01	0.254
		1246.25		-1.462E+01	5.321E+01	8.426E+01	5.944E+00	-0.173
		1333.61		1.661E+01	4.352E+01	7.373E+01	5.502E+00	0.225
		1434.06	*	1.435E+00	1.999E+00	3.534E+00	2.586E-01	0.406
MN-54		834.83	*	-6.855E-01	1.805E+00	2.931E+00	2.267E-01	-0.234
CO-56		846.75	*	-7.672E-01	1.743E+00	2.808E+00	2.212E-01	-0.273
		977.42		-3.904E+01	1.250E+02	2.012E+02	1.643E+01	-0.194
		1037.82		3.247E+00	1.284E+01	2.170E+01	1.804E+00	0.150
		1175.09		-2.391E+01	8.222E+01	1.305E+02	8.746E+00	-0.183
		1238.25		1.011E+00	2.789E+00	4.733E+00	3.465E-01	0.214
		1360.21		-1.292E+01	4.059E+01	6.297E+01	4.681E+00	-0.205
		1771.40		-1.063E+01	1.271E+01	1.858E+01	1.140E+00	-0.572

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CO-57		122.06	*	5.424E-01	1.285E+00	2.146E+00	1.584E-01	0.253
		136.48		-8.943E+00	1.027E+01	1.623E+01	1.193E+00	-0.551
CO-58		810.76	*	-7.077E+00	5.746E+00	2.536E+00	1.896E-01	-2.791
FE-59		142.65		-2.456E+01	1.457E+02	1.845E+02	1.144E+01	-0.133
		192.34		8.416E+00	4.020E+01	6.562E+01	7.574E+00	0.128
		1099.22	*	-4.988E-01	3.346E+00	5.423E+00	4.429E-01	-0.092
		1291.56		-8.471E-01	4.505E+00	7.175E+00	6.185E-01	-0.118
CO-60		1173.22		-1.760E-01	1.952E+00	3.170E+00	2.122E-01	-0.056
		1332.49	*	-9.493E-01	2.044E+00	3.144E+00	2.346E-01	-0.302
ZN-65		1115.52	*	7.962E-01	3.868E+00	6.478E+00	4.687E-01	0.123
GE-68		1077.35	*	-6.808E+01	5.671E+01	8.160E+01	6.145E+00	-0.834
AS-73		53.44	*	-3.949E+01	6.334E+01	8.514E+01	8.237E+00	-0.464
AS-74		595.88	*	1.029E+00	3.169E+00	5.260E+00	3.041E-01	0.196
		634.78		-6.069E+00	1.125E+01	1.753E+01	1.018E+00	-0.346
SE-75		66.05		-5.347E+02	3.058E+02	3.963E+02	4.005E+01	-1.349
		96.73		-4.796E+01	3.758E+01	5.856E+01	7.485E+00	-0.819
		121.11		3.738E+00	6.656E+00	1.116E+01	1.146E+00	0.335
		136.00		-1.516E+00	1.848E+00	2.929E+00	1.940E-01	-0.518
		198.60		-6.879E+00	8.772E+01	1.414E+02	9.489E+00	-0.049
		264.65	*	1.546E-01	2.207E+00	3.539E+00	2.076E-01	0.044
		279.53		-3.235E+00	5.176E+00	8.492E+00	5.401E-01	-0.381
		303.91		-1.603E+00	1.008E+02	1.692E+02	1.618E+01	-0.009
		400.65		-8.158E+00	1.251E+01	2.000E+01	1.750E+00	-0.408
BR-77		87.88		-3.002E+02	1.398E+02	2.119E+02	1.607E+01	-1.417
		200.40		3.551E+01	1.359E+02	2.221E+02	1.177E+01	0.160
	+	239.00		6.100E-02	1.183E+01	1.389E+01	7.802E-01	0.004
		249.79		-3.601E+01	5.822E+01	9.048E+01	5.157E+00	-0.398
		281.68		2.044E+01	7.515E+01	1.281E+02	7.552E+00	0.160
		297.23		-3.116E+01	4.312E+01	7.021E+01	4.113E+00	-0.444
		303.76		-1.312E+01	1.487E+02	2.490E+02	1.453E+01	-0.053
		439.47		7.092E+01	1.268E+02	2.160E+02	1.165E+01	0.328
		484.57		4.266E+00	1.977E+02	3.257E+02	1.809E+01	0.013
		520.65	*	8.686E+00	8.867E+00	1.541E+01	8.714E-01	0.564
		574.64		-8.216E+00	1.698E+02	2.761E+02	1.589E+01	-0.030
		578.91		-5.844E+01	7.175E+01	1.102E+02	6.351E+00	-0.530
		585.48		-3.122E+01	1.357E+02	2.177E+02	1.256E+01	-0.143
		755.35		3.118E+00	1.366E+02	2.198E+02	1.499E+01	0.014
		817.79		5.110E+01	1.054E+02	1.830E+02	1.379E+01	0.279
SR-82		698.33		2.903E+02	1.350E+03	2.209E+03	1.368E+02	0.131
		776.49	*	-1.637E+01	1.268E+01	1.906E+01	1.345E+00	-0.859
		1395.20		2.934E+01	3.745E+02	6.127E+02	4.525E+01	0.048
RB-83		520.41	*	3.048E+00	3.255E+00	5.646E+00	3.192E-01	0.540
		529.64		-2.033E+00	4.769E+00	7.579E+00	4.301E-01	-0.268
		552.65		-2.895E+00	9.864E+00	1.582E+01	9.048E-01	-0.183
RB-84		881.50	*	-1.361E+00	2.454E+00	3.884E+00	3.223E-01	-0.350
KR-85		513.99	*	1.777E+03	4.698E+02	8.294E+02	4.676E+01	2.143
SR-85		513.99	*	7.852E+00	2.075E+00	3.664E+00	2.066E-01	2.143
RB-86		1076.63	*	-4.012E+01	2.276E+01	3.042E+01	2.293E+00	-1.319
Y-88		898.02		1.080E-01	1.845E+00	3.087E+00	2.638E-01	0.035

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		1836.01	*	6.405E-01	2.062E+00	3.542E+00	2.059E-01	0.181
ZR-88		392.90	*	-2.290E+00	1.794E+00	2.295E+00	1.190E-01	-0.998
Y-91		1204.90	*	2.967E+02	6.153E+02	1.058E+03	7.250E+01	0.280
NB-94		702.63	*	-6.667E-01	1.824E+00	2.863E+00	1.786E-01	-0.233
		871.10		-8.008E-01	1.589E+00	2.529E+00	2.066E-01	-0.317
NB-95		765.79	*	1.074E+00	1.724E+00	2.909E+00	2.017E-01	0.369
NB-95M		235.69	*	-7.676E-01	5.822E+00	8.088E+00	5.960E-01	-0.095
ZR-95		724.18		-8.635E-01	3.819E+00	6.034E+00	4.487E-01	-0.143
		756.15	*	-9.905E-01	3.115E+00	4.867E+00	3.845E-01	-0.204
NB-97		657.90	*	-2.867E+00	4.342E+00	6.665E+00	3.870E-01	-0.430
		1024.50		-5.853E+01	4.503E+02	7.351E+02	5.806E+01	-0.080
ZR-97		254.15		-5.795E+01	2.643E+02	4.185E+02	2.399E+01	-0.138
		355.39		-4.908E+01	1.577E+02	2.592E+02	1.434E+01	-0.189
		507.63	*	5.276E+02	1.167E+02	2.058E+02	1.157E+01	2.564
		602.52		-2.269E+02	4.890E+02	5.582E+02	3.230E+01	-0.406
		1021.30		1.001E+02	3.947E+02	6.672E+02	5.282E+01	0.150
		1147.95		4.782E+01	1.913E+02	3.215E+02	2.230E+01	0.149
		1362.66		8.617E+01	3.314E+02	5.562E+02	4.133E+01	0.155
		1750.46		2.758E+00	3.307E+02	5.490E+02	3.425E+01	0.005
MO-99		140.51		2.588E+01	3.882E+01	6.406E+01	1.734E+01	0.404
		181.06		-2.569E+01	2.597E+01	3.991E+01	6.757E+00	-0.644
		366.43		-9.893E+01	1.291E+02	2.066E+02	1.124E+01	-0.479
		739.58	*	1.066E+00	1.614E+01	2.611E+01	3.695E+00	0.041
		778.00		-3.021E+01	4.772E+01	7.622E+01	5.391E+00	-0.396
TC-99M		140.51	*	1.262E+01	1.865E+01	3.125E+01	2.054E+00	0.404
RH-101		127.23		-6.597E-01	1.601E+00	2.588E+00	1.824E-01	-0.255
		198.01	*	-9.723E-02	1.734E+00	2.798E+00	1.477E-01	-0.035
		325.23		-5.508E+00	1.156E+01	1.895E+01	1.088E+00	-0.291
RH-102		418.52		9.865E+00	1.450E+01	2.493E+01	1.323E+00	0.396
		475.06	*	-3.041E-01	2.030E+00	2.523E+00	1.394E-01	-0.121
		631.29		-2.021E-01	2.925E+00	4.723E+00	2.741E-01	-0.043
		697.49		4.390E+00	4.465E+00	7.652E+00	4.731E-01	0.574
		766.84		-1.526E+00	5.131E+00	8.026E+00	5.575E-01	-0.190
		1046.59		1.160E+00	4.881E+00	8.249E+00	6.395E-01	0.141
		1112.84		1.628E+00	9.861E+00	1.647E+01	1.194E+00	0.099
RU-103		497.08	*	-7.220E-01	1.706E+00	2.725E+00	3.420E-01	-0.265
		610.33		-2.511E+00	4.258E+01	5.585E+01	8.609E+00	-0.045
RH-106	+	511.85		1.265E+01	2.561E+01	2.690E+01	1.515E+00	0.470
		621.84	*	-1.027E+01	1.623E+01	2.504E+01	2.939E+00	-0.410
		1050.47		-2.765E+01	9.633E+01	1.541E+02	1.190E+01	-0.179
RU-106	+	511.85		1.265E+01	2.561E+01	2.690E+01	1.515E+00	0.470
		621.84	*	-1.027E+01	1.620E+01	2.504E+01	1.453E+00	-0.410
		1050.47		-2.765E+01	9.633E+01	1.541E+02	1.190E+01	-0.179
AG-108M		433.93	*	7.031E-01	1.822E+00	3.076E+00	1.817E-01	0.229
		614.37		-5.615E-01	2.095E+00	3.343E+00	2.102E-01	-0.168
		722.95		-1.223E+00	2.030E+00	3.101E+00	2.141E-01	-0.394
CD-109		88.03	*	-8.295E+01	3.952E+01	6.003E+01	4.553E+00	-1.382
AG-110M		657.75	*	-1.156E+00	1.722E+00	2.641E+00	1.632E-01	-0.438
		677.61		2.017E+01	1.435E+01	2.568E+01	1.623E+00	0.785

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	706.67		-3.591E+00	1.106E+01	1.741E+01	1.150E+00	-0.206
	763.93		3.001E+00	7.543E+00	1.251E+01	9.028E-01	0.240
	884.67		4.053E-01	2.231E+00	3.776E+00	3.256E-01	0.107
	937.48		2.895E+00	4.864E+00	8.496E+00	7.370E-01	0.341
	1384.27		-5.966E+00	8.039E+00	1.178E+01	9.049E-01	-0.507
IN-111	171.28		7.671E-01	1.593E+00	2.640E+00	1.337E-01	0.291
	245.39	*	-5.181E-03	1.813E+00	2.907E+00	1.647E-01	-0.002
IN-113M	391.69	*	-4.052E+00	2.706E+00	3.423E+00	1.921E-01	-1.184
SN-113	391.69	*	-4.052E+00	2.706E+00	3.423E+00	1.921E-01	-1.184
IN-114M	190.27	*	-1.266E+01	8.083E+00	1.222E+01	6.372E-01	-1.035
CD-115	260.90		-1.684E+01	8.661E+01	1.372E+02	7.930E+00	-0.123
	492.35		1.037E+01	2.466E+01	4.154E+01	2.317E+00	0.250
	527.90	*	2.490E-01	6.752E+00	1.109E+01	6.289E-01	0.022
SN-117M	156.02		7.197E+01	5.562E+01	9.500E+01	5.249E+00	0.758
	158.56	*	-7.816E-01	1.360E+00	2.165E+00	1.169E-01	-0.361
SB-122	563.90	*	-6.710E-01	2.911E+00	4.681E+00	2.687E-01	-0.143
	692.80		9.597E+00	6.561E+01	1.070E+02	6.561E+00	0.090
I-123	159.00	*	-6.058E+00	4.721E+00	7.286E+00	3.917E-01	-0.831
	528.96		-9.920E+01	3.596E+02	5.779E+02	3.278E+01	-0.172
TE-123M	159.00	*	-1.748E+00	1.362E+00	2.102E+00	1.148E-01	-0.831
I-124	602.71	*	-3.272E+00	5.191E+00	5.861E+00	3.392E-01	-0.558
	722.78		-1.037E+01	2.035E+01	3.137E+01	2.025E+00	-0.330
	1325.50		1.702E+02	1.627E+02	2.941E+02	2.186E+01	0.579
	1376.25		8.266E+01	1.418E+02	2.452E+02	1.818E+01	0.337
	1509.49		4.805E+01	7.714E+01	1.342E+02	9.590E+00	0.358
	1691.02		-1.157E+01	2.049E+01	3.122E+01	2.033E+00	-0.371
SB-124	602.71		-1.695E+00	2.689E+00	3.035E+00	1.757E-01	-0.558
	645.85		-1.415E+01	2.248E+01	3.464E+01	2.269E+00	-0.408
	709.31		7.152E+01	1.238E+02	2.082E+02	1.314E+01	0.344
	713.82		-6.214E+01	7.085E+01	1.053E+02	1.110E+01	-0.590
	722.78		-7.782E+00	1.528E+01	2.355E+01	1.579E+00	-0.330
	968.20		-3.148E+00	9.483E+01	1.568E+02	1.288E+01	-0.020
	1045.16		2.384E+01	9.031E+01	1.530E+02	1.188E+01	0.156
	1325.50		1.365E+02	1.305E+02	2.358E+02	1.753E+01	0.579
	1368.21		3.554E+01	7.012E+01	1.210E+02	1.541E+01	0.294
	1436.60		-1.147E+02	1.708E+02	2.511E+02	1.836E+01	-0.457
	1691.02	*	-2.049E+00	3.629E+00	5.529E+00	3.846E-01	-0.371
SB-125	427.89	*	6.544E-01	4.884E+00	8.146E+00	4.572E-01	0.080
	463.38		7.594E+00	1.366E+01	2.327E+01	1.511E+00	0.326
	600.56		6.121E+00	1.077E+01	1.809E+01	1.211E+00	0.338
	635.90		-9.828E-01	1.479E+01	2.389E+01	1.624E+00	-0.041
TE-125M	109.28	*	-6.047E+01	3.954E+02	6.486E+02	5.900E+01	-0.093
I-126	388.63		4.390E+00	5.017E+00	8.710E+00	4.542E-01	0.504
	666.33	*	-3.619E-01	4.244E+00	6.822E+00	3.994E-01	-0.053
	753.82		3.480E+01	3.445E+01	5.982E+01	4.067E+00	0.582
SB-126	223.80		4.103E+01	9.527E+01	1.562E+02	8.585E+00	0.263
	278.60		-5.337E+01	5.658E+01	9.142E+01	5.389E+00	-0.584
	296.50		5.605E+00	3.112E+01	5.275E+01	3.092E+00	0.106
	414.70		8.481E-02	1.711E+00	2.845E+00	1.505E-01	0.030

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	415.30		3.505E+00	1.449E+02	2.405E+02	1.273E+01	0.015
	555.20		5.919E+01	9.818E+01	1.666E+02	9.538E+00	0.355
	573.80		-5.990E+00	2.460E+01	3.945E+01	2.270E+00	-0.152
	593.00		-1.544E+01	2.410E+01	3.757E+01	2.170E+00	-0.411
	656.30		-1.408E+01	7.635E+01	1.219E+02	7.077E+00	-0.116
	666.33		-1.464E-01	1.717E+00	2.760E+00	1.616E-01	-0.053
	675.00		2.287E-01	4.437E+01	7.177E+01	4.267E+00	0.003
	695.00		2.658E+00	2.090E+00	3.637E+00	2.239E-01	0.731
	697.00		4.065E+00	7.262E+00	1.214E+01	7.498E-01	0.335
	720.50	*	1.689E+00	3.048E+00	5.139E+00	3.305E-01	0.329
	856.80		-1.626E+00	1.055E+01	1.739E+01	1.391E+00	-0.094
	989.30		-1.431E+00	2.723E+01	4.486E+01	3.635E+00	-0.032
	1034.80		5.135E+00	1.958E+02	3.241E+02	2.538E+01	0.016
	1213.00		-4.786E+00	7.937E+01	1.289E+02	8.881E+00	-0.037
SN-126	64.28		-2.363E+01	4.099E+01	5.014E+01	7.568E+00	-0.471
	86.94		-1.168E+01	1.622E+01	2.503E+01	1.030E+01	-0.467
	87.57	*	-3.411E+00	3.740E+00	5.994E+00	4.540E-01	-0.569
SB-127	61.10		-1.581E+02	2.574E+02	4.210E+02	3.810E+01	-0.376
	252.40		-3.099E+00	1.785E+01	2.827E+01	1.157E+01	-0.110
	290.80		-4.064E+01	8.437E+01	1.390E+02	8.192E+00	-0.292
	411.60		-1.148E+01	4.677E+01	7.644E+01	9.386E+00	-0.150
	444.90		-1.947E+01	4.091E+01	6.568E+01	5.174E+00	-0.296
	473.00		-2.002E+00	6.798E+00	1.099E+01	9.301E-01	-0.182
	543.00		-4.867E+00	6.974E+01	1.136E+02	1.220E+01	-0.043
	603.60		-7.507E+01	7.379E+01	8.062E+01	6.530E+00	-0.931
	685.20	*	1.354E+00	5.343E+00	8.804E+00	5.697E-01	0.154
	698.50		-1.723E+00	6.984E+01	1.125E+02	1.442E+01	-0.015
	722.20		-3.750E+01	1.143E+02	1.792E+02	1.159E+01	-0.209
	783.80		1.027E+01	1.401E+01	2.467E+01	2.217E+00	0.416
XE-127	57.60		2.053E+02	2.891E+02	4.963E+02	4.726E+01	0.414
	145.22		-3.634E+00	2.661E+01	4.328E+01	2.626E+00	-0.084
	172.10		3.741E+00	4.679E+00	7.844E+00	3.977E-01	0.477
	202.84	*	-6.592E-01	1.868E+00	2.974E+00	1.582E-01	-0.222
	374.96		-2.677E+00	8.160E+00	1.336E+01	7.159E-01	-0.200
I-131	80.18		-8.263E+01	6.540E+01	1.034E+02	7.728E+00	-0.799
	284.30		2.090E+01	2.348E+01	4.096E+01	2.645E+00	0.510
	364.48	*	-4.623E-01	1.834E+00	3.019E+00	1.839E-01	-0.153
	636.97		5.555E-01	2.504E+01	4.068E+01	2.615E+00	0.014
	722.89		-5.751E+01	1.010E+02	1.548E+02	9.997E+00	-0.372
TE-132	49.72		-7.419E+01	7.276E+01	1.173E+02	1.094E+01	-0.633
	111.76		-2.754E+00	7.565E+01	1.246E+02	8.927E+00	-0.022
	116.30		-5.909E+01	7.219E+01	1.151E+02	8.338E+00	-0.513
	228.16	*	-8.842E-01	1.816E+00	2.852E+00	3.606E-01	-0.310
BA-133	53.15		-1.219E+02	3.105E+02	4.225E+02	4.087E+01	-0.289
	79.62		-1.419E+01	6.149E+01	1.015E+02	1.482E+01	-0.140
	81.00		-3.838E+00	4.685E+00	7.507E+00	1.147E+00	-0.511
	276.40		5.748E+00	1.930E+01	3.122E+01	4.059E+00	0.184
	302.84		3.829E+00	7.235E+00	1.243E+01	1.451E+00	0.308
	356.01	*	-1.111E+00	2.299E+00	3.740E+00	4.274E-01	-0.297

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		383.85		-6.609E-01	1.560E+01	2.590E+01	2.745E+00	-0.026
I-133	+	510.53		3.150E+02	6.377E+02	7.045E+02	4.000E+01	0.447
		529.87	*	-8.319E-01	3.606E+00	5.811E+00	3.370E-01	-0.143
		706.58		-7.809E+01	2.713E+02	4.282E+02	2.709E+01	-0.182
		856.28		-1.998E+02	3.182E+02	5.045E+02	4.049E+01	-0.396
		875.33		1.905E+01	7.689E+01	1.310E+02	1.203E+01	0.145
		1236.41		-5.591E+01	2.820E+02	4.504E+02	3.174E+01	-0.124
		1298.22		4.997E+01	1.967E+02	3.285E+02	2.794E+01	0.152
CS-134		475.35		5.040E+00	1.313E+02	1.651E+02	9.120E+00	0.031
		563.23		5.848E+00	1.865E+01	3.108E+01	1.821E+00	0.188
		569.32		-7.431E+00	1.458E+01	1.732E+01	1.026E+00	-0.429
		604.70		-1.573E+00	1.939E+00	2.995E+00	1.744E-01	-0.525
		795.84	*	-1.980E-01	2.087E+00	3.472E+00	2.553E-01	-0.057
		801.93		1.268E+01	1.905E+01	3.347E+01	2.478E+00	0.379
		1038.57		-3.065E+00	1.758E+02	2.897E+02	2.261E+01	-0.011
		1167.94		1.103E+01	1.090E+02	1.804E+02	1.217E+01	0.061
		1365.15		-2.307E+01	6.125E+01	9.453E+01	7.450E+00	-0.244
CS-135		268.24	*	2.874E+00	8.470E+00	1.374E+01	1.055E+00	0.209
I-135		288.45		-4.494E+02	4.845E+02	7.794E+02	7.615E+01	-0.577
		417.63		1.544E+02	4.451E+02	7.519E+02	6.518E+01	0.205
		546.56		1.088E+02	2.497E+02	4.196E+02	3.720E+01	0.259
		836.80		2.118E+01	3.168E+02	5.322E+02	5.645E+01	0.040
		1038.76		-7.109E+01	2.604E+02	4.183E+02	4.566E+01	-0.170
		1124.00		-1.788E+02	6.275E+02	1.002E+03	9.825E+01	-0.178
		1131.51		1.210E+02	9.275E+01	1.706E+02	1.717E+01	0.710
		1260.41	*	6.020E+01	7.424E+01	1.317E+02	1.012E+01	0.457
		1457.56		3.184E+02	3.034E+02	5.412E+02	5.467E+01	0.588
		1678.03		-9.480E+01	2.164E+02	3.370E+02	3.607E+01	-0.281
		1706.46		2.349E+02	4.965E+02	8.770E+02	9.587E+01	0.268
		1791.20		7.413E+01	2.927E+02	5.005E+02	4.452E+01	0.148
CS-136		66.91		-3.492E+01	2.548E+01	3.345E+01	5.070E+00	-1.044
		86.29		-1.528E+01	2.360E+01	3.818E+01	4.638E+00	-0.400
		153.22		6.777E+00	1.580E+01	2.620E+01	1.861E+00	0.259
		163.89		8.148E+00	3.548E+01	4.345E+01	2.919E+00	0.188
		176.55		3.192E+00	9.086E+00	1.496E+01	8.819E-01	0.213
		273.65		-5.745E-01	1.122E+01	1.786E+01	1.190E+00	-0.032
		340.57		-2.217E+00	3.002E+00	4.840E+00	2.909E-01	-0.458
		818.51		5.966E-01	1.719E+00	2.955E+00	2.228E-01	0.202
		1048.07	*	5.887E-01	2.181E+00	3.698E+00	3.010E-01	0.159
		1235.34		-2.195E+00	1.080E+01	1.726E+01	1.851E+00	-0.127
BA-137M		661.65	*	1.065E+00	1.793E+00	3.030E+00	1.759E-01	0.351
CS-137		661.65	*	1.125E+00	1.895E+00	3.203E+00	1.868E-01	0.351
CE-139		165.85	*	4.969E-01	1.429E+00	2.358E+00	1.187E-01	0.211
BA-140		162.64		-1.889E+00	2.447E+01	2.960E+01	1.773E+00	-0.064
		304.84		-3.576E+01	3.270E+01	4.974E+01	1.358E+01	-0.719
		423.70		-3.368E+01	4.746E+01	7.338E+01	2.326E+01	-0.459
		537.32	*	-5.586E+00	8.689E+00	9.879E+00	3.211E+00	-0.565
LA-140		328.77		-1.699E-02	6.911E+00	1.158E+01	7.437E-01	-0.001
		432.53		4.253E+00	5.139E+01	8.542E+01	5.140E+00	0.050

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	487.03		1.601E-01	3.537E+00	5.835E+00	3.709E-01	0.027
	751.79		1.727E+01	4.156E+01	6.898E+01	5.461E+00	0.250
	815.85		4.849E+00	7.484E+00	1.313E+01	1.133E+00	0.369
	867.82		-1.076E+01	2.909E+01	4.688E+01	4.038E+00	-0.230
	919.63		-2.768E+01	6.106E+01	9.725E+01	1.020E+01	-0.285
	925.24		1.699E+01	2.520E+01	4.423E+01	3.962E+00	0.384
	1596.49	*	-4.501E-01	1.784E+00	2.865E+00	1.971E-01	-0.157
CE-141	145.44	*	7.548E-02	2.315E+00	3.790E+00	2.379E-01	0.020
CE-143	57.37		2.791E+01	5.301E+01	9.052E+01	8.647E+00	0.308
	231.56		3.269E+01	1.055E+02	1.712E+02	5.225E+01	0.191
	293.26	*	3.140E+00	5.183E+00	8.883E+00	1.771E+00	0.353
	350.59		-8.428E+01	1.074E+02	1.135E+02	3.398E+01	-0.742
	490.36		3.845E-01	1.283E+02	2.111E+02	6.442E+01	0.002
	664.57		2.165E+01	5.209E+01	8.620E+01	2.700E+01	0.251
	721.93		-1.546E+01	5.390E+01	8.449E+01	2.383E+01	-0.183
CE-144	80.11		-1.011E+02	9.812E+01	1.568E+02	1.171E+01	-0.645
	133.54	*	-4.722E+00	1.003E+01	1.611E+01	2.349E+00	-0.293
PM-144	476.78		7.007E-01	3.512E+00	5.853E+00	3.930E-01	0.120
	618.01		2.758E-01	1.647E+00	2.707E+00	1.663E-01	0.102
	696.49	*	1.543E+00	2.007E+00	3.396E+00	2.096E-01	0.454
	778.57		-1.641E+01	1.111E+02	1.845E+02	1.306E+01	-0.089
PR-144	696.49	*	1.038E+02	1.350E+02	2.284E+02	1.410E+01	0.454
	1489.15		1.736E+02	6.452E+02	1.076E+03	7.747E+01	0.161
PM-146	453.90	*	-6.581E-01	2.218E+00	3.594E+00	3.016E-01	-0.183
	633.02		-2.274E+01	7.502E+01	1.183E+02	4.356E+01	-0.192
	735.90		1.409E+00	7.273E+00	1.188E+01	3.333E+00	0.119
	747.13		-4.150E+00	4.614E+00	6.774E+00	8.780E-01	-0.613
ND-147	91.11		-1.012E+01	9.140E+00	1.049E+01	8.631E-01	-0.965
	319.41		-4.497E+01	7.652E+01	1.250E+02	7.211E+00	-0.360
	439.89		4.187E+01	1.332E+02	2.240E+02	1.209E+01	0.187
	531.02	*	-3.749E+00	1.166E+01	1.865E+01	2.512E+00	-0.201
PM-149	285.90	*	1.103E+01	5.669E+01	9.627E+01	1.365E+01	0.115
EU-152	121.78		2.554E+00	3.900E+00	6.557E+00	5.810E-01	0.390
	244.69		5.125E+00	1.844E+01	2.891E+01	1.637E+00	0.177
	344.27	*	4.291E-02	5.075E+00	8.488E+00	5.414E-01	0.005
	443.98		-4.362E+01	5.235E+01	8.227E+01	4.454E+00	-0.530
	778.89		-2.601E-01	1.329E+01	2.227E+01	1.577E+00	-0.012
	867.32		-2.568E+01	3.805E+01	5.951E+01	4.836E+00	-0.432
	964.01		-6.527E+00	1.199E+01	1.886E+01	1.553E+00	-0.346
	1085.78		-8.275E+00	1.836E+01	2.886E+01	2.154E+00	-0.287
	1112.02		6.930E-01	1.404E+01	2.320E+01	1.683E+00	0.030
	1407.95		9.395E-01	8.651E+00	1.421E+01	1.046E+00	0.066
GD-153	69.67		3.644E+01	8.269E+01	1.401E+02	1.100E+01	0.260
	83.37		6.804E+02	6.595E+02	1.133E+03	8.482E+01	0.601
	97.43	*	9.086E-01	3.829E+00	6.394E+00	4.596E-01	0.142
	103.18		6.505E-01	5.064E+00	8.410E+00	5.981E-01	0.077
EU-154	123.07		-2.636E-01	2.721E+00	4.458E+00	4.639E-01	-0.059
	247.94		1.072E+01	1.953E+01	3.206E+01	3.037E+00	0.334
	591.81		-1.081E+01	3.478E+01	5.545E+01	5.413E+00	-0.195

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	723.30		-5.003E+00	8.472E+00	1.296E+01	9.889E-01	-0.386
	756.87		-1.322E+01	3.857E+01	6.006E+01	6.463E+00	-0.220
	873.19		5.924E+00	1.330E+01	2.303E+01	2.752E+00	0.257
	996.32		-8.699E+00	1.764E+01	2.777E+01	4.861E+00	-0.313
	1004.76		-6.382E+00	1.044E+01	1.628E+01	1.823E+00	-0.392
	1274.45	*	2.806E+00	5.477E+00	9.405E+00	9.653E-01	0.298
EU-155	48.70		-1.549E+02	1.886E+02	3.071E+02	2.765E+01	-0.504
	60.01		-6.392E+02	3.091E+02	4.699E+02	4.362E+01	-1.360
	86.54		-3.648E+00	4.551E+00	7.329E+00	5.604E-01	-0.498
	105.31	*	1.861E+00	5.356E+00	8.961E+00	6.483E-01	0.208
TB-160	86.79		-8.827E+00	1.057E+01	1.699E+01	1.283E+00	-0.519
	197.04		2.915E+00	2.622E+01	4.260E+01	2.245E+00	0.068
	215.65		-2.747E+00	3.498E+01	5.619E+01	3.050E+00	-0.049
	298.57		-1.488E+00	4.950E+00	8.216E+00	4.810E-01	-0.181
	879.36	*	4.915E-01	5.449E+00	9.158E+00	7.576E-01	0.054
	962.29		-1.279E+01	2.352E+01	3.196E+01	2.634E+00	-0.400
	966.15		-5.337E+00	7.452E+00	1.153E+01	9.482E-01	-0.463
	1177.93		-5.799E-01	1.281E+01	2.089E+01	1.403E+00	-0.028
	1271.85		3.827E+01	2.794E+01	5.179E+01	3.717E+00	0.739
HO-166M	80.57		-1.382E+01	1.306E+01	2.085E+01	1.557E+00	-0.663
	184.41		-3.600E-01	2.750E+00	3.389E+00	1.750E-01	-0.106
	280.46		-3.155E+00	4.413E+00	7.208E+00	4.250E-01	-0.438
	410.95		-1.604E+00	1.213E+01	1.997E+01	1.053E+00	-0.080
	711.68	*	-1.117E+00	3.194E+00	5.006E+00	3.172E-01	-0.223
	752.31		1.732E+01	1.393E+01	2.455E+01	1.665E+00	0.705
	810.29		-1.323E+01	9.946E+00	4.256E+00	3.168E-01	-3.108
TM-171	51.35		1.087E+03	2.159E+03	3.695E+03	3.541E+02	0.294
	52.39		2.398E+02	1.360E+03	1.890E+03	1.825E+02	0.127
	59.40		-1.498E+03	1.605E+03	2.589E+03	2.437E+02	-0.579
	66.72	*	-2.819E+03	1.900E+03	2.519E+03	2.050E+02	-1.119
HF-175	89.36		-2.268E+02	6.669E+01	9.470E+01	7.104E+00	-2.395
	343.40	*	1.507E-01	1.632E+00	2.740E+00	1.541E-01	0.055
	433.00		1.849E+01	1.014E+02	1.695E+02	9.103E+00	0.109
LU-176	88.36		-3.058E+01	9.916E+00	1.430E+01	1.082E+00	-2.138
	201.83		-1.786E+00	1.529E+00	2.346E+00	1.246E-01	-0.761
	306.84	*	-3.664E-01	1.344E+00	2.230E+00	1.299E-01	-0.164
	401.10		-3.217E+01	3.479E+02	5.747E+02	3.004E+01	-0.056
LU-177	112.95		6.323E+00	1.938E+01	3.233E+01	2.318E+00	0.196
	208.36	*	-2.611E+00	1.308E+01	2.093E+01	1.123E+00	-0.125
LU-177M	52.97		-2.374E+01	1.328E+02	1.824E+02	1.764E+01	-0.130
	54.07		-4.230E+01	6.797E+01	9.119E+01	8.818E+00	-0.464
	61.30		-8.332E+00	8.130E+01	1.357E+02	1.221E+01	-0.061
	121.62		1.414E+01	1.879E+01	3.170E+01	2.333E+00	0.446
	147.16		-1.024E+01	3.113E+01	5.023E+01	2.998E+00	-0.204
	171.86		1.836E+01	2.322E+01	3.891E+01	1.972E+00	0.472
	218.09		-1.973E+01	4.322E+01	6.826E+01	3.718E+00	-0.289
	268.79		9.251E+00	3.981E+01	6.429E+01	3.750E+00	0.144
	319.02		-3.352E+00	1.359E+01	2.255E+01	1.302E+00	-0.149
	367.43		-4.192E+01	4.599E+01	7.297E+01	3.962E+00	-0.574

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	413.65	*	-3.028E+00	8.342E+00	1.354E+01	7.157E-01	-0.224
HF-181	56.28		1.243E+01	4.810E+01	8.147E+01	7.815E+00	0.153
	57.53		1.009E+01	2.559E+01	4.351E+01	4.144E+00	0.232
	65.20		-1.968E+01	5.079E+01	7.059E+01	5.880E+00	-0.279
	133.02		-6.938E-01	2.642E+00	4.289E+00	2.878E-01	-0.162
	136.25		-1.608E+01	1.856E+01	2.934E+01	1.917E+00	-0.548
	345.85		2.944E+00	8.107E+00	1.378E+01	7.728E-01	0.214
	482.03	*	-9.634E-01	1.832E+00	2.917E+00	1.618E-01	-0.330
W-181	56.28		5.670E+00	2.188E+01	3.707E+01	3.556E+00	0.153
	57.53		4.601E+00	1.165E+01	1.981E+01	1.887E+00	0.232
	65.20	*	-8.889E+00	2.294E+01	3.189E+01	2.656E+00	-0.279
TA-182	67.75		-8.067E-01	6.550E+00	9.125E+00	7.325E-01	-0.088
	100.10		-1.164E+00	8.228E+00	1.354E+01	9.668E-01	-0.086
	152.43		-2.579E+00	1.588E+01	2.577E+01	1.470E+00	-0.100
	222.10		1.305E+01	1.681E+01	2.794E+01	1.531E+00	0.467
	1001.68		8.108E+01	9.002E+01	1.599E+02	1.284E+01	0.507
	1121.28		2.402E+00	5.522E+00	9.443E+00	6.776E-01	0.254
	1189.05		4.343E-01	1.026E+01	1.689E+01	1.144E+00	0.026
	1221.42	*	-2.538E+00	7.535E+00	1.188E+01	8.239E-01	-0.214
	1230.97		1.128E-01	1.814E+01	2.965E+01	2.070E+00	0.004
RE-183	57.98		3.944E+00	1.061E+01	1.803E+01	1.712E+00	0.219
	59.32		-5.545E+00	5.822E+00	9.384E+00	8.840E-01	-0.591
	67.20		-5.037E+00	1.145E+01	1.585E+01	1.281E+00	-0.318
	162.32	*	-1.747E+00	6.700E+00	8.025E+00	4.181E-01	-0.218
	208.81		-2.003E+01	4.453E+01	7.054E+01	3.788E+00	-0.284
	291.72		-1.317E+01	4.131E+01	6.856E+01	4.027E+00	-0.192
RE-184	57.98		1.578E+01	4.244E+01	7.212E+01	6.850E+00	0.219
	59.32		-2.217E+01	2.327E+01	3.751E+01	3.534E+00	-0.591
	67.20		-2.014E+01	4.578E+01	6.337E+01	5.124E+00	-0.318
	161.27		-3.988E+00	1.686E+01	2.721E+01	1.432E+00	-0.147
	216.55		2.109E+00	1.349E+01	2.189E+01	1.190E+00	0.096
	252.85	*	-7.892E+00	1.182E+01	1.829E+01	1.047E+00	-0.431
	318.01		1.397E+01	2.349E+01	4.039E+01	2.333E+00	0.346
	792.07		-1.091E+00	4.271E+01	7.148E+01	5.171E+00	-0.015
	903.28		-5.748E+01	4.416E+01	6.421E+01	5.447E+00	-0.895
	920.93		-2.825E+00	1.995E+01	3.274E+01	2.757E+00	-0.086
OS-185	59.72		-3.297E+01	1.679E+01	2.569E+01	2.403E+00	-1.283
	61.14		-4.214E+00	8.474E+00	1.393E+01	1.258E+00	-0.303
	69.30		-1.847E+00	1.409E+01	2.343E+01	1.847E+00	-0.079
	592.07		-2.164E+01	1.266E+02	2.038E+02	1.177E+01	-0.106
	646.12	*	-1.030E+00	2.000E+00	3.110E+00	1.806E-01	-0.331
	717.42		-6.914E+00	3.974E+01	6.309E+01	4.037E+00	-0.110
	874.81		9.626E+00	2.409E+01	4.157E+01	3.415E+00	0.232
	880.27		-1.702E+01	3.214E+01	5.093E+01	4.218E+00	-0.334
RE-188	155.03	*	-2.114E-01	7.748E+00	1.263E+01	7.040E-01	-0.017
	477.96		3.703E+01	1.422E+02	2.379E+02	1.316E+01	0.156
	633.10		-3.578E+01	1.317E+02	2.095E+02	1.216E+01	-0.171
W-188	63.58		-2.710E+03	3.702E+03	4.467E+03	3.829E+02	-0.607
	227.08		-5.321E+02	5.891E+02	9.080E+02	5.014E+01	-0.586

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		290.67	*	-1.731E+02	3.247E+02	5.335E+02	3.135E+01	-0.324
IR-192		295.96		1.246E+00	4.648E+00	7.908E+00	4.708E-01	0.158
		308.46		-1.810E-02	4.557E+00	7.653E+00	4.504E-01	-0.002
		316.51	*	8.679E-01	1.705E+00	2.921E+00	1.698E-01	0.297
		468.07		-7.880E-01	2.940E+00	4.764E+00	3.063E-01	-0.165
		604.41		-1.388E+01	2.301E+01	3.596E+01	4.079E+00	-0.386
		612.46		-1.660E+01	3.341E+01	5.250E+01	3.973E+00	-0.316
AU-195		65.12		-3.480E+00	1.096E+01	1.529E+01	1.275E+00	-0.228
		66.83		-8.706E+00	6.031E+00	8.019E+00	6.516E-01	-1.086
		75.70		3.909E+00	1.009E+01	1.409E+01	1.062E+00	0.277
		98.88	*	7.546E+00	1.066E+01	1.808E+01	1.294E+00	0.417
		129.76		8.139E+01	1.344E+02	2.255E+02	1.555E+01	0.361
TL-200		367.94	*	-2.908E+00	2.935E+00	4.634E+00	2.514E-01	-0.628
		579.30		-8.462E+00	2.104E+01	3.332E+01	1.920E+00	-0.254
		828.27		9.047E+00	2.901E+01	4.969E+01	3.805E+00	0.182
		1205.75		3.628E+00	1.106E+01	1.874E+01	1.285E+00	0.194
TL-201		68.90		1.357E+00	9.856E+00	1.654E+01	1.310E+00	0.082
		70.82		1.517E+00	5.411E+00	9.120E+00	7.086E-01	0.166
		80.30		-1.236E+01	9.575E+00	1.513E+01	1.130E+00	-0.817
		135.34		-2.689E+01	5.073E+01	8.139E+01	5.358E+00	-0.330
		167.43	*	-4.358E+00	1.428E+01	2.295E+01	1.156E+00	-0.190
TL-202		68.90		1.378E+00	1.001E+01	1.680E+01	1.331E+00	0.082
		70.82		1.536E+00	5.481E+00	9.237E+00	7.177E-01	0.166
		80.30		-1.253E+01	9.701E+00	1.532E+01	1.145E+00	-0.817
		439.56	*	1.003E+00	1.719E+00	2.931E+00	1.582E-01	0.342
HG-203		70.83		1.186E+01	4.296E+01	7.236E+01	9.467E+00	0.164
		72.87		-1.811E+01	2.421E+01	3.915E+01	4.929E+00	-0.463
		82.60		9.926E+00	4.183E+01	7.012E+01	9.157E+00	0.142
		279.20	*	-1.378E+00	1.703E+00	2.770E+00	1.731E-01	-0.497
BI-207		72.80		-8.889E+00	8.859E+00	1.422E+01	1.088E+00	-0.625
		74.97		1.124E+00	6.015E+00	8.336E+00	6.303E-01	0.135
		84.90		3.770E+00	8.753E+00	1.476E+01	1.108E+00	0.255
		569.67		-1.139E+00	2.283E+00	2.696E+00	1.550E-01	-0.423
		1063.62	*	2.964E+00	2.694E+00	4.832E+00	3.688E-01	0.613
		1770.23		-2.096E+01	2.992E+01	4.496E+01	2.762E+00	-0.466
TL-207		81.07		-8.751E+00	1.029E+01	1.657E+01	1.237E+00	-0.528
		83.78		4.806E+00	5.863E+00	1.001E+01	7.498E-01	0.480
		94.90		-3.453E+01	1.286E+01	1.901E+01	1.379E+00	-1.816
		122.32		6.826E+00	9.204E+01	1.518E+02	1.228E+01	0.045
		144.24		-2.996E+01	4.588E+01	5.677E+01	4.251E+00	-0.528
		154.21		-2.802E+00	2.038E+01	3.308E+01	2.270E+00	-0.085
		269.46		-9.258E-02	1.000E+01	1.597E+01	9.737E-01	-0.006
		323.87	*	2.961E+00	3.500E+01	5.889E+01	9.715E+00	0.050
		338.28		3.757E+00	5.175E+01	8.686E+01	9.082E+00	0.043
		445.03		-5.164E+01	1.227E+02	1.976E+02	1.988E+01	-0.261
TL-208		72.80		-9.555E+01	9.522E+01	1.528E+02	1.170E+01	-0.625
		74.97		1.207E+01	6.460E+01	8.952E+01	1.035E+01	0.135
		277.35		5.609E+00	1.954E+01	3.161E+01	3.353E+00	0.177
	+	510.84		1.206E+01	2.442E+01	2.690E+01	2.706E+00	0.448

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		583.14	*	-7.445E-01	3.348E+00	3.164E+00	2.106E-01	-0.235
		763.13		-7.878E+00	1.027E+02	1.638E+02	2.123E+01	-0.048
		860.37		1.694E+01	1.397E+01	2.534E+01	2.209E+00	0.668
		1093.90		5.552E+02	4.829E+02	8.572E+02	1.959E+02	0.648
PO-209		260.50		1.077E+02	5.153E+02	8.325E+02	4.809E+01	0.129
		262.80		-6.265E+02	1.451E+03	2.269E+03	1.315E+02	-0.276
		896.60	*	2.555E+02	3.559E+02	6.272E+02	5.321E+01	0.407
BI-210		46.50	*	-2.541E+02	4.150E+02	4.987E+02	4.299E+01	-0.510
PB-210		46.50	*	-2.541E+02	4.150E+02	4.987E+02	4.299E+01	-0.510
PO-210		46.50	*	-2.541E+02	4.149E+02	4.987E+02	3.821E+01	-0.510
BI-211		72.87		-1.124E+02	1.499E+02	2.430E+02	1.859E+01	-0.463
		351.07	*	-1.500E+01	1.670E+01	1.791E+01	1.115E+00	-0.838
PB-211		404.84	*	-2.316E+01	4.877E+01	7.513E+01	4.680E+01	-0.308
		427.08		1.145E+02	1.276E+02	1.865E+02	1.152E+02	0.614
		831.96		-9.754E-01	6.187E+01	1.033E+02	6.464E+01	-0.009
BI-212		727.18	*	3.640E+00	1.413E+01	2.322E+01	1.917E+00	0.157
		785.46		-3.915E+01	8.860E+01	1.438E+02	1.029E+01	-0.272
		1620.62		-3.912E+01	5.717E+01	8.476E+01	5.757E+00	-0.462
PB-212		74.81		6.604E-01	2.082E+01	2.869E+01	3.450E+00	0.023
		77.11		5.054E+00	9.233E+00	1.566E+01	1.175E+00	0.323
		87.30		-1.629E+01	1.740E+01	2.773E+01	3.477E+00	-0.587
		115.19		4.291E+01	1.837E+02	3.052E+02	2.200E+01	0.141
	+	238.63	*	2.374E-02	4.605E+00	5.355E+00	3.848E-01	0.004
		300.09		1.100E+00	3.887E+01	6.543E+01	5.420E+00	0.017
PO-212		74.81		6.604E-01	2.082E+01	2.869E+01	3.450E+00	0.023
		77.11		5.054E+00	9.233E+00	1.566E+01	1.175E+00	0.323
		87.30		-1.629E+01	1.740E+01	2.773E+01	3.477E+00	-0.587
		115.19		4.291E+01	1.837E+02	3.052E+02	2.200E+01	0.141
	+	238.63	*	2.374E-02	4.605E+00	5.355E+00	3.848E-01	0.004
		300.09		1.100E+00	3.887E+01	6.543E+01	5.420E+00	0.017
BI-214		609.31	*	-2.369E-01	5.010E+00	6.546E+00	5.088E-01	-0.036
		1120.29		-5.417E-01	1.306E+01	2.138E+01	2.089E+00	-0.025
		1764.49		4.490E+00	2.188E+01	2.762E+01	1.704E+00	0.163
PB-214		74.81		1.137E+00	3.584E+01	4.938E+01	5.229E+00	0.023
		77.11		8.655E+00	1.583E+01	2.683E+01	2.869E+00	0.323
		87.30		-2.787E+01	2.972E+01	4.745E+01	5.125E+00	-0.587
		241.98		4.156E+00	2.106E+01	2.982E+01	2.372E+00	0.139
		295.21		7.385E+00	6.864E+00	1.202E+01	1.031E+00	0.614
		351.92	*	-5.684E+00	5.842E+00	6.240E+00	5.066E-01	-0.911
PO-214		74.81		1.137E+00	3.584E+01	4.938E+01	5.229E+00	0.023
		77.11		8.655E+00	1.583E+01	2.683E+01	2.869E+00	0.323
		87.30		-2.787E+01	2.972E+01	4.745E+01	5.125E+00	-0.587
		241.98		4.156E+00	2.106E+01	2.982E+01	2.372E+00	0.139
		295.21		7.385E+00	6.864E+00	1.202E+01	1.031E+00	0.614
		351.92	*	-5.684E+00	5.842E+00	6.240E+00	5.066E-01	-0.911
PO-215		81.07		-8.751E+00	1.029E+01	1.657E+01	1.237E+00	-0.528
		83.78		4.806E+00	5.863E+00	1.001E+01	7.498E-01	0.480
		94.90		-3.453E+01	1.286E+01	1.901E+01	1.379E+00	-1.816
		122.32		6.826E+00	9.204E+01	1.518E+02	1.228E+01	0.045

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		144.24		-2.996E+01	4.588E+01	5.677E+01	4.251E+00	-0.528
		154.21		-2.802E+00	2.038E+01	3.308E+01	2.270E+00	-0.085
		269.46		-9.258E-02	1.000E+01	1.597E+01	9.737E-01	-0.006
		323.87	*	2.961E+00	3.500E+01	5.889E+01	9.715E+00	0.050
		338.28		3.757E+00	5.175E+01	8.686E+01	9.082E+00	0.043
		445.03		-5.164E+01	1.227E+02	1.976E+02	1.988E+01	-0.261
PO-216		74.81		6.604E-01	2.082E+01	2.869E+01	3.450E+00	0.023
		77.11		5.054E+00	9.233E+00	1.566E+01	1.175E+00	0.323
		87.30		-1.629E+01	1.740E+01	2.773E+01	3.477E+00	-0.587
		115.19		4.291E+01	1.837E+02	3.052E+02	2.200E+01	0.141
	+	238.63	*	2.374E-02	4.605E+00	5.355E+00	3.848E-01	0.004
		300.09		1.100E+00	3.887E+01	6.543E+01	5.420E+00	0.017
PO-218		74.81		1.137E+00	3.584E+01	4.938E+01	5.229E+00	0.023
		77.11		8.655E+00	1.583E+01	2.683E+01	2.869E+00	0.323
		87.30		-2.787E+01	2.972E+01	4.745E+01	5.125E+00	-0.587
		241.98		4.156E+00	2.106E+01	2.982E+01	2.372E+00	0.139
		295.21		7.385E+00	6.864E+00	1.202E+01	1.031E+00	0.614
		351.92	*	-5.684E+00	5.842E+00	6.240E+00	5.066E-01	-0.911
RN-219		271.23		1.116E+00	1.270E+01	2.037E+01	1.658E+00	0.055
		401.81	*	1.326E+00	2.085E+01	3.475E+01	4.647E+00	0.038
RN-220		549.76	*	-2.538E+02	1.427E+03	2.306E+03	1.318E+02	-0.110
RA-223		81.07		-8.751E+00	1.029E+01	1.657E+01	1.237E+00	-0.528
		83.78		4.806E+00	5.863E+00	1.001E+01	7.498E-01	0.480
		94.90		-3.453E+01	1.286E+01	1.901E+01	1.379E+00	-1.816
		122.32		6.826E+00	9.204E+01	1.518E+02	1.228E+01	0.045
		144.24		-2.996E+01	4.588E+01	5.677E+01	4.251E+00	-0.528
		154.21		-2.802E+00	2.038E+01	3.308E+01	2.270E+00	-0.085
		269.46		-9.258E-02	1.000E+01	1.597E+01	9.737E-01	-0.006
		323.87	*	2.961E+00	3.500E+01	5.889E+01	9.715E+00	0.050
		338.28		3.757E+00	5.175E+01	8.686E+01	9.082E+00	0.043
		445.03		-5.164E+01	1.227E+02	1.976E+02	1.988E+01	-0.261
RA-224		240.98	*	4.693E+01	3.944E+01	5.896E+01	3.321E+00	0.796
RA-226		186.21	*	-4.093E+01	6.765E+01	7.287E+01	5.345E+01	-0.562
AC-227		79.80		-8.705E+00	7.760E+01	1.286E+02	2.710E+01	-0.068
		236.00		3.572E+00	1.232E+01	1.758E+01	1.818E+00	0.203
		256.20	*	-8.618E+00	2.051E+01	3.210E+01	4.474E+00	-0.268
		286.10		1.572E+01	8.028E+01	1.363E+02	1.582E+01	0.115
		299.80		1.187E+01	7.097E+01	1.202E+02	1.959E+01	0.099
		304.40		-2.615E+01	9.681E+01	1.605E+02	2.779E+01	-0.163
		329.70		-2.133E+00	4.643E+01	7.760E+01	9.643E+00	-0.027
		334.20		-1.542E+01	1.255E+02	2.089E+02	3.823E+01	-0.074
PA-227		64.62	*	1.017E+06	1.255E+02	Half-Life too short		
		110.05		-2.277E+05	1.255E+02	Half-Life too short		
TH-227		79.80		-8.705E+00	7.760E+01	1.286E+02	2.746E+01	-0.068
		94.00		3.227E+02	1.221E+02	1.835E+02	3.907E+01	1.758
		236.00		3.572E+00	1.232E+01	1.758E+01	1.569E+00	0.203
		256.20	*	-8.618E+00	2.053E+01	3.210E+01	5.419E+00	-0.268
		286.10		1.572E+01	8.179E+01	1.363E+02	1.366E+02	0.115
		299.80		1.187E+01	7.097E+01	1.202E+02	1.959E+01	0.099

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		304.40		-2.615E+01	9.681E+01	1.605E+02	2.779E+01	-0.163
		329.70		-2.133E+00	4.643E+01	7.760E+01	9.643E+00	-0.027
		334.20		-1.542E+01	1.255E+02	2.089E+02	3.823E+01	-0.074
AC-228		338.32		7.550E-01	1.239E+01	2.079E+01	8.470E+00	0.036
		911.07	*	5.259E+00	6.506E+00	1.147E+01	1.276E+00	0.458
		969.11		3.636E+00	1.100E+01	1.869E+01	4.335E+00	0.195
RA-228		338.32		7.550E-01	1.239E+01	2.079E+01	8.470E+00	0.036
		911.07	*	5.259E+00	6.506E+00	1.147E+01	1.276E+00	0.458
		969.11		3.636E+00	1.100E+01	1.869E+01	4.335E+00	0.195
TH-228		74.81		6.604E-01	2.082E+01	2.869E+01	2.194E+00	0.023
		77.11		5.054E+00	9.233E+00	1.566E+01	1.175E+00	0.323
		87.30		-1.629E+01	1.732E+01	2.773E+01	2.098E+00	-0.587
	+	238.63	*	2.374E-02	4.605E+00	5.355E+00	3.848E-01	0.004
		300.09		1.100E+00	3.887E+01	6.543E+01	3.857E+01	0.017
TH-229		85.43		1.143E-01	8.579E+00	1.426E+01	1.073E+00	0.008
		88.47		-1.752E+01	5.701E+00	8.228E+00	6.217E-01	-2.129
		100.00		-1.428E+00	9.302E+00	1.530E+01	1.093E+00	-0.093
		193.63	*	1.386E+01	2.751E+01	4.540E+01	2.379E+00	0.305
		210.97		1.343E+01	3.958E+01	6.473E+01	3.487E+00	0.207
TH-230		67.67	*	-8.116E+01	9.140E+02	1.042E+03	6.757E+03	-0.078
PA-231		283.67	*	7.470E+01	8.204E+01	1.423E+02	1.967E+01	0.525
		301.29		5.120E+00	2.846E+01	4.822E+01	5.053E+00	0.106
		330.00		-2.028E+01	1.035E+02	1.715E+02	5.367E+01	-0.118
TH-231		84.21	*	2.358E+01	2.281E+01	3.866E+01	6.701E+00	0.610
U-231		84.21		2.536E+01	2.421E+01	4.159E+01	3.118E+00	0.610
		92.29		-1.264E+01	1.620E+01	1.901E+01	1.398E+00	-0.665
		95.87	*	-2.745E+01	6.237E+00	8.240E+00	5.955E-01	-3.331
		108.00		-5.865E+00	9.940E+00	1.603E+01	1.140E+00	-0.366
TH-232		59.00	*	-1.507E+03	1.597E+04	2.954E+03	3.109E+04	-0.510
PA-233		75.28		7.965E+01	1.747E+02	2.443E+02	3.609E+01	0.326
		86.59		-6.080E+01	7.586E+01	1.195E+02	3.167E+01	-0.509
		300.12		4.530E-01	2.006E+01	3.376E+01	4.544E+00	0.013
		311.98	*	-6.423E-01	3.636E+00	6.059E+00	3.734E-01	-0.106
		340.50		-2.161E+01	3.113E+01	4.970E+01	1.139E+01	-0.435
		398.62		2.428E+01	1.123E+02	1.883E+02	4.846E+01	0.129
		415.76		1.015E+01	8.439E+01	1.408E+02	2.880E+01	0.072
PA-234		63.00		-1.262E+02	1.293E+02	1.532E+02	2.380E+01	-0.824
		94.67		-5.361E+00	8.742E+00	1.416E+01	1.628E+00	-0.379
		98.44		2.410E+00	4.777E+00	7.736E+00	4.300E+00	0.312
		99.86		-3.997E+00	2.355E+01	3.871E+01	2.765E+00	-0.103
		111.00		1.941E+00	9.520E+00	1.582E+01	1.753E+00	0.123
		131.20		1.586E+00	5.307E+00	8.804E+00	5.999E-01	0.180
		152.70		6.934E+00	1.640E+01	2.716E+01	4.282E+00	0.255
		186.00		-6.654E+01	1.016E+02	1.200E+02	3.653E+01	-0.555
		226.40		-1.380E+01	2.095E+01	3.260E+01	3.724E+00	-0.423
		227.20		-1.983E+01	2.296E+01	3.546E+01	1.958E+00	-0.559
		248.90		-1.958E+01	4.519E+01	7.063E+01	1.516E+01	-0.277
		293.70		3.569E+01	3.325E+01	5.764E+01	9.284E+00	0.619
		369.80		1.751E+01	4.546E+01	7.701E+01	1.595E+01	0.227

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	568.70		-6.014E+01	7.505E+01	8.689E+01	4.993E+00	-0.692
	569.50		-9.320E+00	2.031E+01	2.411E+01	1.386E+00	-0.387
	574.00		-1.027E+01	7.715E+01	1.247E+02	7.176E+00	-0.082
	699.00		1.789E+00	4.169E+01	6.746E+01	1.222E+01	0.027
	706.10		3.106E+01	5.836E+01	9.507E+01	4.202E+01	0.327
	733.00		1.873E+00	1.847E+01	2.997E+01	6.438E+00	0.062
	742.81		-1.566E+02	1.791E+02	1.077E+02	7.218E+01	-1.454
	796.30		-1.156E+01	4.266E+01	6.984E+01	1.862E+01	-0.166
	805.60		-2.901E+01	4.738E+01	7.399E+01	2.244E+01	-0.392
	819.60		2.192E+01	6.057E+01	1.033E+02	3.906E+01	0.212
	826.30		-3.099E+00	3.969E+01	6.594E+01	2.938E+01	-0.047
	831.60		2.976E+00	3.122E+01	5.256E+01	1.555E+01	0.057
	876.40		3.657E+00	3.917E+01	6.554E+01	6.736E+01	0.056
	880.51		-9.130E+00	1.322E+01	2.064E+01	1.710E+00	-0.442
	883.24		-3.663E+00	1.331E+01	2.124E+01	1.427E+01	-0.172
	899.00		-1.582E+01	4.126E+01	6.547E+01	2.861E+01	-0.242
	925.00		4.176E+01	5.543E+01	9.799E+01	8.236E+00	0.426
	926.50		4.049E+00	8.559E+00	1.470E+01	3.704E+00	0.275
	946.00	*	1.887E+00	1.319E+01	2.220E+01	4.135E+00	0.085
	949.00		6.101E+00	1.998E+01	3.409E+01	2.831E+00	0.179
	980.50		-1.150E+01	3.409E+01	5.465E+01	4.454E+00	-0.210
	1394.10		2.308E+00	6.058E+01	9.858E+01	6.401E+01	0.023
PA-234M	766.42		-1.260E+02	5.472E+02	8.553E+02	4.317E+02	-0.147
	1001.03	*	1.669E+02	2.229E+02	3.912E+02	3.704E+01	0.426
TH-234	63.29	*	-1.222E+02	1.102E+02	1.288E+02	2.318E+01	-0.949
	92.38		-3.374E+01	4.427E+01	5.157E+01	9.031E+00	-0.654
U-234	53.20	*	-2.289E+03	2.354E+04	7.483E+03	7.483E+04	-0.306
U-235	89.95		-1.007E+02	6.272E+01	8.519E+01	2.603E+01	-1.183
	93.35		-5.361E+01	5.426E+01	6.072E+01	1.679E+01	-0.883
	105.00		1.632E+01	5.282E+01	8.792E+01	2.588E+01	0.186
	143.76	*	-1.120E+01	1.426E+01	1.741E+01	2.860E+00	-0.644
	163.35		2.186E+00	3.311E+01	4.032E+01	7.171E+00	0.054
	185.71		-2.447E+00	3.688E+00	4.442E+00	2.299E-01	-0.551
	205.31		-3.443E+00	2.704E+01	4.342E+01	7.747E+00	-0.079
NP-236	94.67		-3.940E+00	6.625E+00	1.075E+01	7.810E-01	-0.366
	98.44		1.821E+00	3.469E+00	5.848E+00	4.192E-01	0.311
	111.00		1.468E+00	7.200E+00	1.196E+01	8.545E-01	0.123
	160.31	*	-5.918E+00	4.142E+00	6.346E+00	3.370E-01	-0.932
NP-237	86.50	*	-8.803E+00	1.131E+01	1.800E+01	3.954E+00	-0.489
	95.87		-2.513E+02	8.138E+01	7.543E+01	1.824E+01	-3.331
PU-237	59.54	*	-1.962E+02	1.091E+02	1.685E+02	1.584E+01	-1.164
U-238	63.29	*	-1.222E+02	1.102E+02	1.288E+02	2.318E+01	-0.949
	92.38		-3.374E+01	4.395E+01	5.157E+01	3.790E+00	-0.654
NP-239	99.55		1.710E-01	7.855E+00	1.301E+01	9.299E-01	0.013
	117.00	*	-5.512E+00	1.003E+01	1.616E+01	1.171E+00	-0.341
	209.75		-1.459E+01	3.980E+01	6.323E+01	3.400E+00	-0.231
	228.18		-5.938E+00	1.209E+01	1.902E+01	1.052E+00	-0.312
	277.60		8.329E-01	9.493E+00	1.521E+01	8.955E-01	0.055
	334.30		-9.078E+00	7.109E+01	1.183E+02	6.728E+00	-0.077

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
AM-241	59.54	*	-1.765E+01	9.834E+00	1.516E+01	1.513E+00	-1.164
AM-243	74.67	*	-3.332E-02	3.381E+00	4.649E+00	3.520E-01	-0.007
	86.72		-3.331E+02	4.152E+02	6.686E+02	5.048E+01	-0.498
	117.66		-2.491E+02	2.025E+02	3.167E+02	2.299E+01	-0.787
	142.18		1.925E+02	1.182E+03	1.520E+03	9.460E+01	0.127
CM-243	99.55		1.758E-01	8.075E+00	1.337E+01	9.560E-01	0.013
	103.76	*	2.268E+00	4.828E+00	8.115E+00	5.770E-01	0.279
	117.00		-5.665E+00	1.030E+01	1.661E+01	1.203E+00	-0.341
	209.75		-1.437E+01	3.919E+01	6.228E+01	3.349E+00	-0.231
	228.18		-5.994E+00	1.221E+01	1.920E+01	1.062E+00	-0.312
	277.60		8.389E-01	9.562E+00	1.532E+01	9.020E-01	0.055
AM-246	798.80		-2.600E+00	6.813E+00	1.108E+01	8.104E-01	-0.235
	1036.00		9.539E+00	1.437E+01	2.512E+01	1.965E+00	0.380
	1062.04		1.322E+01	1.154E+01	2.080E+01	1.590E+00	0.636
	1078.86	*	8.055E-01	6.611E+00	1.102E+01	8.284E-01	0.073
CM-247	278.00		-3.334E+00	3.764E+01	6.324E+01	3.726E+00	-0.053
	287.40		-2.471E+01	6.457E+01	1.069E+02	6.292E+00	-0.231
	402.60	*	-1.821E-01	1.871E+00	3.089E+00	1.617E-01	-0.059
CF-249	252.85		-3.138E+01	4.699E+01	7.274E+01	4.163E+00	-0.431
	333.44		-1.507E+00	9.311E+00	1.548E+01	8.809E-01	-0.097
	387.95	*	2.174E+00	2.085E+00	3.649E+00	1.905E-01	0.596
CF-251	176.60	*	2.171E+00	6.604E+00	1.087E+01	5.545E-01	0.200
	227.00		-1.861E+01	2.032E+01	3.130E+01	1.728E+00	-0.595
	285.00		7.356E+01	9.378E+01	1.629E+02	9.596E+00	0.451

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005628		
Acquisition date	: 4-JAN-2010 19:28:43	Detector SN#	:
Detector ID	: GAM23	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 08:20:03.65	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 4-JAN-2010 00:00:00	Nuclide Library	: LIQUI
Sample ID	: G1202005628	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 2-JUN-2009 08:19:08	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	
ANH-511	2.601E+00	5.161E+00	2.410E+00	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Act error Ided	MDA (pCi/FILTER)		
BE-7	2.741E+00	1.394E+01	2.369E+01	0.000E+00	NOT IDENT.
NA-22	9.038E-01	1.896E+00	3.311E+00	0.000E+00	NOT IDENT.
NA-24	2.213E+00	5.085E+00	8.875E+00	0.000E+00	NOT IDENT.
AL-26	-5.639E-01	1.924E+00	3.121E+00	0.000E+00	NOT IDENT.
K-40	6.279E+00	2.821E+01	3.907E+01	0.000E+00	NOT IDENT.
TI-44	4.422E-03	1.633E+00	2.775E+00	0.000E+00	NOT IDENT.
SC-46	3.274E-01	1.658E+00	2.864E+00	0.000E+00	NOT IDENT.
V-48	-5.706E-01	1.768E+00	2.898E+00	0.000E+00	NOT IDENT.
CR-51	-1.145E+01	1.425E+01	2.350E+01	0.000E+00	NOT IDENT.
MN-52	1.435E+00	1.959E+00	3.534E+00	0.000E+00	NOT IDENT.
MN-54	-6.855E-01	1.769E+00	2.931E+00	0.000E+00	NOT IDENT.
CO-56	-7.672E-01	1.708E+00	2.808E+00	0.000E+00	NOT IDENT.
CO-57	5.424E-01	1.260E+00	2.146E+00	0.000E+00	NOT IDENT.
CO-58	-7.077E+00	5.632E+00	2.536E+00	0.000E+00	NOT IDENT.
FE-59	-4.988E-01	3.279E+00	5.423E+00	0.000E+00	NOT IDENT.
CO-60	-9.493E-01	2.003E+00	3.144E+00	0.000E+00	NOT IDENT.
ZN-65	7.962E-01	3.790E+00	6.478E+00	0.000E+00	NOT IDENT.
GE-68	-6.808E+01	5.558E+01	8.160E+01	0.000E+00	NOT IDENT.
AS-73	-3.949E+01	6.207E+01	8.514E+01	0.000E+00	NOT IDENT.
AS-74	1.029E+00	3.106E+00	5.260E+00	0.000E+00	NOT IDENT.
SE-75	1.546E-01	2.163E+00	3.539E+00	0.000E+00	NOT IDENT.
BR-77	8.686E+00	8.689E+00	1.541E+01	0.000E+00	FAIL ABUN
SR-82	-1.637E+01	1.243E+01	1.906E+01	0.000E+00	NOT IDENT.
RB-83	3.048E+00	3.190E+00	5.646E+00	0.000E+00	NOT IDENT.
RB-84	-1.361E+00	2.404E+00	3.884E+00	0.000E+00	NOT IDENT.
KR-85	0.000E+00	4.604E+02	8.294E+02	0.000E+00	NOT IDENT.

SR-85	0.000E+00	2.034E+00	3.664E+00	0.000E+00	NOT IDENT.
RB-86	-4.012E+01	2.231E+01	3.042E+01	0.000E+00	NOT IDENT.
Y-88	6.405E-01	2.021E+00	3.542E+00	0.000E+00	NOT IDENT.
ZR-88	-2.290E+00	1.758E+00	2.295E+00	0.000E+00	NOT IDENT.
Y-91	2.967E+02	6.030E+02	1.058E+03	0.000E+00	NOT IDENT.
NB-94	-6.667E-01	1.788E+00	2.863E+00	0.000E+00	NOT IDENT.
NB-95	1.074E+00	1.689E+00	2.909E+00	0.000E+00	NOT IDENT.
NB-95M	-7.676E-01	5.705E+00	8.088E+00	0.000E+00	NOT IDENT.
ZR-95	-9.905E-01	3.053E+00	4.867E+00	0.000E+00	NOT IDENT.
NB-97	-2.867E+00	4.256E+00	6.665E+00	0.000E+00	NOT IDENT.
ZR-97	0.000E+00	1.144E+02	2.058E+02	0.000E+00	NOT IDENT.
MO-99	1.066E+00	1.582E+01	2.611E+01	0.000E+00	NOT IDENT.
TC-99M	1.262E+01	1.827E+01	3.125E+01	0.000E+00	NOT IDENT.
RH-101	-9.723E-02	1.699E+00	2.798E+00	0.000E+00	NOT IDENT.
RH-102	-3.041E-01	1.989E+00	2.523E+00	0.000E+00	NOT IDENT.
RU-103	-7.220E-01	1.672E+00	2.725E+00	0.000E+00	NOT IDENT.
RH-106	-1.027E+01	1.591E+01	2.504E+01	0.000E+00	FAIL ABUN
RU-106	-1.027E+01	1.588E+01	2.504E+01	0.000E+00	FAIL ABUN
AG-108M	7.031E-01	1.785E+00	3.076E+00	0.000E+00	NOT IDENT.
CD-109	-8.295E+01	3.873E+01	6.003E+01	0.000E+00	NOT IDENT.
AG-110M	-1.156E+00	1.688E+00	2.641E+00	0.000E+00	NOT IDENT.
IN-111	-5.181E-03	1.777E+00	2.907E+00	0.000E+00	NOT IDENT.
IN-113M	-4.052E+00	2.652E+00	3.423E+00	0.000E+00	NOT IDENT.
SN-113	-4.052E+00	2.652E+00	3.423E+00	0.000E+00	NOT IDENT.
IN-114M	-1.266E+01	7.922E+00	1.222E+01	0.000E+00	NOT IDENT.
CD-115	2.490E-01	6.617E+00	1.109E+01	0.000E+00	NOT IDENT.
SN-117M	-7.816E-01	1.333E+00	2.165E+00	0.000E+00	NOT IDENT.
SB-122	-6.710E-01	2.853E+00	4.681E+00	0.000E+00	NOT IDENT.
I-123	-6.058E+00	4.627E+00	7.286E+00	0.000E+00	NOT IDENT.
TE-123M	-1.748E+00	1.335E+00	2.102E+00	0.000E+00	NOT IDENT.
I-124	-3.272E+00	5.088E+00	5.861E+00	0.000E+00	NOT IDENT.
SB-124	-2.049E+00	3.557E+00	5.529E+00	0.000E+00	NOT IDENT.
SB-125	6.544E-01	4.787E+00	8.146E+00	0.000E+00	NOT IDENT.
TE-125M	-6.047E+01	3.875E+02	6.486E+02	0.000E+00	NOT IDENT.
I-126	-3.619E-01	4.159E+00	6.822E+00	0.000E+00	NOT IDENT.
SB-126	1.689E+00	2.987E+00	5.139E+00	0.000E+00	NOT IDENT.
SN-126	-3.411E+00	3.665E+00	5.994E+00	0.000E+00	NOT IDENT.
SB-127	1.354E+00	5.236E+00	8.804E+00	0.000E+00	NOT IDENT.
XE-127	-6.592E-01	1.831E+00	2.974E+00	0.000E+00	NOT IDENT.
I-131	-4.623E-01	1.797E+00	3.019E+00	0.000E+00	NOT IDENT.
TE-132	-8.842E-01	1.780E+00	2.852E+00	0.000E+00	NOT IDENT.
BA-133	-1.111E+00	2.253E+00	3.740E+00	0.000E+00	NOT IDENT.
I-133	-8.319E-01	3.533E+00	5.811E+00	0.000E+00	FAIL ABUN
CS-134	-1.980E-01	2.045E+00	3.472E+00	0.000E+00	NOT IDENT.
CS-135	2.874E+00	8.301E+00	1.374E+01	0.000E+00	NOT IDENT.
I-135	6.020E+01	7.276E+01	1.317E+02	0.000E+00	NOT IDENT.
CS-136	5.887E-01	2.138E+00	3.698E+00	0.000E+00	NOT IDENT.
BA-137M	1.065E+00	1.757E+00	3.030E+00	0.000E+00	NOT IDENT.
CS-137	1.125E+00	1.857E+00	3.203E+00	0.000E+00	NOT IDENT.
CE-139	4.969E-01	1.401E+00	2.358E+00	0.000E+00	NOT IDENT.
BA-140	-5.586E+00	8.515E+00	9.879E+00	0.000E+00	NOT IDENT.
LA-140	-4.501E-01	1.748E+00	2.865E+00	0.000E+00	NOT IDENT.
CE-141	7.548E-02	2.268E+00	3.790E+00	0.000E+00	NOT IDENT.
CE-143	3.140E+00	5.080E+00	8.883E+00	0.000E+00	NOT IDENT.
CE-144	-4.722E+00	9.826E+00	1.611E+01	0.000E+00	NOT IDENT.
PM-144	1.543E+00	1.967E+00	3.396E+00	0.000E+00	NOT IDENT.
PR-144	1.038E+02	1.323E+02	2.284E+02	0.000E+00	NOT IDENT.
PM-146	-6.581E-01	2.174E+00	3.594E+00	0.000E+00	NOT IDENT.
ND-147	-3.749E+00	1.142E+01	1.865E+01	0.000E+00	NOT IDENT.
PM-149	1.103E+01	5.556E+01	9.627E+01	0.000E+00	NOT IDENT.
EU-152	4.291E-02	4.974E+00	8.488E+00	0.000E+00	NOT IDENT.
GD-153	9.086E-01	3.753E+00	6.394E+00	0.000E+00	NOT IDENT.
EU-154	2.806E+00	5.367E+00	9.405E+00	0.000E+00	NOT IDENT.
EU-155	1.861E+00	5.249E+00	8.961E+00	0.000E+00	NOT IDENT.
TB-160	4.915E-01	5.340E+00	9.158E+00	0.000E+00	NOT IDENT.
HO-166M	-1.117E+00	3.130E+00	5.006E+00	0.000E+00	NOT IDENT.
TM-171	-2.819E+03	1.862E+03	2.519E+03	0.000E+00	NOT IDENT.
HF-175	1.507E-01	1.599E+00	2.740E+00	0.000E+00	NOT IDENT.
LU-176	-3.664E-01	1.317E+00	2.230E+00	0.000E+00	NOT IDENT.
LU-177	-2.611E+00	1.281E+01	2.093E+01	0.000E+00	NOT IDENT.
LU-177M	-3.028E+00	8.175E+00	1.354E+01	0.000E+00	NOT IDENT.
HF-181	-9.634E-01	1.795E+00	2.917E+00	0.000E+00	NOT IDENT.
W-181	-8.889E+00	2.249E+01	3.189E+01	0.000E+00	NOT IDENT.
TA-182	-2.538E+00	7.384E+00	1.188E+01	0.000E+00	NOT IDENT.
RE-183	-1.747E+00	6.566E+00	8.025E+00	0.000E+00	NOT IDENT.
RE-184	-7.892E+00	1.158E+01	1.829E+01	0.000E+00	NOT IDENT.
OS-185	-1.030E+00	1.960E+00	3.110E+00	0.000E+00	NOT IDENT.
RE-188	-2.114E-01	7.593E+00	1.263E+01	0.000E+00	NOT IDENT.

W-188	-1.731E+02	3.182E+02	5.335E+02	0.000E+00	NOT IDENT.
IR-192	8.679E-01	1.671E+00	2.921E+00	0.000E+00	NOT IDENT.
AU-195	7.546E+00	1.045E+01	1.808E+01	0.000E+00	NOT IDENT.
TL-200	-2.908E+00	2.876E+00	4.634E+00	0.000E+00	NOT IDENT.
TL-201	-4.358E+00	1.399E+01	2.295E+01	0.000E+00	NOT IDENT.
TL-202	1.003E+00	1.685E+00	2.931E+00	0.000E+00	NOT IDENT.
HG-203	-1.378E+00	1.669E+00	2.770E+00	0.000E+00	NOT IDENT.
BI-207	2.964E+00	2.641E+00	4.832E+00	0.000E+00	NOT IDENT.
TL-207	2.961E+00	3.430E+01	5.889E+01	0.000E+00	NOT IDENT.
TL-208	-7.445E-01	3.281E+00	3.164E+00	0.000E+00	FAIL ABUN
PO-209	2.555E+02	3.488E+02	6.272E+02	0.000E+00	NOT IDENT.
BI-210	-2.541E+02	4.067E+02	4.987E+02	0.000E+00	NOT IDENT.
PB-210	-2.541E+02	4.067E+02	4.987E+02	0.000E+00	NOT IDENT.
PO-210	-2.541E+02	4.066E+02	4.987E+02	0.000E+00	NOT IDENT.
BI-211	-1.500E+01	1.636E+01	1.791E+01	0.000E+00	NOT IDENT.
PB-211	-2.316E+01	4.779E+01	7.513E+01	0.000E+00	NOT IDENT.
BI-212	3.640E+00	1.384E+01	2.322E+01	0.000E+00	NOT IDENT.
PB-212	2.374E-02	4.513E+00	5.355E+00	0.000E+00	FAIL ABUN
PO-212	2.374E-02	4.513E+00	5.355E+00	0.000E+00	FAIL ABUN
BI-214	-2.369E-01	4.910E+00	6.546E+00	0.000E+00	NOT IDENT.
PB-214	-5.684E+00	5.725E+00	6.240E+00	0.000E+00	NOT IDENT.
PO-214	-5.684E+00	5.725E+00	6.240E+00	0.000E+00	NOT IDENT.
PO-215	2.961E+00	3.430E+01	5.889E+01	0.000E+00	NOT IDENT.
PO-216	2.374E-02	4.513E+00	5.355E+00	0.000E+00	FAIL ABUN
PO-218	-5.684E+00	5.725E+00	6.240E+00	0.000E+00	NOT IDENT.
RN-219	1.326E+00	2.044E+01	3.475E+01	0.000E+00	NOT IDENT.
RN-220	-2.538E+02	1.399E+03	2.306E+03	0.000E+00	NOT IDENT.
RA-223	2.961E+00	3.430E+01	5.889E+01	0.000E+00	NOT IDENT.
RA-224	4.693E+01	3.866E+01	5.896E+01	0.000E+00	NOT IDENT.
RA-226	-4.093E+01	6.629E+01	7.287E+01	0.000E+00	NOT IDENT.
AC-227	-8.618E+00	2.010E+01	3.210E+01	0.000E+00	NOT IDENT.
PA-227	0.000E+00	6.066E+11	0.000E+00	0.000E+00	SHORT HLIF
TH-227	-8.618E+00	2.012E+01	3.210E+01	0.000E+00	NOT IDENT.
AC-228	5.259E+00	6.376E+00	1.147E+01	0.000E+00	NOT IDENT.
RA-228	5.259E+00	6.376E+00	1.147E+01	0.000E+00	NOT IDENT.
TH-228	2.374E-02	4.513E+00	5.355E+00	0.000E+00	FAIL ABUN
TH-229	1.386E+01	2.696E+01	4.540E+01	0.000E+00	NOT IDENT.
TH-230	-8.116E+01	8.957E+02	1.042E+03	0.000E+00	NOT IDENT.
PA-231	7.470E+01	8.040E+01	1.423E+02	0.000E+00	NOT IDENT.
TH-231	2.358E+01	2.235E+01	3.866E+01	0.000E+00	NOT IDENT.
U-231	-2.745E+01	6.112E+00	8.240E+00	0.000E+00	NOT IDENT.
TH-232	-1.507E+03	1.565E+04	2.954E+03	0.000E+00	NOT IDENT.
PA-233	-6.423E-01	3.564E+00	6.059E+00	0.000E+00	NOT IDENT.
PA-234	1.887E+00	1.293E+01	2.220E+01	0.000E+00	NOT IDENT.
PA-234M	1.669E+02	2.184E+02	3.912E+02	0.000E+00	NOT IDENT.
TH-234	-1.222E+02	1.080E+02	1.288E+02	0.000E+00	NOT IDENT.
U-234	-2.289E+03	2.307E+04	7.483E+03	0.000E+00	NOT IDENT.
U-235	-1.120E+01	1.397E+01	1.741E+01	0.000E+00	NOT IDENT.
NP-236	-5.918E+00	4.059E+00	6.346E+00	0.000E+00	NOT IDENT.
NP-237	-8.803E+00	1.109E+01	1.800E+01	0.000E+00	NOT IDENT.
PU-237	-1.962E+02	1.069E+02	1.685E+02	0.000E+00	NOT IDENT.
U-238	-1.222E+02	1.080E+02	1.288E+02	0.000E+00	NOT IDENT.
NP-239	-5.512E+00	9.825E+00	1.616E+01	0.000E+00	NOT IDENT.
AM-241	-1.765E+01	9.637E+00	1.516E+01	0.000E+00	NOT IDENT.
AM-243	-3.332E-02	3.314E+00	4.649E+00	0.000E+00	NOT IDENT.
CM-243	2.268E+00	4.731E+00	8.115E+00	0.000E+00	NOT IDENT.
AM-246	8.055E-01	6.479E+00	1.102E+01	0.000E+00	NOT IDENT.
CM-247	-1.821E-01	1.833E+00	3.089E+00	0.000E+00	NOT IDENT.
CF-249	2.174E+00	2.043E+00	3.649E+00	0.000E+00	NOT IDENT.
CF-251	2.171E+00	6.472E+00	1.087E+01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:50:00.37

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005628.CNF;1
Sample date : 4-JAN-2010 00:00:00. Acquisition date : 4-JAN-2010 19:28:43.
Sample ID : G1202005628 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM23 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:03.65 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	62.68	74	318	0.91	125.37	124	7	2.45E-03	41.6	
2	0	92.52	287	412	1.37	185.04	181	9	9.57E-03	14.1	
3	0	185.39	188	339	1.13	370.78	367	9	6.25E-03	19.2	
4	0	238.29	74	299	0.95	476.59	473	9	2.46E-03	43.5	
5	0	510.42	591	286	2.41	1020.84	1012	19	1.97E-02	8.0	

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:50:03.55

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005628.CNF;1
Sample date : 4-JAN-2010 00:00:00. Acquisition date : 4-JAN-2010 19:28:43.
Sample ID : G1202005628 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM23 Detector geometry: JAR
Elapsed live time: 0 08:20:00.00 Elapsed real time: 0 08:20:03.65 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	2-Sigma %Error
ANH-511	511.00	55	100.00*	1.912E+00	2.601E+00	2.601E+00	202.43

Flag: "*" = Keyline

Sample ID : G1202005628 Acquisition date : 4-JAN-2010 19:28:43

Total number of lines in spectrum	2	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	2	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
ANH-511	1.00E+09Y	1.00	2.601E+00	2.601E+00	5.266E+00	202.43	
Total Activity :			2.601E+00	2.601E+00			
Grand Total Activity :			2.601E+00	2.601E+00			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left Pw	Cts/Sec	%Err	%Eff	Flags

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 03:50:08.32

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005628.CNF;1		
Acquisition date	: 4-JAN-2010 19:28:43.	Detector SN#	:
Detector ID	: GAM23	Sensitivity	: 5.00000
Geometry	: JAR	Energy tolerance	: 1.50000
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 08:20:03.65	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 4-JAN-2010 00:00:00.	Nuclide Library	: LIQUID
Sample ID	: G1202005628	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.00000E+00 FILTER

QC DATA

CALIB. DATE/TIME	: 2-JUN-2009 08:19:08.94	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
ANH-511	2.601E+00	5.266E+00	2.410E+00	1.357E-01	1.079

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7	2.741E+00		1.422E+01	2.369E+01	1.545E+00	0.116
NA-22	9.038E-01		1.935E+00	3.311E+00	2.385E-01	0.273
NA-24	2.213E+00		5.189E+00	8.875E+00	6.609E-01	0.249
AL-26	-5.639E-01		1.963E+00	3.121E+00	1.856E-01	-0.181
K-40	6.279E+00		2.878E+01	3.907E+01	2.950E+00	0.161
TI-44	4.422E-03		1.666E+00	2.775E+00	2.077E-01	0.002
SC-46	3.274E-01		1.691E+00	2.864E+00	2.404E-01	0.114
V-48	-5.706E-01		1.804E+00	2.898E+00	2.357E-01	-0.197
CR-51	-1.145E+01		1.454E+01	2.350E+01	1.512E+00	-0.487
MN-52	1.435E+00		1.999E+00	3.534E+00	2.586E-01	0.406
MN-54	-6.855E-01		1.805E+00	2.931E+00	2.267E-01	-0.234

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CO-56	-7.672E-01		1.743E+00	2.808E+00	2.212E-01	-0.273
CO-57	5.424E-01		1.285E+00	2.146E+00	1.584E-01	0.253
CO-58	-7.077E+00		5.746E+00	2.536E+00	1.896E-01	-2.791
FE-59	-4.988E-01		3.346E+00	5.423E+00	4.429E-01	-0.092
CO-60	-9.493E-01		2.044E+00	3.144E+00	2.346E-01	-0.302
ZN-65	7.962E-01		3.868E+00	6.478E+00	4.687E-01	0.123
GE-68	-6.808E+01		5.671E+01	8.160E+01	6.145E+00	-0.834
AS-73	-3.949E+01		6.334E+01	8.514E+01	8.237E+00	-0.464
AS-74	1.029E+00		3.169E+00	5.260E+00	3.041E-01	0.196
SE-75	1.546E-01		2.207E+00	3.539E+00	2.076E-01	0.044
BR-77	8.686E+00		8.867E+00	1.541E+01	8.714E-01	0.564
SR-82	-1.637E+01		1.268E+01	1.906E+01	1.345E+00	-0.859
RB-83	3.048E+00		3.255E+00	5.646E+00	3.192E-01	0.540
RB-84	-1.361E+00		2.454E+00	3.884E+00	3.223E-01	-0.350
KR-85	1.777E+03		4.698E+02	8.294E+02	4.676E+01	2.143
SR-85	7.852E+00		2.075E+00	3.664E+00	2.066E-01	2.143
RB-86	-4.012E+01		2.276E+01	3.042E+01	2.293E+00	-1.319
Y-88	6.405E-01		2.062E+00	3.542E+00	2.059E-01	0.181
ZR-88	-2.290E+00		1.794E+00	2.295E+00	1.190E-01	-0.998
Y-91	2.967E+02		6.153E+02	1.058E+03	7.250E+01	0.280
NB-94	-6.667E-01		1.824E+00	2.863E+00	1.786E-01	-0.233
NB-95	1.074E+00		1.724E+00	2.909E+00	2.017E-01	0.369
NB-95M	-7.676E-01		5.822E+00	8.088E+00	5.960E-01	-0.095
ZR-95	-9.905E-01		3.115E+00	4.867E+00	3.845E-01	-0.204
NB-97	-2.867E+00		4.342E+00	6.665E+00	3.870E-01	-0.430
ZR-97	5.276E+02		1.167E+02	2.058E+02	1.157E+01	2.564
MO-99	1.066E+00		1.614E+01	2.611E+01	3.695E+00	0.041
TC-99M	1.262E+01		1.865E+01	3.125E+01	2.054E+00	0.404
RH-101	-9.723E-02		1.734E+00	2.798E+00	1.477E-01	-0.035
RH-102	-3.041E-01		2.030E+00	2.523E+00	1.394E-01	-0.121
RU-103	-7.220E-01		1.706E+00	2.725E+00	3.420E-01	-0.265
RH-106	-1.027E+01		1.623E+01	2.504E+01	2.939E+00	-0.410
RU-106	-1.027E+01		1.620E+01	2.504E+01	1.453E+00	-0.410
AG-108M	7.031E-01		1.822E+00	3.076E+00	1.817E-01	0.229
CD-109	-8.295E+01		3.952E+01	6.003E+01	4.553E+00	-1.382
AG-110M	-1.156E+00		1.722E+00	2.641E+00	1.632E-01	-0.438
IN-111	-5.181E-03		1.813E+00	2.907E+00	1.647E-01	-0.002
IN-113M	-4.052E+00		2.706E+00	3.423E+00	1.921E-01	-1.184
SN-113	-4.052E+00		2.706E+00	3.423E+00	1.921E-01	-1.184
IN-114M	-1.266E+01		8.083E+00	1.222E+01	6.372E-01	-1.035
CD-115	2.490E-01		6.752E+00	1.109E+01	6.289E-01	0.022
SN-117M	-7.816E-01		1.360E+00	2.165E+00	1.169E-01	-0.361
SB-122	-6.710E-01		2.911E+00	4.681E+00	2.687E-01	-0.143
I-123	-6.058E+00		4.721E+00	7.286E+00	3.917E-01	-0.831
TE-123M	-1.748E+00		1.362E+00	2.102E+00	1.148E-01	-0.831
I-124	-3.272E+00		5.191E+00	5.861E+00	3.392E-01	-0.558
SB-124	-2.049E+00		3.629E+00	5.529E+00	3.846E-01	-0.371
SB-125	6.544E-01		4.884E+00	8.146E+00	4.572E-01	0.080

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
TE-125M	-6.047E+01		3.954E+02	6.486E+02	5.900E+01	-0.093
I-126	-3.619E-01		4.244E+00	6.822E+00	3.994E-01	-0.053
SB-126	1.689E+00		3.048E+00	5.139E+00	3.305E-01	0.329
SN-126	-3.411E+00		3.740E+00	5.994E+00	4.540E-01	-0.569
SB-127	1.354E+00		5.343E+00	8.804E+00	5.697E-01	0.154
XE-127	-6.592E-01		1.868E+00	2.974E+00	1.582E-01	-0.222
I-131	-4.623E-01		1.834E+00	3.019E+00	1.839E-01	-0.153
TE-132	-8.842E-01		1.816E+00	2.852E+00	3.606E-01	-0.310
BA-133	-1.111E+00		2.299E+00	3.740E+00	4.274E-01	-0.297
I-133	-8.319E-01		3.606E+00	5.811E+00	3.370E-01	-0.143
CS-134	-1.980E-01		2.087E+00	3.472E+00	2.553E-01	-0.057
CS-135	2.874E+00		8.470E+00	1.374E+01	1.055E+00	0.209
I-135	6.020E+01		7.424E+01	1.317E+02	1.012E+01	0.457
CS-136	5.887E-01		2.181E+00	3.698E+00	3.010E-01	0.159
BA-137M	1.065E+00		1.793E+00	3.030E+00	1.759E-01	0.351
CS-137	1.125E+00		1.895E+00	3.203E+00	1.868E-01	0.351
CE-139	4.969E-01		1.429E+00	2.358E+00	1.187E-01	0.211
BA-140	-5.586E+00		8.689E+00	9.879E+00	3.211E+00	-0.565
LA-140	-4.501E-01		1.784E+00	2.865E+00	1.971E-01	-0.157
CE-141	7.548E-02		2.315E+00	3.790E+00	2.379E-01	0.020
CE-143	3.140E+00		5.183E+00	8.883E+00	1.771E+00	0.353
CE-144	-4.722E+00		1.003E+01	1.611E+01	2.349E+00	-0.293
PM-144	1.543E+00		2.007E+00	3.396E+00	2.096E-01	0.454
PR-144	1.038E+02		1.350E+02	2.284E+02	1.410E+01	0.454
PM-146	-6.581E-01		2.218E+00	3.594E+00	3.016E-01	-0.183
ND-147	-3.749E+00		1.166E+01	1.865E+01	2.512E+00	-0.201
PM-149	1.103E+01		5.669E+01	9.627E+01	1.365E+01	0.115
EU-152	4.291E-02		5.075E+00	8.488E+00	5.414E-01	0.005
GD-153	9.086E-01		3.829E+00	6.394E+00	4.596E-01	0.142
EU-154	2.806E+00		5.477E+00	9.405E+00	9.653E-01	0.298
EU-155	1.861E+00		5.356E+00	8.961E+00	6.483E-01	0.208
TB-160	4.915E-01		5.449E+00	9.158E+00	7.576E-01	0.054
HO-166M	-1.117E+00		3.194E+00	5.006E+00	3.172E-01	-0.223
TM-171	-2.819E+03		1.900E+03	2.519E+03	2.050E+02	-1.119
HF-175	1.507E-01		1.632E+00	2.740E+00	1.541E-01	0.055
LU-176	-3.664E-01		1.344E+00	2.230E+00	1.299E-01	-0.164
LU-177	-2.611E+00		1.308E+01	2.093E+01	1.123E+00	-0.125
LU-177M	-3.028E+00		8.342E+00	1.354E+01	7.157E-01	-0.224
HF-181	-9.634E-01		1.832E+00	2.917E+00	1.618E-01	-0.330
W-181	-8.889E+00		2.294E+01	3.189E+01	2.656E+00	-0.279
TA-182	-2.538E+00		7.535E+00	1.188E+01	8.239E-01	-0.214
RE-183	-1.747E+00		6.700E+00	8.025E+00	4.181E-01	-0.218
RE-184	-7.892E+00		1.182E+01	1.829E+01	1.047E+00	-0.431
OS-185	-1.030E+00		2.000E+00	3.110E+00	1.806E-01	-0.331
RE-188	-2.114E-01		7.748E+00	1.263E+01	7.040E-01	-0.017
W-188	-1.731E+02		3.247E+02	5.335E+02	3.135E+01	-0.324
IR-192	8.679E-01		1.705E+00	2.921E+00	1.698E-01	0.297
AU-195	7.546E+00		1.066E+01	1.808E+01	1.294E+00	0.417

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
TL-200	-2.908E+00		2.935E+00	4.634E+00	2.514E-01	-0.628
TL-201	-4.358E+00		1.428E+01	2.295E+01	1.156E+00	-0.190
TL-202	1.003E+00		1.719E+00	2.931E+00	1.582E-01	0.342
HG-203	-1.378E+00		1.703E+00	2.770E+00	1.731E-01	-0.497
BI-207	2.964E+00		2.694E+00	4.832E+00	3.688E-01	0.613
TL-207	2.961E+00		3.500E+01	5.889E+01	9.715E+00	0.050
TL-208	-7.445E-01		3.348E+00	3.164E+00	2.106E-01	-0.235
PO-209	2.555E+02		3.559E+02	6.272E+02	5.321E+01	0.407
BI-210	-2.541E+02		4.150E+02	4.987E+02	4.299E+01	-0.510
PB-210	-2.541E+02		4.150E+02	4.987E+02	4.299E+01	-0.510
PO-210	-2.541E+02		4.149E+02	4.987E+02	3.821E+01	-0.510
BI-211	-1.500E+01		1.670E+01	1.791E+01	1.115E+00	-0.838
PB-211	-2.316E+01		4.877E+01	7.513E+01	4.680E+01	-0.308
BI-212	3.640E+00		1.413E+01	2.322E+01	1.917E+00	0.157
PB-212	2.374E-02	+	4.605E+00	5.355E+00	3.848E-01	0.004
PO-212	2.374E-02	+	4.605E+00	5.355E+00	3.848E-01	0.004
BI-214	-2.369E-01		5.010E+00	6.546E+00	5.088E-01	-0.036
PB-214	-5.684E+00		5.842E+00	6.240E+00	5.066E-01	-0.911
PO-214	-5.684E+00		5.842E+00	6.240E+00	5.066E-01	-0.911
PO-215	2.961E+00		3.500E+01	5.889E+01	9.715E+00	0.050
PO-216	2.374E-02	+	4.605E+00	5.355E+00	3.848E-01	0.004
PO-218	-5.684E+00		5.842E+00	6.240E+00	5.066E-01	-0.911
RN-219	1.326E+00		2.085E+01	3.475E+01	4.647E+00	0.038
RN-220	-2.538E+02		1.427E+03	2.306E+03	1.318E+02	-0.110
RA-223	2.961E+00		3.500E+01	5.889E+01	9.715E+00	0.050
RA-224	4.693E+01		3.944E+01	5.896E+01	3.321E+00	0.796
RA-226	-4.093E+01		6.765E+01	7.287E+01	5.345E+01	-0.562
AC-227	-8.618E+00		2.051E+01	3.210E+01	4.474E+00	-0.268
PA-227	1.017E+06		3.095E+05	Half-Life too short		
TH-227	-8.618E+00		2.053E+01	3.210E+01	5.419E+00	-0.268
AC-228	5.259E+00		6.506E+00	1.147E+01	1.276E+00	0.458
RA-228	5.259E+00		6.506E+00	1.147E+01	1.276E+00	0.458
TH-228	2.374E-02	+	4.605E+00	5.355E+00	3.848E-01	0.004
TH-229	1.386E+01		2.751E+01	4.540E+01	2.379E+00	0.305
TH-230	-8.116E+01		9.140E+02	1.042E+03	6.757E+03	-0.078
PA-231	7.470E+01		8.204E+01	1.423E+02	1.967E+01	0.525
TH-231	2.358E+01		2.281E+01	3.866E+01	6.701E+00	0.610
U-231	-2.745E+01		6.237E+00	8.240E+00	5.955E-01	-3.331
TH-232	-1.507E+03		1.597E+04	2.954E+03	3.109E+04	-0.510
PA-233	-6.423E-01		3.636E+00	6.059E+00	3.734E-01	-0.106
PA-234	1.887E+00		1.319E+01	2.220E+01	4.135E+00	0.085
PA-234M	1.669E+02		2.229E+02	3.912E+02	3.704E+01	0.426
TH-234	-1.222E+02		1.102E+02	1.288E+02	2.318E+01	-0.949
U-234	-2.289E+03		2.354E+04	7.483E+03	7.483E+04	-0.306
U-235	-1.120E+01		1.426E+01	1.741E+01	2.860E+00	-0.644
NP-236	-5.918E+00		4.142E+00	6.346E+00	3.370E-01	-0.932
NP-237	-8.803E+00		1.131E+01	1.800E+01	3.954E+00	-0.489
PU-237	-1.962E+02		1.091E+02	1.685E+02	1.584E+01	-1.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
U-238	-1.222E+02		1.102E+02	1.288E+02	2.318E+01	-0.949
NP-239	-5.512E+00		1.003E+01	1.616E+01	1.171E+00	-0.341
AM-241	-1.765E+01		9.834E+00	1.516E+01	1.513E+00	-1.164
AM-243	-3.332E-02		3.381E+00	4.649E+00	3.520E-01	-0.007
CM-243	2.268E+00		4.828E+00	8.115E+00	5.770E-01	0.279
AM-246	8.055E-01		6.611E+00	1.102E+01	8.284E-01	0.073
CM-247	-1.821E-01		1.871E+00	3.089E+00	1.617E-01	-0.059
CF-249	2.174E+00		2.085E+00	3.649E+00	1.905E-01	0.596
CF-251	2.171E+00		6.604E+00	1.087E+01	5.545E-01	0.200

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202005628		
Acquisition date	: 4-JAN-2010 19:28:43	Detector SN#	:
Detector ID	: GAM23	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 08:20:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 08:20:03.65	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 4-JAN-2010 00:00:00	Nuclide Library	: LIQUI
Sample ID	: G1202005628	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 2-JUN-2009 08:19:08	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act Error	DLC (pCi/FILTER)	TPU
ANH-511	2.601E+00	5.161E+00	1.206E+00	2.633E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L Act error	DLC (pCi/FILTER)	TPU	
BE-7	2.741E+00	1.394E+01	1.185E+01	7.111E+00	NOT IDENT.
NA-22	9.038E-01	1.896E+00	1.657E+00	9.675E-01	NOT IDENT.
NA-24	2.213E+00	5.085E+00	4.440E+00	2.595E+00	NOT IDENT.
AL-26	-5.639E-01	1.924E+00	1.561E+00	9.817E-01	NOT IDENT.
K-40	6.279E+00	2.821E+01	1.955E+01	1.439E+01	NOT IDENT.
TI-44	4.422E-03	1.633E+00	1.389E+00	8.332E-01	NOT IDENT.
SC-46	3.274E-01	1.658E+00	1.433E+00	8.457E-01	NOT IDENT.
V-48	-5.706E-01	1.768E+00	1.450E+00	9.019E-01	NOT IDENT.
CR-51	-1.145E+01	1.425E+01	1.176E+01	7.272E+00	NOT IDENT.
MN-52	1.435E+00	1.959E+00	1.768E+00	9.997E-01	NOT IDENT.
MN-54	-6.855E-01	1.769E+00	1.466E+00	9.024E-01	NOT IDENT.
CO-56	-7.672E-01	1.708E+00	1.405E+00	8.715E-01	NOT IDENT.
CO-57	5.424E-01	1.260E+00	1.074E+00	6.427E-01	NOT IDENT.
CO-58	-7.077E+00	5.632E+00	1.269E+00	2.874E+00	NOT IDENT.
FE-59	-4.988E-01	3.279E+00	2.713E+00	1.673E+00	NOT IDENT.
CO-60	-9.493E-01	2.003E+00	1.573E+00	1.022E+00	NOT IDENT.
ZN-65	7.962E-01	3.790E+00	3.241E+00	1.934E+00	NOT IDENT.
GE-68	-6.808E+01	5.558E+01	4.082E+01	2.837E+01	NOT IDENT.
AS-73	-3.949E+01	6.207E+01	4.260E+01	3.167E+01	NOT IDENT.
AS-74	1.029E+00	3.106E+00	2.632E+00	1.585E+00	NOT IDENT.
SE-75	1.546E-01	2.163E+00	1.771E+00	1.103E+00	NOT IDENT.
BR-77	8.686E+00	8.689E+00	7.711E+00	4.434E+00	FAIL ABUN
SR-82	-1.637E+01	1.243E+01	9.536E+00	6.342E+00	NOT IDENT.
RB-83	3.048E+00	3.190E+00	2.825E+00	1.628E+00	NOT IDENT.
RB-84	-1.361E+00	2.404E+00	1.943E+00	1.227E+00	NOT IDENT.
KR-85	1.777E+03	4.604E+02	4.150E+02	2.356E+02	NOT IDENT.

SR-85	7.852E+00	2.034E+00	1.833E+00	1.041E+00	NOT IDENT.
RB-86	-4.012E+01	2.231E+01	1.522E+01	1.139E+01	NOT IDENT.
Y-88	6.405E-01	2.021E+00	1.772E+00	1.031E+00	NOT IDENT.
ZR-88	-2.290E+00	1.758E+00	1.148E+00	8.972E-01	NOT IDENT.
Y-91	2.967E+02	6.030E+02	5.294E+02	3.077E+02	NOT IDENT.
NB-94	-6.667E-01	1.788E+00	1.432E+00	9.121E-01	NOT IDENT.
NB-95	1.074E+00	1.689E+00	1.455E+00	8.620E-01	NOT IDENT.
NB-95M	-7.676E-01	5.705E+00	4.046E+00	2.911E+00	NOT IDENT.
ZR-95	-9.905E-01	3.053E+00	2.435E+00	1.558E+00	NOT IDENT.
NB-97	-2.867E+00	4.256E+00	3.334E+00	2.171E+00	NOT IDENT.
ZR-97	5.276E+02	1.144E+02	1.029E+02	5.859E+01	NOT IDENT.
MO-99	1.066E+00	1.582E+01	1.306E+01	8.070E+00	NOT IDENT.
TC-99M	1.262E+01	1.827E+01	1.563E+01	9.324E+00	NOT IDENT.
RH-101	-9.723E-02	1.699E+00	1.400E+00	8.670E-01	NOT IDENT.
RH-102	-3.041E-01	1.989E+00	1.262E+00	1.015E+00	NOT IDENT.
RU-103	-7.220E-01	1.672E+00	1.363E+00	8.531E-01	NOT IDENT.
RH-106	-1.027E+01	1.591E+01	1.253E+01	8.117E+00	FAIL ABUN
RU-106	-1.027E+01	1.588E+01	1.253E+01	8.100E+00	FAIL ABUN
AG-108M	7.031E-01	1.785E+00	1.539E+00	9.108E-01	NOT IDENT.
CD-109	-8.295E+01	3.873E+01	3.003E+01	1.978E+01	NOT IDENT.
AG-110M	-1.156E+00	1.688E+00	1.321E+00	8.612E-01	NOT IDENT.
IN-111	-5.181E-03	1.777E+00	1.454E+00	9.065E-01	NOT IDENT.
IN-113M	-4.052E+00	2.652E+00	1.712E+00	1.354E+00	NOT IDENT.
SN-113	-4.052E+00	2.652E+00	1.712E+00	1.354E+00	NOT IDENT.
IN-114M	-1.266E+01	7.922E+00	6.116E+00	4.044E+00	NOT IDENT.
CD-115	2.490E-01	6.617E+00	5.549E+00	3.376E+00	NOT IDENT.
SN-117M	-7.816E-01	1.333E+00	1.083E+00	6.799E-01	NOT IDENT.
SB-122	-6.710E-01	2.853E+00	2.342E+00	1.456E+00	NOT IDENT.
I-123	-6.058E+00	4.627E+00	3.645E+00	2.361E+00	NOT IDENT.
TE-123M	-1.748E+00	1.335E+00	1.052E+00	6.814E-01	NOT IDENT.
I-124	-3.272E+00	5.088E+00	2.932E+00	2.596E+00	NOT IDENT.
SB-124	-2.049E+00	3.557E+00	2.766E+00	1.815E+00	NOT IDENT.
SB-125	6.544E-01	4.787E+00	4.075E+00	2.442E+00	NOT IDENT.
TE-125M	-6.047E+01	3.875E+02	3.245E+02	1.977E+02	NOT IDENT.
I-126	-3.619E-01	4.159E+00	3.413E+00	2.122E+00	NOT IDENT.
SB-126	1.689E+00	2.987E+00	2.571E+00	1.524E+00	NOT IDENT.
SN-126	-3.411E+00	3.665E+00	2.999E+00	1.870E+00	NOT IDENT.
SB-127	1.354E+00	5.236E+00	4.405E+00	2.671E+00	NOT IDENT.
XE-127	-6.592E-01	1.831E+00	1.488E+00	9.342E-01	NOT IDENT.
I-131	-4.623E-01	1.797E+00	1.510E+00	9.168E-01	NOT IDENT.
TE-132	-8.842E-01	1.780E+00	1.427E+00	9.080E-01	NOT IDENT.
BA-133	-1.111E+00	2.253E+00	1.871E+00	1.149E+00	NOT IDENT.
I-133	-8.319E-01	3.533E+00	2.907E+00	1.803E+00	FAIL ABUN
CS-134	-1.980E-01	2.045E+00	1.737E+00	1.043E+00	NOT IDENT.
CS-135	2.874E+00	8.301E+00	6.876E+00	4.235E+00	NOT IDENT.
I-135	6.020E+01	7.276E+01	6.590E+01	3.713E+01	NOT IDENT.
CS-136	5.887E-01	2.138E+00	1.850E+00	1.091E+00	NOT IDENT.
BA-137M	1.065E+00	1.757E+00	1.516E+00	8.965E-01	NOT IDENT.
CS-137	1.125E+00	1.857E+00	1.602E+00	9.477E-01	NOT IDENT.
CE-139	4.969E-01	1.401E+00	1.180E+00	7.147E-01	NOT IDENT.
BA-140	-5.586E+00	8.515E+00	4.942E+00	4.345E+00	NOT IDENT.
LA-140	-4.501E-01	1.748E+00	1.433E+00	8.918E-01	NOT IDENT.
CE-141	7.548E-02	2.268E+00	1.896E+00	1.157E+00	NOT IDENT.
CE-143	3.140E+00	5.080E+00	4.444E+00	2.592E+00	NOT IDENT.
CE-144	-4.722E+00	9.826E+00	8.057E+00	5.014E+00	NOT IDENT.
PM-144	1.543E+00	1.967E+00	1.699E+00	1.004E+00	NOT IDENT.
PR-144	1.038E+02	1.323E+02	1.143E+02	6.751E+01	NOT IDENT.
PM-146	-6.581E-01	2.174E+00	1.798E+00	1.109E+00	NOT IDENT.
ND-147	-3.749E+00	1.142E+01	9.330E+00	5.829E+00	NOT IDENT.
PM-149	1.103E+01	5.556E+01	4.816E+01	2.835E+01	NOT IDENT.
EU-152	4.291E-02	4.974E+00	4.247E+00	2.538E+00	NOT IDENT.
GD-153	9.086E-01	3.753E+00	3.199E+00	1.915E+00	NOT IDENT.
EU-154	2.806E+00	5.367E+00	4.705E+00	2.739E+00	NOT IDENT.
EU-155	1.861E+00	5.249E+00	4.483E+00	2.678E+00	NOT IDENT.
TB-160	4.915E-01	5.340E+00	4.582E+00	2.724E+00	NOT IDENT.
HO-166M	-1.117E+00	3.130E+00	2.505E+00	1.597E+00	NOT IDENT.
TM-171	-2.819E+03	1.862E+03	1.260E+03	9.502E+02	NOT IDENT.
HF-175	1.507E-01	1.599E+00	1.371E+00	8.158E-01	NOT IDENT.
LU-176	-3.664E-01	1.317E+00	1.116E+00	6.719E-01	NOT IDENT.
LU-177	-2.611E+00	1.281E+01	1.047E+01	6.538E+00	NOT IDENT.
LU-177M	-3.028E+00	8.175E+00	6.775E+00	4.171E+00	NOT IDENT.
HF-181	-9.634E-01	1.795E+00	1.460E+00	9.161E-01	NOT IDENT.
W-181	-8.889E+00	2.249E+01	1.596E+01	1.147E+01	NOT IDENT.
TA-182	-2.538E+00	7.384E+00	5.946E+00	3.768E+00	NOT IDENT.
RE-183	-1.747E+00	6.566E+00	4.015E+00	3.350E+00	NOT IDENT.
RE-184	-7.892E+00	1.158E+01	9.152E+00	5.909E+00	NOT IDENT.
OS-185	-1.030E+00	1.960E+00	1.556E+00	9.998E-01	NOT IDENT.
RE-188	-2.114E-01	7.593E+00	6.319E+00	3.874E+00	NOT IDENT.

W-188	-1.731E+02	3.182E+02	2.669E+02	1.623E+02 NOT IDENT.
IR-192	8.679E-01	1.671E+00	1.461E+00	8.524E-01 NOT IDENT.
AU-195	7.546E+00	1.045E+01	9.044E+00	5.330E+00 NOT IDENT.
TL-200	-2.908E+00	2.876E+00	2.318E+00	1.468E+00 NOT IDENT.
TL-201	-4.358E+00	1.399E+01	1.148E+01	7.140E+00 NOT IDENT.
TL-202	1.003E+00	1.685E+00	1.466E+00	8.596E-01 NOT IDENT.
HG-203	-1.378E+00	1.669E+00	1.386E+00	8.515E-01 NOT IDENT.
BI-207	2.964E+00	2.641E+00	2.418E+00	1.348E+00 NOT IDENT.
TL-207	2.961E+00	3.430E+01	2.946E+01	1.750E+01 NOT IDENT.
TL-208	-7.445E-01	3.281E+00	1.583E+00	1.674E+00 FAIL ABUN
PO-209	2.555E+02	3.488E+02	3.138E+02	1.780E+02 NOT IDENT.
BI-210	-2.541E+02	4.067E+02	2.495E+02	2.075E+02 NOT IDENT.
PB-210	-2.541E+02	4.067E+02	2.495E+02	2.075E+02 NOT IDENT.
PO-210	-2.541E+02	4.066E+02	2.495E+02	2.075E+02 NOT IDENT.
BI-211	-1.500E+01	1.636E+01	8.959E+00	8.350E+00 NOT IDENT.
PB-211	-2.316E+01	4.779E+01	3.759E+01	2.438E+01 NOT IDENT.
BI-212	3.640E+00	1.384E+01	1.161E+01	7.063E+00 NOT IDENT.
PB-212	2.374E-02	4.513E+00	2.679E+00	2.303E+00 FAIL ABUN
PO-212	2.374E-02	4.513E+00	2.679E+00	2.303E+00 FAIL ABUN
BI-214	-2.369E-01	4.910E+00	3.275E+00	2.505E+00 NOT IDENT.
PB-214	-5.684E+00	5.725E+00	3.122E+00	2.921E+00 NOT IDENT.
PO-214	-5.684E+00	5.725E+00	3.122E+00	2.921E+00 NOT IDENT.
PO-215	2.961E+00	3.430E+01	2.946E+01	1.750E+01 NOT IDENT.
PO-216	2.374E-02	4.513E+00	2.679E+00	2.303E+00 FAIL ABUN
PO-218	-5.684E+00	5.725E+00	3.122E+00	2.921E+00 NOT IDENT.
RN-219	1.326E+00	2.044E+01	1.738E+01	1.043E+01 NOT IDENT.
RN-220	-2.538E+02	1.399E+03	1.154E+03	7.137E+02 NOT IDENT.
RA-223	2.961E+00	3.430E+01	2.946E+01	1.750E+01 NOT IDENT.
RA-224	4.693E+01	3.866E+01	2.950E+01	1.973E+01 NOT IDENT.
RA-226	-4.093E+01	6.629E+01	3.646E+01	3.383E+01 NOT IDENT.
AC-227	-8.618E+00	2.010E+01	1.606E+01	1.026E+01 NOT IDENT.
PA-227	1.017E+12	6.066E+11	0.000E+00	3.097E+11 SHORT HLIF
TH-227	-8.618E+00	2.012E+01	1.606E+01	1.026E+01 NOT IDENT.
AC-228	5.259E+00	6.376E+00	5.740E+00	3.254E+00 NOT IDENT.
RA-228	5.259E+00	6.376E+00	5.740E+00	3.254E+00 NOT IDENT.
TH-228	2.374E-02	4.513E+00	2.679E+00	2.303E+00 FAIL ABUN
TH-229	1.386E+01	2.696E+01	2.271E+01	1.376E+01 NOT IDENT.
TH-230	-8.116E+01	8.957E+02	5.211E+02	4.570E+02 NOT IDENT.
PA-231	7.470E+01	8.040E+01	7.121E+01	4.102E+01 NOT IDENT.
TH-231	2.358E+01	2.235E+01	1.934E+01	1.141E+01 NOT IDENT.
U-231	-2.745E+01	6.112E+00	4.122E+00	3.130E+00 NOT IDENT.
TH-232	-1.507E+03	1.565E+04	1.478E+03	7.985E+03 NOT IDENT.
PA-233	-6.423E-01	3.564E+00	3.031E+00	1.818E+00 NOT IDENT.
PA-234	1.887E+00	1.293E+01	1.111E+01	6.597E+00 NOT IDENT.
PA-234M	1.669E+02	2.184E+02	1.957E+02	1.115E+02 NOT IDENT.
TH-234	-1.222E+02	1.080E+02	6.445E+01	5.513E+01 NOT IDENT.
U-234	-2.289E+03	2.307E+04	3.744E+03	1.177E+04 NOT IDENT.
U-235	-1.120E+01	1.397E+01	8.708E+00	7.130E+00 NOT IDENT.
NP-236	-5.918E+00	4.059E+00	3.175E+00	2.072E+00 NOT IDENT.
NP-237	-8.803E+00	1.109E+01	9.003E+00	5.657E+00 NOT IDENT.
PU-237	-1.962E+02	1.069E+02	8.429E+01	5.457E+01 NOT IDENT.
U-238	-1.222E+02	1.080E+02	6.445E+01	5.513E+01 NOT IDENT.
NP-239	-5.512E+00	9.825E+00	8.085E+00	5.013E+00 NOT IDENT.
AM-241	-1.765E+01	9.637E+00	7.586E+00	4.920E+00 NOT IDENT.
AM-243	-3.332E-02	3.314E+00	2.326E+00	1.691E+00 NOT IDENT.
CM-243	2.268E+00	4.731E+00	4.060E+00	2.414E+00 NOT IDENT.
AM-246	8.055E-01	6.479E+00	5.511E+00	3.306E+00 NOT IDENT.
CM-247	-1.821E-01	1.833E+00	1.545E+00	9.353E-01 NOT IDENT.
CF-249	2.174E+00	2.043E+00	1.825E+00	1.043E+00 NOT IDENT.
CF-251	2.171E+00	6.472E+00	5.436E+00	3.302E+00 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	320.7173
46.50	320.7173
46.50	320.7173
48.70	349.2014
49.72	357.1007
51.35	297.9729
52.39	303.9814
52.97	324.3832
53.15	332.7083
53.20	332.7368
53.44	339.2722
54.07	335.9691
56.28	314.2265
56.28	314.2278
57.37	317.5454
57.53	323.1517
57.53	323.1523
57.60	306.6141
57.98	312.3294
57.98	312.3294
59.00	364.5162
59.32	375.7807
59.32	375.7807
59.40	375.8280
59.54	423.0154
59.54	423.0154
59.72	429.6031
60.01	429.7991
61.10	366.6464
61.14	365.7431
61.30	365.8343
63.00	361.2211
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63.29	368.8122
63.58	344.8108
64.28	354.4798
64.62	0.0000
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65.20	391.3051
65.20	391.3051
66.05	450.5720
66.72	446.3472
66.83	446.4219
66.91	445.5407
67.20	389.6633
67.20	389.6633
67.67	360.0093
67.75	360.0504
67.85	360.1033
68.90	368.1482
68.90	368.1482
69.30	390.8564
69.67	367.6211
70.82	364.4664
70.82	364.4664
70.83	364.4723
72.80	418.2384
72.80	418.2384
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74.81	372.1766
74.81	372.1766
74.81	372.1766
74.81	372.1766
74.81	372.1766
74.81	372.1766

74.81	372.1766
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74.97	365.6440
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77.11	354.3943
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80.11	405.2902
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80.30	415.8588
80.30	415.8588
80.57	412.1993
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81.07	400.0866
81.07	400.0866
81.07	400.0866
82.60	358.8885
83.37	337.2692
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83.78	349.8755
83.78	349.8755
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84.21	344.3307
84.90	364.7379
85.43	377.4370
86.29	401.8240
86.50	406.7274
86.54	406.7469
86.59	406.7727
86.72	403.0026
86.79	403.0362
86.94	396.3946
87.30	407.1367
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87.30	407.1367
87.30	407.1367
87.30	407.1367
87.30	407.1367
87.57	409.1953
87.88	491.0332
88.03	491.1248
88.36	563.4380
88.47	563.5162
89.36	608.4215
89.95	524.0864
91.11	362.7526
92.29	363.2732
92.38	360.4146
92.38	360.4146
93.35	373.4133
94.00	370.8004
94.67	465.0797
94.67	465.0824
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94.90	563.0986
94.90	563.0986
95.87	627.7883
95.87	627.7883
96.73	427.3695
97.43	350.9251
98.44	330.9003
98.44	330.9016
98.88	323.2803
99.55	343.9967
99.55	343.9967
99.86	349.9683
100.00	350.0244
100.10	350.0669

103.18	336.6212
103.76	323.1330
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105.31	330.5620
108.00	362.0479
109.28	353.6892
110.05	0.0000
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111.00	359.2873
111.76	375.3874
112.95	358.0630
115.19	353.9604
115.19	353.9604
115.19	353.9604
116.30	404.0066
117.00	382.4489
117.00	382.4489
117.66	405.5767
121.11	350.1618
121.62	344.3564
121.78	349.4032
122.06	349.5033
122.32	358.5851
122.32	358.5851
122.32	358.5851
123.07	367.8554
127.23	367.3871
129.76	337.1111
131.20	343.6328
133.02	358.3720
133.54	359.5635
135.34	357.1502
136.00	372.5596
136.25	373.6620
136.48	371.7180
140.51	357.8813
140.51	357.8813
142.18	356.4007
142.65	367.7616
143.76	393.6333
144.24	387.6857
144.24	387.6857
144.24	387.6857
145.22	357.3994
145.44	346.2367
147.16	365.1929
152.43	362.8112
152.70	335.1404
153.22	337.3516
154.21	362.3501
154.21	362.3501
154.21	362.3501
155.03	366.7339
156.02	307.2511
158.56	353.3972
159.00	383.5080
159.00	383.5080
160.31	387.0457
161.27	334.5428
162.32	338.9876
162.64	332.8582
163.35	326.8336
163.89	316.6034
165.85	331.6848
167.43	344.6166
171.28	310.2058
171.86	303.0406
172.10	303.1004
176.55	326.2283
176.60	326.2401
181.06	392.6785
184.41	310.3293
185.71	334.9478
186.00	335.0252
186.21	330.8503
190.27	400.8175
192.34	331.3572
193.63	338.0618

197.04	346.3961
198.01	344.5157
198.60	343.5990
200.40	315.2133
201.83	367.9592
202.84	332.9099
205.31	333.5150
208.36	343.9307
208.81	354.7943
209.75	339.9715
209.75	339.9715
210.97	320.8879
215.65	318.7221
216.55	313.5191
218.09	325.7649
222.10	277.8418
223.80	275.9967
226.40	297.1733
227.00	313.6311
227.08	314.7377
227.20	314.7642
228.16	308.4301
228.18	308.4344
228.18	308.4344
231.56	277.4656
235.69	269.9117
236.00	252.4377
236.00	252.4377
238.63	279.8810
238.63	279.8810
238.63	279.8810
238.63	279.8810
239.00	321.4474
240.98	276.1395
241.98	304.4817
241.98	304.4817
241.98	304.4817
244.69	278.3234
245.39	286.6403
247.94	248.4644
248.90	276.2432
249.79	277.5071
252.40	243.6412
252.85	265.8673
252.85	265.8673
254.15	245.0227
256.20	258.6621
256.20	258.6621
260.50	238.2128
260.90	256.0898
262.80	255.2769
264.65	244.4101
268.24	249.4254
268.79	248.3916
269.46	257.4480
269.46	257.4480
269.46	257.4480
271.23	247.6437
273.65	248.0079
276.40	230.4342
277.35	228.3161
277.60	236.2244
277.60	236.2244
278.00	244.8332
278.60	264.7292
279.20	265.7269
279.53	261.2726
280.46	261.4177
281.68	236.3501
283.67	223.0809
284.30	223.1653
285.00	227.7751
285.90	232.4200
286.10	229.7317
286.10	229.7317
287.40	243.4857
288.45	253.5996
290.67	239.4176

290.80	239.4337
291.72	238.6552
293.26	223.4300
293.70	209.8598
295.21	209.1310
295.21	209.1310
295.21	209.1310
295.96	234.6943
296.50	232.0369
297.23	258.5329
298.57	241.4211
299.80	221.5358
299.80	221.5358
300.09	230.6895
300.09	230.6895
300.09	230.6895
300.09	230.6895
300.12	230.6926
301.29	220.8102
302.84	203.6535
303.76	226.6027
303.91	226.6209
304.40	225.7704
304.40	225.7704
304.84	253.2528
306.84	236.1494
308.46	227.2021
311.98	248.7596
316.51	226.3759
318.01	216.4341
319.02	238.6676
319.41	250.7002
320.08	248.9491
323.87	214.3536
323.87	214.3536
323.87	214.3536
325.23	226.5293
328.77	206.5826
329.70	207.6129
329.70	207.6129
330.00	209.4997
333.44	236.8151
334.20	235.0534
334.20	235.0534
334.30	235.0658
338.28	216.9386
338.28	216.9386
338.28	216.9386
338.32	216.9414
338.32	216.9414
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340.57	221.8583
343.40	195.1134
344.27	192.4008
345.85	191.6219
350.59	192.0924
351.07	191.2027
351.92	195.9732
351.92	195.9732
351.92	195.9732
355.39	194.4415
356.01	201.0795
364.48	186.8407
366.43	198.3593
367.43	198.4567
367.94	198.5079
369.80	168.4134
374.96	186.8638
383.85	165.7630
387.95	146.9993
388.63	151.8205
391.69	203.6786
391.69	203.6786
392.90	193.2710
398.62	166.9312
400.65	179.5743
401.10	163.2847
401.81	151.8088

402.60	154.7483
404.84	158.7581
410.95	150.5232
411.60	148.6386
413.65	153.6081
414.70	143.0498
415.30	147.9237
415.76	145.0543
417.63	137.4342
418.52	132.6485
423.70	163.0453
427.08	125.3860
427.89	151.6849
432.53	150.0504
433.00	151.0569
433.93	155.0172
439.47	148.5562
439.56	148.5618
439.89	156.4043
443.98	167.4556
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445.03	154.7964
453.90	136.7043
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476.78	133.0660
477.59	131.1250
477.96	130.1509
482.03	146.2930
484.57	134.4908
487.03	140.6110
490.36	146.7936
492.35	134.9193
497.08	137.1806
507.63	135.7498
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510.84	120.8196
511.00	120.8269
511.85	120.8687
511.85	120.8687
513.99	104.1684
513.99	104.1684
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520.65	105.1146
527.90	110.4796
528.96	114.5808
529.64	114.6111
529.87	109.5478
531.02	112.6422
537.32	121.0511
543.00	121.3126
546.56	111.2699
549.76	124.6896
552.65	130.9625
555.20	110.6051
563.23	110.9347
563.90	124.3204
568.70	125.5683
569.32	118.3916
569.50	114.2818
569.67	114.2872
573.80	115.4918
574.00	111.3750
574.64	106.2439
578.91	127.0690
579.30	114.6883
583.14	97.2588
585.48	117.0168
591.81	127.6605
592.07	122.4826
593.00	137.0596
595.88	138.2375
600.56	145.7559

602.52	157.3150
602.71	163.5774
602.71	163.5774
603.60	176.1379
604.41	156.3794
604.70	163.6924
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610.33	124.3166
612.46	135.9097
614.37	124.4939
618.01	103.7010
621.84	109.0807
621.84	109.0807
631.29	105.2271
633.02	108.4467
633.10	108.4492
634.78	114.8332
635.90	108.5523
636.97	106.4840
645.85	105.7446
646.12	101.5242
656.30	93.3797
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657.90	104.0460
661.65	85.0410
661.65	85.0410
664.57	89.3792
666.33	93.6891
666.33	93.6891
675.00	83.2768
677.61	61.9762
685.20	82.4799
692.80	114.8944
695.00	106.3791
696.49	117.1803
696.49	117.1803
697.00	120.4246
697.49	109.6898
698.33	122.6251
698.50	128.0122
699.00	123.7289
702.63	112.0209
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706.58	112.1605
706.67	112.1631
709.31	87.4310
711.68	98.2982
713.82	97.2817
717.42	82.2418
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722.78	92.1324
722.78	92.1324
722.89	92.1366
722.95	92.1387
723.30	92.1490
724.18	85.6676
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752.31	64.5284
753.82	65.6528
755.35	82.1027
756.15	85.4077
756.87	82.1411
763.13	79.0014
763.93	72.4356
765.79	70.2797
766.42	85.6686
766.84	86.7785
776.49	97.3068
778.00	90.0028

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778.89	83.5944
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792.07	72.8506
795.84	72.9294
796.30	80.3253
798.80	84.0795
801.93	67.5093
805.60	75.9107
810.29	71.3776
810.76	66.7515
815.85	65.9197
817.79	65.9558
818.51	65.9688
819.60	65.0596
826.30	69.8380
828.27	68.9459
831.60	77.4022
831.96	83.0065
834.83	87.7406
836.80	84.0527
846.75	79.6010
848.13	61.8320
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856.80	77.0035
860.37	57.3389
867.32	66.8644
867.82	61.2218
871.10	65.0469
873.19	49.9916
874.81	52.8452
875.33	54.7396
876.40	58.5312
879.36	53.8538
880.27	63.3182
880.51	68.0479
881.50	67.1201
883.24	59.5842
884.67	57.7149
889.25	61.5749
896.60	54.1020
898.02	64.5662
899.00	69.3316
903.28	76.0661
911.07	60.0238
911.07	60.0238
919.63	63.9766
920.93	59.2224
925.00	49.7223
925.24	52.5942
926.50	56.4384
935.52	48.8989
937.48	49.8820
944.10	58.6147
946.00	49.0296
949.00	50.0291
962.29	57.9187
964.01	63.7374
966.15	69.5698
968.20	62.8378
969.11	59.9515
969.11	59.9515
977.42	62.0130
980.50	58.1812
983.50	59.1955
989.30	57.3363
996.32	65.2225
1001.03	54.5770
1001.68	52.6355
1004.76	69.2579
1021.30	54.8442
1024.50	60.7670
1034.80	57.9701
1036.00	49.1394
1037.82	51.1283
1038.57	52.1201
1038.76	56.0560

1045.16	43.3376
1046.59	43.3519
1048.07	42.3806
1050.47	48.3221
1050.47	48.3221
1062.04	49.4425
1063.62	52.4285
1076.63	76.3984
1077.35	66.4875
1078.86	51.6191
1085.78	56.6730
1093.90	33.8672
1099.22	53.8550
1112.02	51.0104
1112.84	50.0203
1115.52	54.0527
1120.29	57.1183
1120.51	57.1206
1121.28	49.1117
1124.00	58.1676
1129.67	49.2034
1131.51	33.1504
1147.95	47.3863
1167.94	50.6307
1173.22	51.7035
1175.09	48.6816
1177.93	44.6517
1189.05	35.6038
1204.90	37.7648
1205.75	36.7515
1213.00	40.8968
1221.42	54.2853
1230.97	52.3406
1235.34	51.3611
1236.41	46.2341
1238.25	38.0298
1246.25	49.4180
1260.41	32.0091
1271.85	30.0136
1274.45	38.3128
1274.54	38.3143
1291.56	42.6016
1298.22	45.7796
1312.09	42.7767
1325.50	30.3370
1325.50	30.3370
1332.49	48.1881
1333.61	36.6720
1360.21	32.6499
1362.66	27.3965
1365.15	37.9512
1368.21	26.3713
1368.53	27.4272
1376.25	32.7508
1384.27	43.3823
1394.10	33.9219
1395.20	32.8694
1407.95	29.7591
1434.06	23.4967
1436.60	39.5353
1457.56	35.3982
1460.81	36.4930
1489.15	30.2080
1509.49	25.9863
1596.49	23.5570
1620.62	24.5999
1678.03	27.7023
1691.02	27.7610
1691.02	27.7610
1706.46	20.1533
1750.46	21.2626
1764.49	25.1848
1770.23	35.8721
1771.40	33.9392
1791.20	25.2909
1808.65	29.2613
1836.01	26.4463

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202005628

Total Uranium Activity	-3.6874E+02	ug/g
Total Uranium Counting Unc.	3.2148E+02	ug/g
Total Uranium Tpu	1.6406E-04	ug/g
Total Uranium Mda	1.9179E+02	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 937282	SAMPLE ID	: G1202005628
ANALYST	: MXR1	DETECTOR	: GAM23
SAMPLE DATE	: 4-JAN-2010 00:00:00.00	COUNT TIME	: 0 08:20:00.00
ANALYSIS DATE:	4-JAN-2010 19:28:43.98	SAMPLE ALQT:	1.000 FILTER

GROSS GAMMA ACTIVITY (pCi/FILTER)	: 2.612E+00
GROSS GAMMA ERROR (pCi/FILTER)	: 2.153E+01
GROSS GAMMA MDA (pCi/FILTER)	: 6.350E+00
GROSS GAMMA DLC (pCi/FILTER)	: 3.077E+00

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 13:08:51.50

```
*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005629.CNF;1
Sample date       : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 09:08:19.
Sample ID         : G1202005629          Sample quantity  : 1.00000E+00 FILTER
Detector name     : GAM03                Detector geometry: JAR
Elapsed live time: 0 04:00:00.00         Elapsed real time: 0 04:00:00.90  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 937282               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*******************************************************************************
```

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.60*	77	205	0.99	127.76	123	11	5.33E-03	43.2	
2	0	92.34*	38	326	1.27	185.16	178	14	2.63E-03	120.5	
3	0	185.78*	14	293	1.20	371.84	365	14	9.52E-04	309.9	
4	0	239.41*	9	304	4.74	479.01	469	20	6.07E-04	526.3	
5	0	584.18*	67	59	4.34	1167.94	1158	23	4.62E-03	35.1	
6	0	911.06*	9	31	1.38	1821.27	1816	12	6.39E-04	139.4	
7	0	1001.16*	8	34	1.36	2001.37	1995	14	5.66E-04	197.4	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 5-JAN-2010 13:08:54

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005629.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 09:08:19
Sample ID : G1202005629 Sample quantity : 1.0000 FILTER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA3 Detector geometry: JAR
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:00.90 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
RA-226	+	186.21	*	2.106E+01	1.314E+02	9.133E+01	6.702E+01	0.231
TH-234	+	63.29	*	2.667E+02	2.369E+02	2.083E+02	4.268E+01	1.280
	+	92.38		3.821E+01	9.241E+01	6.213E+01	1.188E+01	0.615
U-238	+	63.29	*	2.667E+02	2.369E+02	2.083E+02	4.268E+01	1.280
	+	92.38		3.821E+01	9.221E+01	6.213E+01	6.600E+00	0.615

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7		477.59	*	1.173E+01	2.463E+01	4.231E+01	2.778E+00	0.277
NA-22		1274.54	*	-1.608E+00	2.585E+00	3.702E+00	2.859E-01	-0.435
NA-24		1368.53	*	1.152E+03	2.585E+00	Half-Life too short		
AL-26		1129.67		-5.232E+01	1.020E+02	1.531E+02	9.890E+00	-0.342
		1808.65	*	5.768E-01	2.248E+00	3.895E+00	2.393E-01	0.148
K-40		1460.81	*	-1.035E+01	3.812E+01	5.250E+01	4.500E+00	-0.197
TI-44		67.85		-1.044E+00	4.697E+00	6.932E+00	8.504E-01	-0.151
		78.38	*	9.723E-02	2.742E+00	4.641E+00	5.374E-01	0.021
SC-46		889.25	*	1.482E-01	2.478E+00	4.145E+00	3.349E-01	0.036
		1120.51		-1.506E+00	4.099E+00	5.847E+00	3.832E-01	-0.258
V-48		944.10		1.810E+01	7.044E+01	1.200E+02	9.528E+00	0.151
		983.50	*	4.000E+00	5.495E+00	9.857E+00	7.584E-01	0.406
		1312.09		-7.219E+00	6.777E+00	8.979E+00	7.529E-01	-0.804
CR-51		320.08	*	-1.430E+01	3.008E+01	4.897E+01	3.835E+00	-0.292
MN-52		744.21		-1.895E+00	2.397E+01	3.990E+01	2.602E+00	-0.047
		848.13		-6.271E+02	8.027E+02	1.229E+03	9.366E+01	-0.510
		935.52		8.475E+00	2.610E+01	4.473E+01	3.573E+00	0.189
		1246.25		8.506E+01	6.129E+02	1.014E+03	7.316E+01	0.084
		1333.61		-3.059E+02	5.162E+02	7.459E+02	6.531E+01	-0.410
		1434.06	*	-7.383E-01	1.863E+01	3.078E+01	2.594E+00	-0.024
MN-54		834.83	*	2.183E+00	2.658E+00	4.791E+00	3.582E-01	0.456
CO-56		846.75	*	-1.191E-01	3.225E+00	5.347E+00	4.067E-01	-0.022
		977.42		-4.486E+01	1.905E+02	3.034E+02	2.347E+01	-0.148
		1037.82		1.910E+01	2.072E+01	3.806E+01	2.981E+00	0.502

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided	(keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		1175.09		6.344E+01	1.286E+02	2.249E+02	1.355E+01	0.282
		1238.25		7.133E-02	4.744E+00	7.706E+00	5.688E-01	0.009
		1360.21		1.504E+01	7.825E+01	1.343E+02	1.166E+01	0.112
		1771.40		7.768E+00	2.213E+01	3.847E+01	2.477E+00	0.202
CO-57		122.06	*	2.326E+00	2.085E+00	3.654E+00	2.338E-01	0.637
		136.48		5.259E+00	1.732E+01	2.913E+01	1.976E+00	0.181
CO-58		810.76	*	8.297E-01	2.468E+00	4.292E+00	3.108E-01	0.193
FE-59		142.65		-1.790E+02	2.771E+02	3.896E+02	2.220E+01	-0.459
		192.34		8.744E+01	8.418E+01	1.353E+02	1.593E+01	0.646
		1099.22	*	-1.385E+00	7.144E+00	1.140E+01	8.701E-01	-0.121
		1291.56		-7.360E+00	7.533E+00	9.731E+00	9.007E-01	-0.756
CO-60		1173.22		6.018E-01	2.662E+00	4.477E+00	2.684E-01	0.134
		1332.49	*	-1.993E-01	2.691E+00	4.282E+00	3.750E-01	-0.047
ZN-65		1115.52	*	-1.351E+00	6.034E+00	9.564E+00	6.327E-01	-0.141
GE-68		1077.35	*	5.913E+01	8.917E+01	1.526E+02	1.063E+01	0.387
AS-73		53.44	*	1.251E+02	1.313E+02	2.182E+02	3.230E+01	0.573
AS-74		595.88	*	1.945E-01	7.854E+00	1.281E+01	7.339E-01	0.015
		634.78		8.678E+00	3.286E+01	5.457E+01	3.125E+00	0.159
SE-75		66.05		-2.936E+02	5.994E+02	7.662E+02	1.061E+02	-0.383
		96.73		6.903E+00	7.266E+01	1.032E+02	1.479E+01	0.067
		121.11		2.549E+00	1.154E+01	1.941E+01	1.878E+00	0.131
		136.00		-6.288E-02	3.245E+00	5.374E+00	3.210E-01	-0.012
		198.60		-9.268E+01	1.754E+02	2.390E+02	1.715E+01	-0.388
		264.65	*	-1.980E+00	3.622E+00	5.594E+00	4.293E-01	-0.354
		279.53		5.525E+00	8.817E+00	1.474E+01	1.236E+00	0.375
		303.91		-4.237E+01	1.753E+02	2.748E+02	2.954E+01	-0.154
		400.65		-1.961E+00	1.916E+01	3.163E+01	2.790E+00	-0.062
BR-77		87.88		-4.279E+03	3.476E+04	5.119E+04	6.039E+03	-0.084
		200.40		-3.477E+03	2.911E+04	4.714E+04	2.783E+03	-0.074
	+	239.00		4.166E+02	4.386E+03	3.256E+03	2.250E+02	0.128
		249.79		-7.760E+03	1.311E+04	2.033E+04	1.465E+03	-0.382
		281.68		-6.902E+03	1.617E+04	2.509E+04	2.010E+03	-0.275
		297.23		6.082E+03	8.779E+03	1.475E+04	1.143E+03	0.412
		303.76		-7.718E+03	3.332E+04	5.229E+04	3.989E+03	-0.148
		439.47		-1.110E+04	2.523E+04	4.024E+04	2.205E+03	-0.276
		484.57		-1.859E+04	3.927E+04	6.186E+04	3.463E+03	-0.300
		520.65	*	5.361E+02	1.814E+03	3.056E+03	1.731E+02	0.175
		574.64		1.725E+04	3.834E+04	6.181E+04	3.537E+03	0.279
		578.91		-6.963E+02	1.670E+04	2.338E+04	1.339E+03	-0.030
	+	585.48		8.632E+04	6.078E+04	5.187E+04	2.970E+03	1.664
		755.35		1.137E+04	2.423E+04	4.271E+04	2.834E+03	0.266
		817.79		1.597E+03	2.032E+04	3.421E+04	2.495E+03	0.047
SR-82		698.33		5.429E+02	3.094E+03	4.774E+03	2.894E+02	0.114
		776.49	*	5.749E+00	2.676E+01	4.587E+01	3.144E+00	0.125
		1395.20		9.740E+01	6.854E+02	1.175E+03	1.007E+02	0.083
RB-83		520.41	*	1.280E+00	5.430E+00	9.099E+00	5.154E-01	0.141
		529.64		2.404E+00	7.901E+00	1.333E+01	7.566E-01	0.180
		552.65		-7.387E+00	2.009E+01	2.567E+01	1.464E+00	-0.288
RB-84		881.50	*	1.167E+00	5.747E+00	9.745E+00	7.789E-01	0.120

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
KR-85	513.99	*	-2.547E+03	8.890E+02	1.202E+03	6.799E+01	-2.118
SR-85	513.99	*	-1.345E+01	4.695E+00	6.350E+00	3.591E-01	-2.118
RB-86	1076.63	*	8.779E+01	5.436E+01	1.077E+02	7.504E+00	0.815
Y-88	898.02		-2.360E-01	2.734E+00	4.482E+00	3.686E-01	-0.053
	1836.01	*	6.544E-01	2.829E+00	4.847E+00	2.877E-01	0.135
ZR-88	392.90	*	2.070E+00	2.442E+00	4.318E+00	2.294E-01	0.479
Y-91	1204.90	*	4.802E+02	1.154E+03	1.985E+03	1.293E+02	0.242
NB-94	702.63	*	-3.615E-02	2.511E+00	4.034E+00	2.463E-01	-0.009
	871.10		-1.269E+00	2.422E+00	3.764E+00	2.965E-01	-0.337
NB-95	765.79	*	-2.516E+00	3.933E+00	5.619E+00	3.790E-01	-0.448
NB-95M	235.69	*	1.035E+00	1.091E+01	1.556E+01	1.298E+00	0.067
ZR-95	724.18		1.624E+00	5.681E+00	9.472E+00	6.917E-01	0.171
	756.15	*	-4.920E-01	4.949E+00	8.206E+00	6.355E-01	-0.060
NB-97	657.90	*	-9.374E+01	4.949E+00	Half-Life too short		
	1024.50		-4.515E+02	4.949E+00	Half-Life too short		
ZR-97	254.15		-4.237E+03	4.949E+00	Half-Life too short		
	355.39		-2.180E+03	4.949E+00	Half-Life too short		
	507.63	*	-7.335E+03	4.949E+00	Half-Life too short		
	602.52		3.686E+02	4.949E+00	Half-Life too short		
	1021.30		3.264E+03	4.949E+00	Half-Life too short		
	1147.95		-7.156E+02	4.949E+00	Half-Life too short		
	1362.66		-6.025E+03	4.949E+00	Half-Life too short		
	1750.46		-2.733E+03	4.949E+00	Half-Life too short		
MO-99	140.51		-3.862E+03	4.594E+03	7.092E+03	1.910E+03	-0.545
	181.06		-1.022E+03	3.226E+03	4.512E+03	7.682E+02	-0.226
	366.43		-2.273E+03	1.482E+04	2.291E+04	1.399E+03	-0.099
	739.58	*	1.132E+03	1.653E+03	2.954E+03	4.158E+02	0.383
	778.00		2.577E+03	4.596E+03	8.156E+03	5.604E+02	0.316
TC-99M	140.51	*	-6.402E+15	4.596E+03	Half-Life too short		
RH-101	127.23		-3.020E+00	2.494E+00	3.863E+00	2.387E-01	-0.782
	198.01	*	-2.472E-01	3.112E+00	4.344E+00	2.540E-01	-0.057
	325.23		1.187E+01	1.673E+01	2.943E+01	2.113E+00	0.403
RH-102	418.52		3.645E+00	2.103E+01	3.543E+01	1.917E+00	0.103
	475.06	*	-2.143E+00	2.240E+00	3.365E+00	1.877E-01	-0.637
	631.29		4.861E-01	4.320E+00	7.081E+00	4.055E-01	0.069
	697.49		-2.336E+00	6.569E+00	9.584E+00	5.803E-01	-0.244
	766.84		-4.851E+00	7.960E+00	1.131E+01	7.641E-01	-0.429
	1046.59		2.745E-01	6.776E+00	1.119E+01	8.082E-01	0.025
	1112.84		-2.131E+00	1.511E+01	2.422E+01	1.605E+00	-0.088
RU-103	497.08	*	2.260E-01	3.365E+00	5.567E+00	6.995E-01	0.041
	610.33		4.484E+01	8.189E+01	1.292E+02	1.989E+01	0.347
RH-106	511.85		-4.041E+01	2.336E+01	3.861E+01	2.182E+00	-1.047
	621.84	*	7.133E+00	2.603E+01	4.331E+01	5.068E+00	0.165
	1050.47		-3.719E+00	1.320E+02	2.155E+02	1.550E+01	-0.017
RU-106	511.85		-4.041E+01	2.336E+01	3.861E+01	2.182E+00	-1.047
	621.84	*	7.133E+00	2.602E+01	4.331E+01	2.482E+00	0.165
	1050.47		-3.719E+00	1.320E+02	2.155E+02	1.550E+01	-0.017
AG-108M	433.93	*	-1.228E+00	2.471E+00	3.920E+00	2.347E-01	-0.313
	614.37		-2.083E+00	3.549E+00	5.476E+00	3.411E-01	-0.380

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	722.95		-7.025E-01	2.659E+00	4.124E+00	2.788E-01	-0.170
CD-109	88.03	*	-1.518E+00	7.144E+01	1.059E+02	1.249E+01	-0.014
AG-110M	657.75	*	-2.543E+00	3.029E+00	4.332E+00	2.639E-01	-0.587
	677.61		-6.427E-01	2.511E+01	4.040E+01	2.510E+00	-0.016
	706.67		7.917E+00	1.584E+01	2.681E+01	1.736E+00	0.295
	763.93		-3.260E+00	1.048E+01	1.694E+01	1.191E+00	-0.192
	884.67		9.074E-01	3.599E+00	6.145E+00	5.116E-01	0.148
	937.48		4.500E-01	8.586E+00	1.428E+01	1.187E+00	0.032
	1384.27		1.034E+01	9.946E+00	1.940E+01	1.717E+00	0.533
IN-111	171.28		-6.698E+01	1.665E+02	2.674E+02	1.401E+01	-0.251
	245.39	*	1.184E+02	1.925E+02	2.862E+02	2.028E+01	0.414
IN-113M	391.69	*	3.376E+00	3.498E+00	6.233E+00	3.571E-01	0.542
SN-113	391.69	*	3.376E+00	3.498E+00	6.233E+00	3.571E-01	0.542
IN-114M	190.27	*	5.113E+00	1.697E+01	2.486E+01	1.407E+00	0.206
CD-115	260.90		-1.058E-02	1.697E+01	Half-Life too short		
	492.35		-1.870E-03	1.697E+01	Half-Life too short		
	527.90	*	1.675E-03	1.697E+01	Half-Life too short		
SN-117M	156.02		1.431E+02	2.058E+02	3.513E+02	1.884E+01	0.407
	158.56	*	-7.005E+00	5.128E+00	7.791E+00	4.131E-01	-0.899
SB-122	563.90	*	2.107E+02	3.352E+02	5.775E+02	3.300E+01	0.365
	692.80		-4.277E+02	6.550E+03	1.048E+04	6.294E+02	-0.041
I-123	159.00	*	-1.848E+04	6.550E+03	Half-Life too short		
	528.96		7.122E+05	6.550E+03	Half-Life too short		
TE-123M	159.00	*	-2.657E+00	2.383E+00	3.683E+00	1.981E-01	-0.721
I-124	602.71	*	2.796E+01	8.728E+01	1.458E+02	8.357E+00	0.192
	722.78		2.354E+01	4.237E+02	6.856E+02	4.323E+01	0.034
	1325.50		-1.105E+03	3.919E+03	6.018E+03	5.193E+02	-0.184
	1376.25		-3.016E+03	3.092E+03	4.263E+03	3.680E+02	-0.707
	1509.49		-4.236E+01	1.932E+03	3.196E+03	2.589E+02	-0.013
	1691.02		5.062E+01	4.471E+02	7.536E+02	5.295E+01	0.067
SB-124	602.71		1.054E+00	3.290E+00	5.497E+00	3.152E-01	0.192
	645.85		2.444E+01	3.686E+01	6.395E+01	4.140E+00	0.382
	709.31		2.781E+02	2.211E+02	3.996E+02	2.466E+01	0.696
	713.82		-1.027E+02	1.281E+02	1.859E+02	1.943E+01	-0.552
	722.78		1.287E+00	2.315E+01	3.747E+01	2.457E+00	0.034
	968.20		1.617E+02	2.226E+02	3.520E+02	2.744E+01	0.459
	1045.16		-4.090E+01	1.572E+02	2.478E+02	1.793E+01	-0.165
	1325.50		-6.449E+01	2.288E+02	3.512E+02	3.031E+01	-0.184
	1368.21		1.054E+02	1.363E+02	2.511E+02	3.390E+01	0.420
	1436.60		-2.806E+01	2.415E+02	3.933E+02	3.311E+01	-0.071
	1691.02	*	6.525E-01	5.763E+00	9.714E+00	7.228E-01	0.067
SB-125	427.89	*	6.881E+00	6.986E+00	1.248E+01	7.115E-01	0.552
	463.38		-5.402E+00	2.483E+01	3.240E+01	2.121E+00	-0.167
	600.56		5.068E+00	1.498E+01	2.507E+01	1.667E+00	0.202
	635.90		1.390E+01	2.179E+01	3.745E+01	2.520E+00	0.371
TE-125M	109.28	*	-3.362E+02	9.040E+02	1.336E+03	1.285E+02	-0.252
I-126	388.63		-1.738E+01	1.852E+01	2.861E+01	1.547E+00	-0.607
	666.33	*	-4.371E+00	1.615E+01	2.533E+01	1.457E+00	-0.173
	753.82		5.769E+01	1.032E+02	1.843E+02	1.220E+01	0.313

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
SB-126		223.80		-2.229E+02	3.788E+02	5.914E+02	3.846E+01	-0.377
		278.60		2.231E+02	2.295E+02	3.915E+02	3.143E+01	0.570
		296.50		5.614E+01	1.181E+02	1.955E+02	1.518E+01	0.287
		414.70		9.432E-01	6.692E+00	1.124E+01	6.068E-01	0.084
		415.30		2.098E+02	5.584E+02	9.548E+02	5.155E+01	0.220
		555.20		9.813E+01	3.681E+02	6.161E+02	3.516E+01	0.159
		573.80		3.399E+01	9.397E+01	1.584E+02	9.061E+00	0.215
		593.00		-9.155E+01	9.837E+01	1.186E+02	6.796E+00	-0.772
		656.30		1.109E+02	2.813E+02	4.743E+02	2.710E+01	0.234
		666.33		-1.838E+00	6.791E+00	1.065E+01	6.129E-01	-0.173
		675.00		2.125E+01	1.862E+02	3.040E+02	1.774E+01	0.070
		695.00		-1.129E+00	6.931E+00	1.097E+01	6.614E-01	-0.103
		697.00		1.444E+00	2.362E+01	3.828E+01	2.316E+00	0.038
		720.50	*	2.720E+00	1.047E+01	1.740E+01	1.093E+00	0.156
		856.80		-3.596E+00	4.344E+01	7.165E+01	5.529E+00	-0.050
		989.30		-2.644E+01	1.120E+02	1.792E+02	1.372E+01	-0.148
		1034.80		-2.833E+02	7.174E+02	1.115E+03	8.159E+01	-0.254
		1213.00		4.669E+01	3.299E+02	5.462E+02	3.633E+01	0.085
SN-126	+	64.28		1.056E+02	9.323E+01	1.016E+02	1.822E+01	1.039
		86.94		-2.007E+01	3.115E+01	4.256E+01	1.793E+01	-0.472
		87.57	*	-2.836E+00	7.057E+00	1.019E+01	1.200E+00	-0.278
SB-127		61.10		4.803E+03	1.169E+04	1.696E+04	2.708E+03	0.283
		252.40		9.967E+02	7.263E+02	1.058E+03	4.447E+02	0.942
		290.80		4.684E+02	2.631E+03	4.269E+03	4.911E+02	0.110
		411.60		-8.441E+01	1.581E+03	2.618E+03	3.904E+02	-0.032
		444.90		-1.362E+02	1.256E+03	2.060E+03	2.378E+02	-0.066
		473.00		-8.595E+01	2.133E+02	3.388E+02	4.045E+01	-0.254
		543.00		-1.248E+03	2.020E+03	3.084E+03	4.202E+02	-0.405
		603.60		-9.242E+02	1.673E+03	2.586E+03	3.007E+02	-0.357
		685.20	*	7.495E+01	1.762E+02	2.964E+02	3.120E+01	0.253
		698.50		2.695E+02	2.122E+03	3.259E+03	4.975E+02	0.083
		722.20		2.527E+01	2.959E+03	4.760E+03	4.997E+02	0.005
		783.80		-4.549E+01	3.613E+02	5.950E+02	7.244E+01	-0.076
XE-127		57.60		-9.361E+00	8.388E+02	1.330E+03	1.907E+02	-0.007
		145.22		3.823E+00	5.815E+01	9.646E+01	5.430E+00	0.040
		172.10		2.290E+00	1.050E+01	1.743E+01	9.162E-01	0.131
		202.84	*	-1.754E+00	3.954E+00	6.276E+00	3.744E-01	-0.279
		374.96		4.124E+00	1.618E+01	2.753E+01	1.609E+00	0.150
I-131		80.18		-5.469E+02	4.636E+02	7.298E+02	8.487E+01	-0.749
		284.30		-2.669E+01	1.486E+02	2.348E+02	1.990E+01	-0.114
		364.48	*	-3.489E+00	1.151E+01	1.883E+01	1.286E+00	-0.185
		636.97		2.268E+01	1.568E+02	2.576E+02	1.664E+01	0.088
		722.89		-1.467E+02	5.708E+02	8.862E+02	5.682E+01	-0.166
TE-132		49.72		-6.255E+03	6.097E+03	8.959E+03	1.446E+03	-0.698
		111.76		2.121E+03	4.445E+03	7.582E+03	8.188E+02	0.280
		116.30		7.738E+02	4.061E+03	6.834E+03	7.150E+02	0.113
		228.16	*	8.869E+01	1.047E+02	1.766E+02	2.702E+01	0.502
BA-133		53.15		8.089E+02	5.579E+02	9.408E+02	1.393E+02	0.860
		79.62		-4.740E+01	1.003E+02	1.648E+02	2.814E+01	-0.288

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	81.00		-9.628E+00	7.948E+00	1.231E+01	2.175E+00	-0.782
	276.40		7.150E+00	2.951E+01	4.812E+01	6.769E+00	0.149
	302.84		-1.002E+01	1.167E+01	1.730E+01	2.194E+00	-0.579
	356.01	*	-5.622E-01	3.271E+00	5.411E+00	6.425E-01	-0.104
	383.85		1.863E+01	2.340E+01	4.116E+01	4.424E+00	0.453
I-133	510.53		-5.126E+02	2.340E+01	Half-Life too short		
	529.87	*	1.082E+00	2.340E+01	Half-Life too short		
	706.58		1.332E+02	2.340E+01	Half-Life too short		
	856.28		5.268E+01	2.340E+01	Half-Life too short		
	875.33		5.751E+01	2.340E+01	Half-Life too short		
	1236.41		3.408E+02	2.340E+01	Half-Life too short		
	1298.22		1.739E+01	2.340E+01	Half-Life too short		
CS-134	475.35		-1.097E+02	1.458E+02	2.237E+02	1.248E+01	-0.491
	563.23		9.873E+00	2.918E+01	4.905E+01	2.863E+00	0.201
	569.32		-1.101E+01	1.738E+01	2.471E+01	1.456E+00	-0.445
	604.70		-4.272E+00	3.027E+00	4.311E+00	2.485E-01	-0.991
	795.84	*	1.614E+00	3.057E+00	5.397E+00	3.850E-01	0.299
	801.93		-1.768E+01	3.508E+01	4.960E+01	3.561E+00	-0.356
	1038.57		2.620E+02	2.566E+02	4.756E+02	3.467E+01	0.551
	1167.94		-8.401E+01	1.344E+02	1.944E+02	1.177E+01	-0.432
	1365.15		3.803E+00	9.395E+01	1.580E+02	1.431E+01	0.024
CS-135	268.24	*	5.441E+00	1.225E+01	2.028E+01	1.867E+00	0.268
I-135	288.45		-6.255E+13	1.225E+01	Half-Life too short		
	417.63		6.405E+14	1.225E+01	Half-Life too short		
	546.56		-4.523E+14	1.225E+01	Half-Life too short		
	836.80		1.840E+15	1.225E+01	Half-Life too short		
	1038.76		1.694E+15	1.225E+01	Half-Life too short		
	1124.00		-2.785E+15	1.225E+01	Half-Life too short		
	1131.51		-2.039E+14	1.225E+01	Half-Life too short		
	1260.41	*	-3.354E+14	1.225E+01	Half-Life too short		
	1457.56		9.406E+14	1.225E+01	Half-Life too short		
	1678.03		3.385E+14	1.225E+01	Half-Life too short		
	1706.46		-1.405E+15	1.225E+01	Half-Life too short		
	1791.20		6.520E+14	1.225E+01	Half-Life too short		
CS-136	66.91		-9.455E+01	1.045E+02	1.359E+02	2.423E+01	-0.696
	86.29		1.374E+00	1.074E+02	1.597E+02	2.413E+01	0.009
	153.22		1.418E+01	6.042E+01	1.009E+02	6.993E+00	0.141
	163.89		-8.050E+00	1.017E+02	1.666E+02	1.128E+01	-0.048
	176.55		1.193E+01	3.553E+01	5.928E+01	3.631E+00	0.201
	273.65		-9.065E+00	4.049E+01	6.398E+01	5.441E+00	-0.142
	340.57		-8.656E+00	1.110E+01	1.764E+01	1.258E+00	-0.491
	818.51		4.511E+00	5.646E+00	1.028E+01	7.514E-01	0.439
	1048.07	*	8.060E-01	7.283E+00	1.215E+01	9.295E-01	0.066
	1235.34		3.142E+01	3.508E+01	6.415E+01	6.896E+00	0.490
BA-137M	661.65	*	1.068E+00	2.628E+00	4.427E+00	2.527E-01	0.241
CS-137	661.65	*	1.129E+00	2.778E+00	4.680E+00	2.683E-01	0.241
CE-139	165.85	*	-9.425E-01	2.470E+00	3.978E+00	2.043E-01	-0.237
BA-140	162.64		5.524E+01	7.159E+01	1.223E+02	7.343E+00	0.452
	304.84		4.876E+01	1.213E+02	1.982E+02	5.497E+01	0.246

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		423.70		-9.498E+01	1.624E+02	2.510E+02	7.962E+01	-0.378
		537.32	*	2.252E+01	2.574E+01	4.355E+01	1.415E+01	0.517
LA-140		328.77		1.971E+00	2.591E+01	4.380E+01	3.363E+00	0.045
		432.53		-1.154E+02	1.851E+02	2.906E+02	1.772E+01	-0.397
		487.03		-1.601E-01	1.209E+01	1.988E+01	1.271E+00	-0.008
		751.79		-6.487E+01	1.354E+02	2.149E+02	1.668E+01	-0.302
		815.85		7.919E-01	2.577E+01	4.315E+01	3.635E+00	0.018
		867.82		-4.465E+01	1.120E+02	1.770E+02	1.476E+01	-0.252
		919.63		-1.306E+02	2.601E+02	3.844E+02	3.925E+01	-0.340
		925.24		-4.336E+01	8.883E+01	1.374E+02	1.184E+01	-0.316
		1596.49	*	-3.441E-01	6.409E+00	1.048E+01	7.997E-01	-0.033
CE-141		145.44	*	-4.451E-01	5.269E+00	8.672E+00	5.084E-01	-0.051
CE-143		57.37		2.775E-02	5.269E+00	Half-Life too short		
		231.56		-3.947E-01	5.269E+00	Half-Life too short		
		293.26	*	-1.178E-03	5.269E+00	Half-Life too short		
		350.59		-2.879E-01	5.269E+00	Half-Life too short		
		490.36		3.963E-01	5.269E+00	Half-Life too short		
		664.57		-2.524E-01	5.269E+00	Half-Life too short		
		721.93		2.900E-03	5.269E+00	Half-Life too short		
CE-144		80.11		-1.967E+02	1.689E+02	2.662E+02	3.081E+01	-0.739
		133.54	*	-1.020E+01	1.663E+01	2.660E+01	3.796E+00	-0.383
PM-144		476.78		4.218E-01	4.986E+00	8.283E+00	5.601E-01	0.051
		618.01		1.994E-01	2.840E+00	4.637E+00	2.822E-01	0.043
		696.49	*	-5.032E-01	2.657E+00	4.193E+00	2.537E-01	-0.120
		778.57		3.371E+01	1.531E+02	2.624E+02	1.805E+01	0.128
PR-144		696.49	*	-3.415E+01	1.803E+02	2.846E+02	1.720E+01	-0.120
		1489.15		6.039E+02	9.879E+02	1.789E+03	1.466E+02	0.338
PM-146		453.90	*	-2.889E+00	3.409E+00	5.210E+00	4.396E-01	-0.555
		633.02		1.226E+02	1.202E+02	1.994E+02	7.340E+01	0.615
		735.90		-6.341E+00	1.086E+01	1.689E+01	4.733E+00	-0.375
		747.13		-6.608E-01	6.199E+00	1.028E+01	1.323E+00	-0.064
ND-147	+	91.11		2.295E+01	5.538E+01	6.238E+01	7.179E+00	0.368
		319.41		-6.197E+01	2.972E+02	4.934E+02	3.608E+01	-0.126
		439.89		-6.383E+01	5.337E+02	8.751E+02	4.799E+01	-0.073
		531.02	*	-4.375E+01	5.279E+01	7.904E+01	1.065E+01	-0.554
PM-149		285.90	*	9.482E-03	5.279E+01	Half-Life too short		
EU-152		121.78		5.578E+00	6.000E+00	1.042E+01	8.431E-01	0.535
		244.69		1.704E+01	2.920E+01	4.335E+01	3.064E+00	0.393
		344.27	*	-5.794E+00	7.868E+00	1.253E+01	9.226E-01	-0.462
		443.98		3.232E+01	7.401E+01	1.269E+02	6.968E+00	0.255
		778.89		3.367E+00	1.752E+01	2.995E+01	2.060E+00	0.112
		867.32		5.087E+00	5.666E+01	9.516E+01	7.455E+00	0.053
		964.01		-7.380E+00	2.257E+01	3.328E+01	2.602E+00	-0.222
		1085.78		2.295E+01	2.377E+01	4.422E+01	3.045E+00	0.519
		1112.02		-7.496E+00	2.041E+01	3.158E+01	2.096E+00	-0.237
		1407.95		-4.505E-01	1.635E+01	2.526E+01	2.154E+00	-0.018
GD-153		69.67		1.475E+02	1.551E+02	2.567E+02	3.093E+01	0.575
		83.37		-8.208E+02	1.426E+03	1.984E+03	2.306E+02	-0.414
		97.43	*	-5.274E-01	7.581E+00	1.066E+01	1.017E+00	-0.049

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		103.18		3.535E+00	8.487E+00	1.450E+01	1.244E+00	0.244
EU-154		123.07		2.917E+00	4.223E+00	7.253E+00	7.073E-01	0.402
		247.94		-9.670E+00	3.216E+01	4.899E+01	5.106E+00	-0.197
		591.81		-1.131E+01	5.127E+01	6.958E+01	6.772E+00	-0.163
		723.30		-3.395E+00	1.107E+01	1.707E+01	1.281E+00	-0.199
		756.87		-9.093E+00	5.053E+01	8.297E+01	8.834E+00	-0.110
		873.19		8.247E+00	2.177E+01	3.766E+01	4.424E+00	0.219
		996.32		9.003E+00	3.209E+01	4.746E+01	8.209E+00	0.190
		1004.76		-9.461E+00	1.891E+01	2.430E+01	2.641E+00	-0.389
		1274.45	*	-5.139E+00	7.322E+00	1.030E+01	1.096E+00	-0.499
EU-155		48.70		-2.807E+02	4.271E+02	6.503E+02	8.731E+01	-0.432
		60.01		1.587E+02	6.405E+02	9.189E+02	1.276E+02	0.173
		86.54		-3.475E+00	8.651E+00	1.250E+01	1.474E+00	-0.278
		105.31	*	1.567E+00	8.718E+00	1.472E+01	1.233E+00	0.106
TB-160		86.79		-6.228E+00	2.315E+01	3.375E+01	3.964E+00	-0.185
		197.04		-1.367E+01	5.440E+01	7.511E+01	4.374E+00	-0.182
		215.65		-1.576E+01	5.918E+01	9.455E+01	5.947E+00	-0.167
		298.57		-2.116E+00	9.011E+00	1.415E+01	1.093E+00	-0.150
		879.36	*	-3.584E+00	1.135E+01	1.819E+01	1.450E+00	-0.197
		962.29		-5.336E+00	4.061E+01	6.072E+01	4.755E+00	-0.088
		966.15		4.845E+00	1.445E+01	2.468E+01	1.926E+00	0.196
		1177.93		-6.354E+00	2.125E+01	3.291E+01	1.998E+00	-0.193
		1271.85		-2.376E+01	4.243E+01	6.147E+01	4.712E+00	-0.387
HO-166M		80.57		-2.991E+01	2.171E+01	3.370E+01	3.900E+00	-0.888
	+	184.41		9.594E-01	5.946E+00	6.192E+00	3.422E-01	0.155
		280.46		1.428E+00	6.778E+00	1.103E+01	8.855E-01	0.129
		410.95		-5.589E+00	1.902E+01	3.092E+01	1.664E+00	-0.181
		711.68	*	-3.377E+00	5.864E+00	7.881E+00	4.882E-01	-0.429
		752.31		-9.999E+00	1.848E+01	2.910E+01	1.922E+00	-0.344
		810.29		7.724E-02	3.580E+00	5.993E+00	4.321E-01	0.013
TM-171		51.35		-2.569E+03	5.066E+03	7.796E+03	1.143E+03	-0.330
		52.39		1.629E+03	2.500E+03	4.111E+03	6.080E+02	0.396
		59.40		8.551E+02	3.544E+03	5.084E+03	7.147E+02	0.168
		66.72	*	-2.505E+03	3.237E+03	4.285E+03	5.326E+02	-0.585
HF-175		89.36		5.504E+01	1.357E+02	1.990E+02	2.270E+01	0.277
		343.40	*	-2.279E+00	2.917E+00	4.627E+00	3.118E-01	-0.493
		433.00		-1.198E+02	1.719E+02	2.682E+02	1.464E+01	-0.447
LU-176		88.36		6.444E+00	1.641E+01	2.495E+01	2.919E+00	0.258
		201.83		-2.599E+00	2.323E+00	3.530E+00	2.097E-01	-0.736
		306.84	*	1.111E+00	2.080E+00	3.447E+00	2.609E-01	0.322
		401.10		-2.016E+02	5.024E+02	8.095E+02	4.327E+01	-0.249
LU-177		112.95		-7.467E+01	1.806E+02	2.951E+02	2.158E+01	-0.253
		208.36	*	-5.309E+01	1.264E+02	1.838E+02	1.122E+01	-0.289
LU-177M		52.97		3.537E+02	2.555E+02	4.304E+02	6.374E+01	0.822
		54.07		5.765E+01	1.302E+02	2.119E+02	3.130E+01	0.272
		61.30		7.708E+01	1.884E+02	2.730E+02	3.695E+01	0.282
		121.62		1.523E+01	3.158E+01	5.381E+01	3.459E+00	0.283
		147.16		-3.932E+01	5.260E+01	8.341E+01	4.654E+00	-0.471
		171.86		-3.500E+00	4.096E+01	6.694E+01	3.516E+00	-0.052

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		218.09		4.748E+01	6.627E+01	1.123E+02	7.132E+00	0.423
		268.79		2.742E+01	6.179E+01	1.023E+02	7.926E+00	0.268
		319.02		-4.097E+00	1.965E+01	3.262E+01	2.387E+00	-0.126
		367.43		-1.382E+01	7.738E+01	1.189E+02	7.223E+00	-0.116
		413.65	*	2.522E+00	1.541E+01	2.330E+01	1.257E+00	0.108
HF-181		56.28		-6.923E+01	1.393E+02	2.141E+02	3.112E+01	-0.323
		57.53		4.453E-01	7.025E+01	1.115E+02	1.600E+01	0.004
		65.20		9.987E+01	1.220E+02	1.725E+02	2.187E+01	0.579
		133.02		-4.184E+00	5.587E+00	8.901E+00	5.322E-01	-0.470
		136.25		7.282E+00	3.921E+01	6.558E+01	3.856E+00	0.111
		345.85		8.100E+00	1.616E+01	2.799E+01	1.868E+00	0.289
		482.03	*	-5.139E-01	3.374E+00	5.484E+00	3.067E-01	-0.094
W-181		56.28		-2.632E+01	5.292E+01	8.134E+01	1.182E+01	-0.324
		57.53		1.831E-01	2.672E+01	4.241E+01	6.085E+00	0.004
		65.20	*	3.767E+01	4.602E+01	6.505E+01	8.249E+00	0.579
TA-182		67.75		-2.933E+00	1.140E+01	1.679E+01	2.062E+00	-0.175
		100.10		-1.269E+01	1.465E+01	2.339E+01	2.121E+00	-0.543
		152.43		-1.646E+01	2.759E+01	4.407E+01	2.402E+00	-0.373
		222.10		-9.941E+00	2.777E+01	4.404E+01	2.844E+00	-0.226
	+	1001.68		7.255E+01	2.865E+02	3.318E+02	2.511E+01	0.219
		1121.28		4.053E+00	9.326E+00	1.605E+01	1.051E+00	0.253
		1189.05		-8.803E+00	1.853E+01	2.788E+01	1.743E+00	-0.316
		1221.42	*	-9.176E+00	1.218E+01	1.751E+01	1.189E+00	-0.524
		1230.97		1.338E+00	2.748E+01	4.488E+01	3.121E+00	0.030
RE-183		57.98		1.337E+00	2.783E+01	4.209E+01	6.011E+00	0.032
		59.32		3.672E+00	1.498E+01	2.150E+01	3.025E+00	0.171
		67.20		-2.105E+01	2.346E+01	3.076E+01	3.801E+00	-0.685
		162.32	*	8.843E+00	9.156E+00	1.580E+01	8.237E-01	0.560
		208.81		-3.750E+01	8.752E+01	1.272E+02	7.778E+00	-0.295
		291.72		-1.499E+01	7.221E+01	1.137E+02	8.920E+00	-0.132
RE-184		57.98		4.848E+00	1.009E+02	1.526E+02	2.179E+01	0.032
		59.32		1.330E+01	5.427E+01	7.787E+01	1.096E+01	0.171
		67.20		-7.631E+01	8.503E+01	1.115E+02	1.378E+01	-0.685
		161.27		1.855E+01	2.895E+01	4.922E+01	2.579E+00	0.377
		216.55		5.158E+00	2.087E+01	3.442E+01	2.173E+00	0.150
		252.85	*	1.329E+01	2.004E+01	3.362E+01	2.453E+00	0.395
		318.01		-1.428E+01	3.387E+01	5.537E+01	4.064E+00	-0.258
		792.07		4.227E+01	6.405E+01	1.147E+02	8.052E+00	0.368
		903.28		-2.016E-01	7.106E+01	1.091E+02	8.896E+00	-0.002
		920.93		-5.727E+00	3.527E+01	5.548E+01	4.474E+00	-0.103
OS-185		59.72		1.037E+01	3.925E+01	5.639E+01	7.881E+00	0.184
		61.14		8.836E+00	2.048E+01	2.976E+01	4.040E+00	0.297
		69.30		2.803E+01	2.842E+01	4.709E+01	5.695E+00	0.595
		592.07		-1.760E+02	2.331E+02	2.906E+02	1.665E+01	-0.606
		646.12	*	2.415E+00	3.139E+00	5.497E+00	3.145E-01	0.439
		717.42		3.297E+00	6.098E+01	9.867E+01	6.168E+00	0.033
		874.81		1.808E+01	4.380E+01	7.606E+01	6.022E+00	0.238
		880.27		3.794E+01	6.213E+01	1.096E+02	8.740E+00	0.346
RE-188		155.03	*	1.069E+01	1.393E+01	2.385E+01	1.285E+00	0.448

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Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		477.96		1.212E+02	2.369E+02	4.079E+02	2.277E+01	0.297
		633.10		2.477E+02	2.312E+02	4.120E+02	2.360E+01	0.601
W-188	+	63.58		1.102E+04	9.637E+03	1.101E+04	1.431E+03	1.001
		227.08		4.937E+02	1.090E+03	1.813E+03	1.195E+02	0.272
		290.67	*	9.545E+01	5.650E+02	9.162E+02	7.205E+01	0.104
IR-192		295.96		-1.464E+00	8.224E+00	1.298E+01	1.018E+00	-0.113
		308.46		1.973E+00	8.378E+00	1.360E+01	1.032E+00	0.145
		316.51	*	-1.697E+00	2.664E+00	4.285E+00	3.169E-01	-0.396
		468.07		1.648E+00	5.051E+00	8.571E+00	5.553E-01	0.192
		604.41		-5.097E+01	4.227E+01	6.108E+01	6.911E+00	-0.835
		612.46		-3.408E+01	6.696E+01	1.043E+02	7.841E+00	-0.327
AU-195		65.12		2.116E+01	2.145E+01	3.063E+01	3.888E+00	0.691
		66.83		-9.960E+00	1.089E+01	1.425E+01	1.769E+00	-0.699
		75.70		1.421E+01	1.630E+01	2.620E+01	3.050E+00	0.542
		98.88	*	7.337E+00	2.010E+01	3.132E+01	2.907E+00	0.234
		129.76		2.192E+02	2.233E+02	3.884E+02	2.365E+01	0.564
TL-200		367.94	*	-1.606E-01	2.233E+02	Half-Life too short		
		579.30		1.920E-02	2.233E+02	Half-Life too short		
		828.27		6.642E-01	2.233E+02	Half-Life too short		
		1205.75		6.300E-01	2.233E+02	Half-Life too short		
TL-201		68.90		5.715E+02	8.870E+02	1.384E+03	1.679E+02	0.413
		70.82		-6.542E+01	4.535E+02	7.633E+02	9.113E+01	-0.086
		80.30		-1.072E+03	7.615E+02	1.180E+03	1.365E+02	-0.909
		135.34		-9.716E+02	3.936E+03	6.443E+03	3.806E+02	-0.151
		167.43	*	-3.695E+02	1.094E+03	1.766E+03	9.117E+01	-0.209
TL-202		68.90		3.181E+01	4.937E+01	7.701E+01	9.348E+00	0.413
		70.82		-3.631E+00	2.518E+01	4.237E+01	5.059E+00	-0.086
		80.30		-5.951E+01	4.229E+01	6.550E+01	7.580E+00	-0.909
		439.56	*	-2.636E+00	6.329E+00	1.012E+01	5.544E-01	-0.260
HG-203		70.83		-1.460E+01	9.700E+01	1.632E+02	2.597E+01	-0.089
		72.87		-9.148E+00	5.345E+01	8.974E+01	1.387E+01	-0.102
		82.60		4.787E+01	8.839E+01	1.524E+02	2.406E+01	0.314
		279.20	*	4.030E+00	3.320E+00	5.750E+00	4.777E-01	0.701
BI-207		72.80		-3.073E+00	1.504E+01	2.522E+01	2.972E+00	-0.122
		74.97		1.337E+00	9.224E+00	1.442E+01	1.683E+00	0.093
		84.90		-4.814E-01	1.797E+01	2.526E+01	2.947E+00	-0.019
		569.67		-1.994E+00	2.699E+00	3.791E+00	2.168E-01	-0.526
		1063.62	*	2.660E+00	3.655E+00	6.525E+00	4.621E-01	0.408
		1770.23		-1.315E+01	4.587E+01	7.153E+01	4.611E+00	-0.184
TL-207		81.07		-2.060E+01	1.731E+01	2.725E+01	3.156E+00	-0.756
		83.78		-6.377E+00	1.198E+01	1.673E+01	1.946E+00	-0.381
		94.90		1.324E+01	2.044E+01	3.150E+01	3.167E+00	0.420
		122.32		1.394E+02	1.442E+02	2.510E+02	1.808E+01	0.555
		144.24		-5.867E+01	6.662E+01	9.211E+01	6.555E+00	-0.637
		154.21		3.780E+01	3.142E+01	5.483E+01	3.668E+00	0.690
		269.46		2.357E+00	1.398E+01	2.274E+01	1.811E+00	0.104
		323.87	*	-2.546E+01	5.121E+01	8.303E+01	1.417E+01	-0.307
		338.28		2.720E+01	8.765E+01	1.379E+02	1.538E+01	0.197
		445.03		-2.222E+01	1.763E+02	2.887E+02	2.916E+01	-0.077

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TL-208		72.80		-3.357E+01	1.643E+02	2.754E+02	3.246E+01	-0.122
		74.97		1.459E+01	1.006E+02	1.573E+02	2.295E+01	0.093
		277.35		1.212E+01	3.022E+01	4.978E+01	5.927E+00	0.244
		510.84		-2.492E+01	2.217E+01	3.744E+01	3.769E+00	-0.666
	+	583.14	*	8.693E+00	6.127E+00	5.702E+00	3.776E-01	1.525
		763.13		3.556E+01	1.366E+02	2.354E+02	3.028E+01	0.151
		860.37		-4.769E+00	2.172E+01	3.526E+01	2.982E+00	-0.135
		1093.90		3.819E+02	7.816E+02	1.349E+03	3.059E+02	0.283
PO-209		260.50		-1.694E+01	8.131E+02	1.307E+03	9.816E+01	-0.013
		262.80		-3.650E+02	2.177E+03	3.463E+03	2.623E+02	-0.105
		896.60	*	-9.366E+01	4.841E+02	7.823E+02	6.386E+01	-0.120
BI-210		46.50	*	9.922E+01	6.766E+02	1.090E+03	1.204E+02	0.091
PB-210		46.50	*	9.922E+01	6.766E+02	1.090E+03	1.204E+02	0.091
PO-210		46.50	*	9.922E+01	6.766E+02	1.090E+03	1.125E+02	0.091
BI-211		72.87		-4.411E+01	2.577E+02	4.328E+02	5.098E+01	-0.102
		351.07	*	-9.741E+00	1.958E+01	2.752E+01	1.955E+00	-0.354
PB-211		404.84	*	-2.904E+01	7.290E+01	1.137E+02	7.084E+01	-0.255
		427.08		8.634E+01	1.638E+02	2.685E+02	1.659E+02	0.322
		831.96		-9.967E+01	1.042E+02	1.191E+02	7.446E+01	-0.837
BI-212		727.18	*	-2.751E+01	2.569E+01	2.994E+01	2.435E+00	-0.919
		785.46		-8.505E+01	1.123E+02	1.702E+02	1.182E+01	-0.500
		1620.62		-1.597E+02	1.369E+02	1.445E+02	1.082E+01	-1.105
PB-212		74.81		1.541E+00	3.227E+01	5.019E+01	7.505E+00	0.031
		77.11		2.600E+00	1.610E+01	2.742E+01	3.181E+00	0.095
		87.30		-1.984E+01	3.401E+01	4.838E+01	7.472E+00	-0.410
		115.19		-1.152E+02	2.940E+02	4.804E+02	3.396E+01	-0.240
	+	238.63	*	1.165E+00	1.227E+01	9.024E+00	7.427E-01	0.129
		300.09		1.233E+01	5.958E+01	9.668E+01	9.357E+00	0.128
PO-212		74.81		1.541E+00	3.227E+01	5.019E+01	7.505E+00	0.031
		77.11		2.600E+00	1.610E+01	2.742E+01	3.181E+00	0.095
		87.30		-1.984E+01	3.401E+01	4.838E+01	7.472E+00	-0.410
		115.19		-1.152E+02	2.940E+02	4.804E+02	3.396E+01	-0.240
	+	238.63	*	1.165E+00	1.227E+01	9.024E+00	7.427E-01	0.129
		300.09		1.233E+01	5.958E+01	9.668E+01	9.357E+00	0.128
BI-214		609.31	*	2.193E+00	7.205E+00	1.120E+01	8.655E-01	0.196
		1120.29		-9.638E+00	2.356E+01	3.345E+01	3.117E+00	-0.288
		1764.49		-1.592E+00	2.253E+01	3.403E+01	2.209E+00	-0.047
PB-214		74.81		2.609E+00	5.463E+01	8.494E+01	1.174E+01	0.031
		77.11		4.379E+00	2.712E+01	4.618E+01	6.409E+00	0.095
		87.30		-3.338E+01	5.720E+01	8.142E+01	1.145E+01	-0.410
		241.98		1.180E+01	2.676E+01	4.439E+01	3.979E+00	0.266
		295.21		-3.569E+00	1.021E+01	1.588E+01	1.585E+00	-0.225
		351.92	*	-8.169E+00	6.744E+00	8.809E+00	7.751E-01	-0.927
PO-214		74.81		2.609E+00	5.463E+01	8.494E+01	1.174E+01	0.031
		77.11		4.379E+00	2.712E+01	4.618E+01	6.409E+00	0.095
		87.30		-3.338E+01	5.720E+01	8.142E+01	1.145E+01	-0.410
		241.98		1.180E+01	2.676E+01	4.439E+01	3.979E+00	0.266
		295.21		-3.569E+00	1.021E+01	1.588E+01	1.585E+00	-0.225
		351.92	*	-8.169E+00	6.744E+00	8.809E+00	7.751E-01	-0.927

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
PO-215		81.07		-2.060E+01	1.731E+01	2.725E+01	3.156E+00	-0.756
		83.78		-6.377E+00	1.198E+01	1.673E+01	1.946E+00	-0.381
		94.90		1.324E+01	2.044E+01	3.150E+01	3.167E+00	0.420
		122.32		1.394E+02	1.442E+02	2.510E+02	1.808E+01	0.555
		144.24		-5.867E+01	6.662E+01	9.211E+01	6.555E+00	-0.637
		154.21		3.780E+01	3.142E+01	5.483E+01	3.668E+00	0.690
		269.46		2.357E+00	1.398E+01	2.274E+01	1.811E+00	0.104
		323.87	*	-2.546E+01	5.121E+01	8.303E+01	1.417E+01	-0.307
		338.28		2.720E+01	8.765E+01	1.379E+02	1.538E+01	0.197
		445.03		-2.222E+01	1.763E+02	2.887E+02	2.916E+01	-0.077
PO-216		74.81		1.541E+00	3.227E+01	5.019E+01	7.505E+00	0.031
		77.11		2.600E+00	1.610E+01	2.742E+01	3.181E+00	0.095
		87.30		-1.984E+01	3.401E+01	4.838E+01	7.472E+00	-0.410
		115.19		-1.152E+02	2.940E+02	4.804E+02	3.396E+01	-0.240
	+	238.63	*	1.165E+00	1.227E+01	9.024E+00	7.427E-01	0.129
		300.09		1.233E+01	5.958E+01	9.668E+01	9.357E+00	0.128
PO-218		74.81		2.609E+00	5.463E+01	8.494E+01	1.174E+01	0.031
		77.11		4.379E+00	2.712E+01	4.618E+01	6.409E+00	0.095
		87.30		-3.338E+01	5.720E+01	8.142E+01	1.145E+01	-0.410
		241.98		1.180E+01	2.676E+01	4.439E+01	3.979E+00	0.266
		295.21		-3.569E+00	1.021E+01	1.588E+01	1.585E+00	-0.225
		351.92	*	-8.169E+00	6.744E+00	8.809E+00	7.751E-01	-0.927
RN-219		271.23		-1.459E+01	1.872E+01	2.830E+01	2.731E+00	-0.515
		401.81	*	-1.731E+01	3.024E+01	4.783E+01	6.418E+00	-0.362
RN-220		549.76	*	1.868E+03	1.934E+03	3.449E+03	1.967E+02	0.542
RA-223		81.07		-2.060E+01	1.731E+01	2.725E+01	3.156E+00	-0.756
		83.78		-6.377E+00	1.198E+01	1.673E+01	1.946E+00	-0.381
		94.90		1.324E+01	2.044E+01	3.150E+01	3.167E+00	0.420
		122.32		1.394E+02	1.442E+02	2.510E+02	1.808E+01	0.555
		144.24		-5.867E+01	6.662E+01	9.211E+01	6.555E+00	-0.637
		154.21		3.780E+01	3.142E+01	5.483E+01	3.668E+00	0.690
		269.46		2.357E+00	1.398E+01	2.274E+01	1.811E+00	0.104
		323.87	*	-2.546E+01	5.121E+01	8.303E+01	1.417E+01	-0.307
		338.28		2.720E+01	8.765E+01	1.379E+02	1.538E+01	0.197
		445.03		-2.222E+01	1.763E+02	2.887E+02	2.916E+01	-0.077
RA-224		240.98	*	5.519E+01	5.347E+01	9.144E+01	6.369E+00	0.604
AC-227		79.80		-1.431E+02	1.336E+02	2.070E+02	4.728E+01	-0.692
		236.00		1.013E+01	1.965E+01	2.896E+01	3.202E+00	0.350
		256.20	*	-2.000E+01	3.276E+01	5.046E+01	7.414E+00	-0.396
		286.10		5.043E+01	1.166E+02	1.926E+02	2.460E+01	0.262
		299.80		1.996E+01	1.082E+02	1.753E+02	2.990E+01	0.114
		304.40		4.009E+01	1.512E+02	2.459E+02	4.423E+01	0.163
		329.70		1.420E+01	6.813E+01	1.161E+02	1.522E+01	0.122
		334.20		5.247E+00	1.825E+02	3.074E+02	5.759E+01	0.017
PA-227	+	64.62	*	1.000E+35	1.825E+02	Half-Life too short		
		110.05		1.000E+35	1.825E+02	Half-Life too short		
TH-227		79.80		-1.431E+02	1.337E+02	2.070E+02	4.782E+01	-0.692
		94.00		-4.573E+02	2.473E+02	3.473E+02	7.805E+01	-1.317
		236.00		1.013E+01	1.964E+01	2.896E+01	2.823E+00	0.350

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		256.20	*	-2.000E+01	3.282E+01	5.046E+01	8.835E+00	-0.396
		286.10		5.043E+01	1.269E+02	1.926E+02	1.932E+02	0.262
		299.80		1.996E+01	1.082E+02	1.753E+02	2.990E+01	0.114
		304.40		4.009E+01	1.512E+02	2.459E+02	4.423E+01	0.163
		329.70		1.420E+01	6.813E+01	1.161E+02	1.522E+01	0.122
		334.20		5.247E+00	1.825E+02	3.074E+02	5.759E+01	0.017
AC-228		338.32		6.709E+00	2.129E+01	3.325E+01	1.361E+01	0.202
	+	911.07	*	5.148E+00	1.436E+01	1.899E+01	2.063E+00	0.271
		969.11		1.757E+00	2.086E+01	3.077E+01	7.091E+00	0.057
RA-228		338.32		6.709E+00	2.129E+01	3.325E+01	1.361E+01	0.202
	+	911.07	*	5.148E+00	1.436E+01	1.899E+01	2.063E+00	0.271
		969.11		1.757E+00	2.086E+01	3.077E+01	7.091E+00	0.057
TH-228		74.81		1.541E+00	3.227E+01	5.019E+01	5.886E+00	0.031
		77.11		2.600E+00	1.610E+01	2.742E+01	3.181E+00	0.095
		87.30		-1.984E+01	3.396E+01	4.838E+01	5.694E+00	-0.410
	+	238.63	*	1.165E+00	1.227E+01	9.024E+00	7.427E-01	0.129
		300.09		1.233E+01	6.002E+01	9.668E+01	5.719E+01	0.128
TH-229		85.43		-2.651E-01	1.797E+01	2.459E+01	2.874E+00	-0.011
		88.47		2.859E-01	1.005E+01	1.439E+01	1.679E+00	0.020
		100.00		-1.195E+01	1.501E+01	2.407E+01	2.187E+00	-0.496
		193.63	*	1.916E+01	4.098E+01	6.863E+01	3.940E+00	0.279
		210.97		-6.642E+00	5.682E+01	9.175E+01	5.661E+00	-0.072
TH-230		67.67	*	-8.685E+02	5.780E+03	1.726E+03	1.120E+04	-0.503
PA-231		283.67	*	-6.477E+01	1.211E+02	1.856E+02	2.752E+01	-0.349
		301.29		-2.510E+00	4.346E+01	6.912E+01	8.017E+00	-0.036
		330.00		1.650E+01	1.503E+02	2.545E+02	8.034E+01	0.065
TH-231		84.21	*	-2.178E+01	4.599E+01	6.431E+01	1.253E+01	-0.339
U-231		84.21		-3.861E+02	8.130E+02	1.140E+03	1.327E+02	-0.339
	+	92.29		2.317E+02	5.591E+02	6.378E+02	6.790E+01	0.363
		95.87	*	3.258E+01	1.465E+02	2.202E+02	2.170E+01	0.148
		108.00		-7.719E+01	2.676E+02	4.409E+02	3.486E+01	-0.175
TH-232		59.00	*	5.766E+01	4.187E+03	5.840E+03	6.148E+04	0.010
PA-233		75.28		2.251E+02	2.658E+02	4.243E+02	7.314E+01	0.530
		86.59		-5.984E+01	1.410E+02	2.022E+02	5.656E+01	-0.296
		300.12		5.829E+00	3.022E+01	4.897E+01	7.032E+00	0.119
		311.98	*	2.111E+00	5.037E+00	8.717E+00	6.755E-01	0.242
		340.50		-3.749E+01	4.749E+01	7.422E+01	1.725E+01	-0.505
		398.62		3.808E+01	1.581E+02	2.677E+02	6.894E+01	0.142
		415.76		1.748E+01	1.272E+02	2.135E+02	4.372E+01	0.082
PA-234	+	63.00		3.109E+02	2.747E+02	3.159E+02	5.809E+01	0.984
		94.67		2.214E+01	1.535E+01	2.435E+01	3.281E+00	0.909
		98.44		5.374E+00	8.739E+00	1.260E+01	7.045E+00	0.426
		99.86		-1.351E+01	3.746E+01	6.159E+01	5.611E+00	-0.219
		111.00		1.263E+01	1.717E+01	2.674E+01	3.033E+00	0.472
		131.20		4.475E+00	8.310E+00	1.416E+01	8.553E-01	0.316
		152.70		-4.277E+00	2.565E+01	4.193E+01	6.575E+00	-0.102
	+	186.00		3.454E+01	2.143E+02	2.289E+02	6.985E+01	0.151
		226.40		2.499E+00	3.318E+01	5.403E+01	6.465E+00	0.046
		227.20		1.740E+01	3.587E+01	5.977E+01	3.941E+00	0.291

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		248.90		-2.705E+01	7.097E+01	1.113E+02	2.438E+01	-0.243
		293.70		7.836E+00	4.860E+01	7.868E+01	1.331E+01	0.100
		369.80		-1.992E+01	6.645E+01	1.084E+02	2.264E+01	-0.184
		568.70		-4.643E+01	8.971E+01	1.298E+02	7.422E+00	-0.358
		569.50		-1.103E+01	2.333E+01	3.354E+01	1.918E+00	-0.329
		574.00		4.554E+01	1.189E+02	1.959E+02	1.121E+01	0.232
		699.00		-6.755E+00	6.167E+01	9.263E+01	1.674E+01	-0.073
		706.10		-3.620E+01	8.468E+01	1.277E+02	5.641E+01	-0.284
		733.00		-8.507E-02	2.701E+01	4.333E+01	9.287E+00	-0.002
		742.81		-3.726E+01	9.773E+01	1.519E+02	1.017E+02	-0.245
		796.30		2.861E+01	5.942E+01	1.037E+02	2.758E+01	0.276
		805.60		3.956E+01	6.842E+01	1.198E+02	3.626E+01	0.330
		819.60		7.576E+01	8.482E+01	1.479E+02	5.585E+01	0.512
		826.30		7.207E+00	5.412E+01	9.151E+01	4.074E+01	0.079
		831.60		-7.306E+01	4.899E+01	5.844E+01	1.725E+01	-1.250
		876.40		2.562E+01	6.818E+01	1.091E+02	1.121E+02	0.235
		880.51		1.352E+01	2.176E+01	3.842E+01	3.067E+00	0.352
		883.24		4.893E+00	2.200E+01	3.699E+01	2.484E+01	0.132
		899.00		3.236E+01	5.541E+01	9.559E+01	4.170E+01	0.339
		925.00		-2.411E+01	7.852E+01	1.246E+02	1.002E+02	-0.193
		926.50		-1.163E+01	1.252E+01	1.761E+01	4.417E+00	-0.660
		946.00	*	-2.664E+00	2.089E+01	3.395E+01	6.267E+00	-0.078
		949.00		4.055E+00	2.939E+01	4.941E+01	3.908E+00	0.082
		980.50		-5.037E+01	4.993E+01	7.037E+01	5.428E+00	-0.716
		1394.10		1.235E+01	6.678E+01	1.147E+02	7.468E+01	0.108
PA-234M		766.42		-6.380E+02	9.103E+02	1.197E+03	6.040E+02	-0.533
	+	1001.03	*	1.619E+02	6.395E+02	7.514E+02	6.819E+01	0.216
U-234		53.20	*	1.341E+04	1.345E+05	1.663E+04	1.663E+05	0.806
U-235		89.95		1.069E+02	1.082E+02	1.567E+02	4.965E+01	0.683
	+	93.35		4.594E+01	1.115E+02	1.221E+02	3.495E+01	0.376
		105.00		5.973E+01	8.679E+01	1.471E+02	4.378E+01	0.406
		143.76	*	-2.030E+01	2.081E+01	2.831E+01	4.603E+00	-0.717
		163.35		1.962E+01	3.874E+01	6.514E+01	1.159E+01	0.301
	+	185.71		1.279E+00	7.928E+00	8.485E+00	4.714E-01	0.151
		205.31		-2.467E+01	4.802E+01	6.854E+01	1.238E+01	-0.360
NP-236		94.67		1.703E+01	1.156E+01	1.850E+01	1.870E+00	0.920
		98.44		4.062E+00	6.215E+00	9.527E+00	8.917E-01	0.426
		111.00		9.553E+00	1.297E+01	2.023E+01	1.525E+00	0.472
		160.31	*	4.361E-01	6.394E+00	1.057E+01	5.559E-01	0.041
NP-237		86.50	*	-8.053E+00	2.117E+01	3.053E+01	7.246E+00	-0.264
		95.87		1.809E+01	8.148E+01	1.223E+02	3.069E+01	0.148
PU-237		59.54	*	6.911E+01	2.947E+02	4.224E+02	5.927E+01	0.164
NP-239		99.55		2.119E+00	1.251E+01	2.114E+01	1.937E+00	0.100
		117.00	*	8.267E+00	1.536E+01	2.629E+01	1.809E+00	0.314
		209.75		-2.530E+01	6.595E+01	9.566E+01	5.872E+00	-0.264
		228.18		1.595E+01	1.872E+01	3.180E+01	2.105E+00	0.502
		277.60		1.906E+00	1.454E+01	2.353E+01	1.882E+00	0.081
		334.30		8.729E+00	1.038E+02	1.754E+02	1.222E+01	0.050
AM-241		59.54	*	4.794E+00	2.044E+01	2.931E+01	4.227E+00	0.164

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
AM-243		74.67	*	-3.648E+00	5.302E+00	7.956E+00	9.294E-01	-0.459
		86.72		-1.982E+02	7.726E+02	1.127E+03	1.324E+02	-0.176
		117.66		-1.927E+01	3.114E+02	5.173E+02	3.524E+01	-0.037
		142.18		-9.969E+02	1.734E+03	2.452E+03	1.400E+02	-0.407
CM-243		99.55		2.181E+00	1.287E+01	2.176E+01	1.994E+00	0.100
		103.76	*	7.176E+00	7.913E+00	1.380E+01	1.171E+00	0.520
		117.00		8.507E+00	1.581E+01	2.705E+01	1.861E+00	0.314
		209.75		-2.494E+01	6.503E+01	9.432E+01	5.790E+00	-0.264
		228.18		1.612E+01	1.892E+01	3.214E+01	2.127E+00	0.502
		277.60		1.922E+00	1.466E+01	2.373E+01	1.898E+00	0.081
AM-246		798.80		-1.317E+01	9.980E+00	1.411E+01	9.999E-01	-0.934
		1036.00		-1.155E+00	2.020E+01	3.290E+01	2.405E+00	-0.035
		1062.04		1.352E+01	1.568E+01	2.844E+01	2.018E+00	0.475
		1078.86	*	-2.938E+00	1.005E+01	1.515E+01	1.053E+00	-0.194
CM-247		278.00		6.174E+00	5.969E+01	9.645E+01	7.726E+00	0.064
		287.40		6.849E+01	9.232E+01	1.560E+02	1.236E+01	0.439
		402.60	*	-2.487E+00	2.788E+00	4.301E+00	2.301E-01	-0.578
CF-249		252.85		4.930E+01	7.433E+01	1.247E+02	9.098E+00	0.395
		333.44		3.648E-01	1.352E+01	2.276E+01	1.591E+00	0.016
		387.95	*	-2.487E+00	3.021E+00	4.704E+00	2.555E-01	-0.529
CF-251		176.60	*	1.389E+00	1.066E+01	1.760E+01	9.421E-01	0.079
		227.00		1.249E+01	3.180E+01	5.273E+01	3.474E+00	0.237
		285.00		7.120E+00	1.344E+02	2.162E+02	1.721E+01	0.033
ANH-511		511.00	*	-5.804E+00	4.705E+00	7.942E+00	4.487E-01	-0.731

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005629		
Acquisition date	: 5-JAN-2010 09:08:19	Detector SN#	:
Detector ID	: GAM03	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 04:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 04:00:00.90	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUI
Sample ID	: G1202005629	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 20-AUG-2009 10:22:10	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	
RA-226	2.106E+01	1.288E+02	9.133E+01	0.000E+00
TH-234	2.667E+02	2.322E+02	2.083E+02	0.000E+00
U-238	2.667E+02	2.322E+02	2.083E+02	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Act error Ided	MDA (pCi/FILTER)		
BE-7	1.173E+01	2.414E+01	4.231E+01	0.000E+00	NOT IDENT.
NA-22	-1.608E+00	2.533E+00	3.702E+00	0.000E+00	NOT IDENT.
NA-24	0.000E+00	1.254E+09	0.000E+00	0.000E+00	SHORT HLIF
AL-26	5.768E-01	2.203E+00	3.895E+00	0.000E+00	NOT IDENT.
K-40	-1.035E+01	3.736E+01	5.250E+01	0.000E+00	NOT IDENT.
TI-44	9.723E-02	2.687E+00	4.641E+00	0.000E+00	NOT IDENT.
SC-46	1.482E-01	2.429E+00	4.145E+00	0.000E+00	NOT IDENT.
V-48	4.000E+00	5.385E+00	9.857E+00	0.000E+00	NOT IDENT.
CR-51	-1.430E+01	2.948E+01	4.897E+01	0.000E+00	NOT IDENT.
MN-52	-7.383E-01	1.826E+01	3.078E+01	0.000E+00	NOT IDENT.
MN-54	2.183E+00	2.605E+00	4.791E+00	0.000E+00	NOT IDENT.
CO-56	-1.191E-01	3.160E+00	5.347E+00	0.000E+00	NOT IDENT.
CO-57	2.326E+00	2.043E+00	3.654E+00	0.000E+00	NOT IDENT.
CO-58	8.297E-01	2.419E+00	4.292E+00	0.000E+00	NOT IDENT.
FE-59	-1.385E+00	7.001E+00	1.140E+01	0.000E+00	NOT IDENT.
CO-60	-1.993E-01	2.637E+00	4.282E+00	0.000E+00	NOT IDENT.
ZN-65	-1.351E+00	5.914E+00	9.564E+00	0.000E+00	NOT IDENT.
GE-68	5.913E+01	8.739E+01	1.526E+02	0.000E+00	NOT IDENT.
AS-73	1.251E+02	1.287E+02	2.182E+02	0.000E+00	NOT IDENT.
AS-74	1.945E-01	7.697E+00	1.281E+01	0.000E+00	NOT IDENT.
SE-75	-1.980E+00	3.549E+00	5.594E+00	0.000E+00	NOT IDENT.
BR-77	5.361E+02	1.778E+03	3.056E+03	0.000E+00	FAIL ABUN
SR-82	5.749E+00	2.623E+01	4.587E+01	0.000E+00	NOT IDENT.
RB-83	1.280E+00	5.322E+00	9.099E+00	0.000E+00	NOT IDENT.

RB-84	1.167E+00	5.632E+00	9.745E+00	0.000E+00 NOT IDENT.
KR-85	-2.547E+03	8.713E+02	1.202E+03	0.000E+00 NOT IDENT.
SR-85	-1.345E+01	4.601E+00	6.350E+00	0.000E+00 NOT IDENT.
RB-86	8.779E+01	5.327E+01	1.077E+02	0.000E+00 NOT IDENT.
Y-88	6.544E-01	2.772E+00	4.847E+00	0.000E+00 NOT IDENT.
ZR-88	2.070E+00	2.393E+00	4.318E+00	0.000E+00 NOT IDENT.
Y-91	4.802E+02	1.131E+03	1.985E+03	0.000E+00 NOT IDENT.
NB-94	-3.615E-02	2.460E+00	4.034E+00	0.000E+00 NOT IDENT.
NB-95	-2.516E+00	3.855E+00	5.619E+00	0.000E+00 NOT IDENT.
NB-95M	1.035E+00	1.070E+01	1.556E+01	0.000E+00 NOT IDENT.
ZR-95	-4.920E-01	4.850E+00	8.206E+00	0.000E+00 NOT IDENT.
NB-97	0.000E+00	1.280E+08	0.000E+00	0.000E+00 SHORT HLIF
ZR-97	0.000E+00	3.258E+09	0.000E+00	0.000E+00 SHORT HLIF
MO-99	1.132E+03	1.620E+03	2.954E+03	0.000E+00 NOT IDENT.
TC-99M	0.000E+00	7.567E+21	0.000E+00	0.000E+00 SHORT HLIF
RH-101	-2.472E-01	3.050E+00	4.344E+00	0.000E+00 NOT IDENT.
RH-102	-2.143E+00	2.195E+00	3.365E+00	0.000E+00 NOT IDENT.
RU-103	2.260E-01	3.298E+00	5.567E+00	0.000E+00 NOT IDENT.
RH-106	7.133E+00	2.551E+01	4.331E+01	0.000E+00 NOT IDENT.
RU-106	7.133E+00	2.550E+01	4.331E+01	0.000E+00 NOT IDENT.
AG-108M	-1.228E+00	2.422E+00	3.920E+00	0.000E+00 NOT IDENT.
CD-109	-1.518E+00	7.001E+01	1.059E+02	0.000E+00 NOT IDENT.
AG-110M	-2.543E+00	2.969E+00	4.332E+00	0.000E+00 NOT IDENT.
IN-111	1.184E+02	1.886E+02	2.862E+02	0.000E+00 NOT IDENT.
IN-113M	3.376E+00	3.428E+00	6.233E+00	0.000E+00 NOT IDENT.
SN-113	3.376E+00	3.428E+00	6.233E+00	0.000E+00 NOT IDENT.
IN-114M	5.113E+00	1.663E+01	2.486E+01	0.000E+00 NOT IDENT.
CD-115	0.000E+00	1.844E+03	0.000E+00	0.000E+00 SHORT HLIF
SN-117M	-7.005E+00	5.025E+00	7.791E+00	0.000E+00 NOT IDENT.
SB-122	2.107E+02	3.285E+02	5.775E+02	0.000E+00 NOT IDENT.
I-123	0.000E+00	1.624E+10	0.000E+00	0.000E+00 SHORT HLIF
TE-123M	-2.657E+00	2.335E+00	3.683E+00	0.000E+00 NOT IDENT.
I-124	2.796E+01	8.553E+01	1.458E+02	0.000E+00 NOT IDENT.
SB-124	6.525E-01	5.648E+00	9.714E+00	0.000E+00 NOT IDENT.
SB-125	6.881E+00	6.846E+00	1.248E+01	0.000E+00 NOT IDENT.
TE-125M	-3.362E+02	8.859E+02	1.336E+03	0.000E+00 NOT IDENT.
I-126	-4.371E+00	1.582E+01	2.533E+01	0.000E+00 NOT IDENT.
SB-126	2.720E+00	1.026E+01	1.740E+01	0.000E+00 NOT IDENT.
SN-126	-2.836E+00	6.916E+00	1.019E+01	0.000E+00 FAIL ABUN
SB-127	7.495E+01	1.727E+02	2.964E+02	0.000E+00 NOT IDENT.
XE-127	-1.754E+00	3.875E+00	6.276E+00	0.000E+00 NOT IDENT.
I-131	-3.489E+00	1.128E+01	1.883E+01	0.000E+00 NOT IDENT.
TE-132	8.869E+01	1.026E+02	1.766E+02	0.000E+00 NOT IDENT.
BA-133	-5.622E-01	3.206E+00	5.411E+00	0.000E+00 NOT IDENT.
I-133	0.000E+00	4.069E+06	0.000E+00	0.000E+00 SHORT HLIF
CS-134	1.614E+00	2.996E+00	5.397E+00	0.000E+00 NOT IDENT.
CS-135	5.441E+00	1.201E+01	2.028E+01	0.000E+00 NOT IDENT.
I-135	0.000E+00	3.981E+20	0.000E+00	0.000E+00 SHORT HLIF
CS-136	8.060E-01	7.137E+00	1.215E+01	0.000E+00 NOT IDENT.
BA-137M	1.068E+00	2.576E+00	4.427E+00	0.000E+00 NOT IDENT.
CS-137	1.129E+00	2.723E+00	4.680E+00	0.000E+00 NOT IDENT.
CE-139	-9.425E-01	2.421E+00	3.978E+00	0.000E+00 NOT IDENT.
BA-140	2.252E+01	2.523E+01	4.355E+01	0.000E+00 NOT IDENT.
LA-140	-3.441E-01	6.281E+00	1.048E+01	0.000E+00 NOT IDENT.
CE-141	-4.451E-01	5.164E+00	8.672E+00	0.000E+00 NOT IDENT.
CE-143	0.000E+00	3.828E+04	0.000E+00	0.000E+00 SHORT HLIF
CE-144	-1.020E+01	1.630E+01	2.660E+01	0.000E+00 NOT IDENT.
PM-144	-5.032E-01	2.604E+00	4.193E+00	0.000E+00 NOT IDENT.
PR-144	-3.415E+01	1.767E+02	2.846E+02	0.000E+00 NOT IDENT.
PM-146	-2.889E+00	3.341E+00	5.210E+00	0.000E+00 NOT IDENT.
ND-147	-4.375E+01	5.173E+01	7.904E+01	0.000E+00 FAIL ABUN
PM-149	0.000E+00	1.642E+04	0.000E+00	0.000E+00 SHORT HLIF
EU-152	-5.794E+00	7.711E+00	1.253E+01	0.000E+00 NOT IDENT.
GD-153	-5.274E-01	7.430E+00	1.066E+01	0.000E+00 NOT IDENT.
EU-154	-5.139E+00	7.176E+00	1.030E+01	0.000E+00 NOT IDENT.
EU-155	1.567E+00	8.544E+00	1.472E+01	0.000E+00 NOT IDENT.
TB-160	-3.584E+00	1.112E+01	1.819E+01	0.000E+00 NOT IDENT.
HO-166M	-3.377E+00	5.747E+00	7.881E+00	0.000E+00 FAIL ABUN
TM-171	-2.505E+03	3.173E+03	4.285E+03	0.000E+00 NOT IDENT.
HF-175	-2.279E+00	2.859E+00	4.627E+00	0.000E+00 NOT IDENT.
LU-176	1.111E+00	2.039E+00	3.447E+00	0.000E+00 NOT IDENT.
LU-177	-5.309E+01	1.239E+02	1.838E+02	0.000E+00 NOT IDENT.
LU-177M	2.522E+00	1.510E+01	2.330E+01	0.000E+00 NOT IDENT.
HF-181	-5.139E-01	3.307E+00	5.484E+00	0.000E+00 NOT IDENT.
W-181	3.767E+01	4.510E+01	6.505E+01	0.000E+00 NOT IDENT.
TA-182	-9.176E+00	1.194E+01	1.751E+01	0.000E+00 FAIL ABUN
RE-183	8.843E+00	8.972E+00	1.580E+01	0.000E+00 NOT IDENT.
RE-184	1.329E+01	1.964E+01	3.362E+01	0.000E+00 NOT IDENT.

OS-185	2.415E+00	3.076E+00	5.497E+00	0.000E+00	NOT IDENT.
RE-188	1.069E+01	1.365E+01	2.385E+01	0.000E+00	NOT IDENT.
W-188	9.545E+01	5.537E+02	9.162E+02	0.000E+00	FAIL ABUN
IR-192	-1.697E+00	2.611E+00	4.285E+00	0.000E+00	NOT IDENT.
AU-195	7.337E+00	1.970E+01	3.132E+01	0.000E+00	NOT IDENT.
TL-200	0.000E+00	2.289E+05	0.000E+00	0.000E+00	SHORT HLIF
TL-201	-3.695E+02	1.073E+03	1.766E+03	0.000E+00	NOT IDENT.
TL-202	-2.636E+00	6.203E+00	1.012E+01	0.000E+00	NOT IDENT.
HG-203	4.030E+00	3.254E+00	5.750E+00	0.000E+00	NOT IDENT.
BI-207	2.660E+00	3.582E+00	6.525E+00	0.000E+00	NOT IDENT.
TL-207	-2.546E+01	5.018E+01	8.303E+01	0.000E+00	NOT IDENT.
TL-208	0.000E+00	6.005E+00	5.702E+00	0.000E+00	FAIL ABUN
PO-209	-9.366E+01	4.744E+02	7.823E+02	0.000E+00	NOT IDENT.
BI-210	9.922E+01	6.631E+02	1.090E+03	0.000E+00	NOT IDENT.
PB-210	9.922E+01	6.631E+02	1.090E+03	0.000E+00	NOT IDENT.
PO-210	9.922E+01	6.631E+02	1.090E+03	0.000E+00	NOT IDENT.
BI-211	-9.741E+00	1.919E+01	2.752E+01	0.000E+00	NOT IDENT.
PB-211	-2.904E+01	7.144E+01	1.137E+02	0.000E+00	NOT IDENT.
BI-212	-2.751E+01	2.517E+01	2.994E+01	0.000E+00	NOT IDENT.
PB-212	1.165E+00	1.202E+01	9.024E+00	0.000E+00	FAIL ABUN
PO-212	1.165E+00	1.202E+01	9.024E+00	0.000E+00	FAIL ABUN
BI-214	2.193E+00	7.061E+00	1.120E+01	0.000E+00	NOT IDENT.
PB-214	-8.169E+00	6.609E+00	8.809E+00	0.000E+00	NOT IDENT.
PO-214	-8.169E+00	6.609E+00	8.809E+00	0.000E+00	NOT IDENT.
PO-215	-2.546E+01	5.018E+01	8.303E+01	0.000E+00	NOT IDENT.
PO-216	1.165E+00	1.202E+01	9.024E+00	0.000E+00	FAIL ABUN
PO-218	-8.169E+00	6.609E+00	8.809E+00	0.000E+00	NOT IDENT.
RN-219	-1.731E+01	2.964E+01	4.783E+01	0.000E+00	NOT IDENT.
RN-220	1.868E+03	1.895E+03	3.449E+03	0.000E+00	NOT IDENT.
RA-223	-2.546E+01	5.018E+01	8.303E+01	0.000E+00	NOT IDENT.
RA-224	5.519E+01	5.240E+01	9.144E+01	0.000E+00	NOT IDENT.
AC-227	-2.000E+01	3.211E+01	5.046E+01	0.000E+00	NOT IDENT.
PA-227	0.000E+00	8.567E+40	0.000E+00	0.000E+00	SHORT HLIF
TH-227	-2.000E+01	3.216E+01	5.046E+01	0.000E+00	NOT IDENT.
AC-228	5.148E+00	1.407E+01	1.899E+01	0.000E+00	FAIL ABUN
RA-228	5.148E+00	1.407E+01	1.899E+01	0.000E+00	FAIL ABUN
TH-228	1.165E+00	1.202E+01	9.024E+00	0.000E+00	FAIL ABUN
TH-229	1.916E+01	4.016E+01	6.863E+01	0.000E+00	NOT IDENT.
TH-230	-8.685E+02	5.665E+03	1.726E+03	0.000E+00	NOT IDENT.
PA-231	-6.477E+01	1.187E+02	1.856E+02	0.000E+00	NOT IDENT.
TH-231	-2.178E+01	4.507E+01	6.431E+01	0.000E+00	NOT IDENT.
U-231	3.258E+01	1.436E+02	2.202E+02	0.000E+00	FAIL ABUN
TH-232	5.766E+01	4.103E+03	5.840E+03	0.000E+00	NOT IDENT.
PA-233	2.111E+00	4.937E+00	8.717E+00	0.000E+00	NOT IDENT.
PA-234	-2.664E+00	2.047E+01	3.395E+01	0.000E+00	FAIL ABUN
PA-234M	1.619E+02	6.267E+02	7.514E+02	0.000E+00	FAIL ABUN
U-234	1.341E+04	1.318E+05	1.663E+04	0.000E+00	NOT IDENT.
U-235	-2.030E+01	2.039E+01	2.831E+01	0.000E+00	FAIL ABUN
NP-236	4.361E-01	6.266E+00	1.057E+01	0.000E+00	NOT IDENT.
NP-237	-8.053E+00	2.074E+01	3.053E+01	0.000E+00	NOT IDENT.
PU-237	6.911E+01	2.888E+02	4.224E+02	0.000E+00	NOT IDENT.
NP-239	8.267E+00	1.506E+01	2.629E+01	0.000E+00	NOT IDENT.
AM-241	4.794E+00	2.003E+01	2.931E+01	0.000E+00	NOT IDENT.
AM-243	-3.648E+00	5.196E+00	7.956E+00	0.000E+00	NOT IDENT.
CM-243	7.176E+00	7.755E+00	1.380E+01	0.000E+00	NOT IDENT.
AM-246	-2.938E+00	9.854E+00	1.515E+01	0.000E+00	NOT IDENT.
CM-247	-2.487E+00	2.733E+00	4.301E+00	0.000E+00	NOT IDENT.
CF-249	-2.487E+00	2.960E+00	4.704E+00	0.000E+00	NOT IDENT.
CF-251	1.389E+00	1.045E+01	1.760E+01	0.000E+00	NOT IDENT.
ANH-511	-5.804E+00	4.611E+00	7.942E+00	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 13:08:49.30

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005629.CNF;1
Sample date : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 09:08:19.
Sample ID : G1202005629 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM03 Detector geometry: JAR
Elapsed live time: 0 04:00:00.00 Elapsed real time: 0 04:00:00.90 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	63.60	159	205	0.99	127.76	123	11	1.11E-02	19.1	
2	0	92.34	370	326	1.27	185.16	178	14	2.57E-02	11.6	
3	0	185.78	212	293	1.20	371.84	365	14	1.48E-02	18.4	
4	0	239.41	100	304	4.74	479.01	469	20	6.93E-03	44.0	
5	0	510.77	240	126	2.26	1021.23	1012	18	1.67E-02	12.7	
6	0	584.18	93	59	4.34	1167.94	1158	23	6.48E-03	23.5	
7	0	911.06	23	31	1.38	1821.27	1816	12	1.63E-03	51.3	
8	0	1001.16	36	34	1.36	2001.37	1995	14	2.50E-03	38.5	

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 13:08:52.45

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*******************************************************************************
*                              GEL Laboratories LLC                           *
*                                2040 Savage Road                             *
*                              Charleston, SC 29414                           *
*******************************************************************************
Configuration     : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005629.CNF;1
Sample date       : 18-DEC-2009 12:00:00 Acquisition date : 5-JAN-2010 09:08:19.
Sample ID         : G1202005629          Sample quantity  : 1.00000E+00 FILTER
Detector name     : GAM03                Detector geometry: JAR
Elapsed live time: 0 04:00:00.00         Elapsed real time: 0 04:00:00.90  0.0%
Energy tolerance : 1.50000 keV           Analyst Initials : MXR1
Abundance limit   : 75.00000             Sensitivity      : 5.00000
Batch ID          : 937282               Detector SN#     :
Matrix Spike ID   :                      LCS ID           : 1032-A
*******************************************************************************
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Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	2-Sigma %Error
RA-226	186.21	14	3.28*	3.727E+00	2.106E+01	2.106E+01	624.12
TH-234	63.29	77	3.80*	1.421E+00	2.667E+02	2.667E+02	88.83
	92.38	38	5.41	3.437E+00	3.821E+01	3.821E+01	241.84
U-238	63.29	77	3.80*	1.421E+00	2.667E+02	2.667E+02	88.83
	92.38	38	5.41	3.437E+00	3.821E+01	3.821E+01	241.32

Flag: "*" = Keyline

Sample ID : G1202005629 Acquisition date : 5-JAN-2010 09:08:19

Total number of lines in spectrum	7	
Number of unidentified lines	0	
Number of lines tentatively identified by NID	7	100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
RA-226	1600.00Y	1.00	2.106E+01	2.106E+01	13.14E+01	624.12	
TH-234	4.47E+09Y	1.00	2.667E+02	2.667E+02	2.369E+02	88.83	
U-238	4.47E+09Y	1.00	2.667E+02	2.667E+02	2.369E+02	88.83	
Total Activity :			5.545E+02	5.545E+02			
Grand Total Activity :			5.545E+02	5.545E+02			

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	%Eff	Flags
0	239.41	9	304	4.74	479.01	469	20	6.07E-04	****	3.21E+00	T
0	584.18	67	59	4.34	1167.94	1158	23	4.62E-03	70.2	1.74E+00	T
0	911.06	9	31	1.38	1821.27	1816	12	6.39E-04	****	1.22E+00	T
0	1001.16	8	34	1.36	2001.37	1995	14	5.66E-04	****	1.12E+00	T

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 5-JAN-2010 13:08:57.87

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005629.CNF;1		
Acquisition date	: 5-JAN-2010 09:08:19.	Detector SN#	:
Detector ID	: GAM03	Sensitivity	: 5.00000
Geometry	: JAR	Energy tolerance	: 1.50000
Elapsed live time	: 0 04:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 04:00:00.90	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUID
Sample ID	: G1202005629	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.00000E+00 FILTER

QC DATA

CALIB. DATE/TIME	: 20-AUG-2009 10:22:10.4	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
RA-226	2.106E+01	1.314E+02	9.133E+01	6.702E+01	0.231
TH-234	2.667E+02	2.369E+02	2.083E+02	4.268E+01	1.280
U-238	2.667E+02	2.369E+02	2.083E+02	4.268E+01	1.280

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7	1.173E+01		2.463E+01	4.231E+01	2.778E+00	0.277
NA-22	-1.608E+00		2.585E+00	3.702E+00	2.859E-01	-0.435
NA-24	1.152E+03		6.399E+02	Half-Life too short		
AL-26	5.768E-01		2.248E+00	3.895E+00	2.393E-01	0.148
K-40	-1.035E+01		3.812E+01	5.250E+01	4.500E+00	-0.197
TI-44	9.723E-02		2.742E+00	4.641E+00	5.374E-01	0.021
SC-46	1.482E-01		2.478E+00	4.145E+00	3.349E-01	0.036
V-48	4.000E+00		5.495E+00	9.857E+00	7.584E-01	0.406
CR-51	-1.430E+01		3.008E+01	4.897E+01	3.835E+00	-0.292

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
MN-52	-7.383E-01		1.863E+01	3.078E+01	2.594E+00	-0.024
MN-54	2.183E+00		2.658E+00	4.791E+00	3.582E-01	0.456
CO-56	-1.191E-01		3.225E+00	5.347E+00	4.067E-01	-0.022
CO-57	2.326E+00		2.085E+00	3.654E+00	2.338E-01	0.637
CO-58	8.297E-01		2.468E+00	4.292E+00	3.108E-01	0.193
FE-59	-1.385E+00		7.144E+00	1.140E+01	8.701E-01	-0.121
CO-60	-1.993E-01		2.691E+00	4.282E+00	3.750E-01	-0.047
ZN-65	-1.351E+00		6.034E+00	9.564E+00	6.327E-01	-0.141
GE-68	5.913E+01		8.917E+01	1.526E+02	1.063E+01	0.387
AS-73	1.251E+02		1.313E+02	2.182E+02	3.230E+01	0.573
AS-74	1.945E-01		7.854E+00	1.281E+01	7.339E-01	0.015
SE-75	-1.980E+00		3.622E+00	5.594E+00	4.293E-01	-0.354
BR-77	5.361E+02		1.814E+03	3.056E+03	1.731E+02	0.175
SR-82	5.749E+00		2.676E+01	4.587E+01	3.144E+00	0.125
RB-83	1.280E+00		5.430E+00	9.099E+00	5.154E-01	0.141
RB-84	1.167E+00		5.747E+00	9.745E+00	7.789E-01	0.120
KR-85	-2.547E+03		8.890E+02	1.202E+03	6.799E+01	-2.118
SR-85	-1.345E+01		4.695E+00	6.350E+00	3.591E-01	-2.118
RB-86	8.779E+01		5.436E+01	1.077E+02	7.504E+00	0.815
Y-88	6.544E-01		2.829E+00	4.847E+00	2.877E-01	0.135
ZR-88	2.070E+00		2.442E+00	4.318E+00	2.294E-01	0.479
Y-91	4.802E+02		1.154E+03	1.985E+03	1.293E+02	0.242
NB-94	-3.615E-02		2.511E+00	4.034E+00	2.463E-01	-0.009
NB-95	-2.516E+00		3.933E+00	5.619E+00	3.790E-01	-0.448
NB-95M	1.035E+00		1.091E+01	1.556E+01	1.298E+00	0.067
ZR-95	-4.920E-01		4.949E+00	8.206E+00	6.355E-01	-0.060
NB-97	-9.374E+01		6.532E+01	Half-Life too short		
ZR-97	-7.335E+03		1.662E+03	Half-Life too short		
MO-99	1.132E+03		1.653E+03	2.954E+03	4.158E+02	0.383
TC-99M	-6.402E+15		3.860E+15	Half-Life too short		
RH-101	-2.472E-01		3.112E+00	4.344E+00	2.540E-01	-0.057
RH-102	-2.143E+00		2.240E+00	3.365E+00	1.877E-01	-0.637
RU-103	2.260E-01		3.365E+00	5.567E+00	6.995E-01	0.041
RH-106	7.133E+00		2.603E+01	4.331E+01	5.068E+00	0.165
RU-106	7.133E+00		2.602E+01	4.331E+01	2.482E+00	0.165
AG-108M	-1.228E+00		2.471E+00	3.920E+00	2.347E-01	-0.313
CD-109	-1.518E+00		7.144E+01	1.059E+02	1.249E+01	-0.014
AG-110M	-2.543E+00		3.029E+00	4.332E+00	2.639E-01	-0.587
IN-111	1.184E+02		1.925E+02	2.862E+02	2.028E+01	0.414
IN-113M	3.376E+00		3.498E+00	6.233E+00	3.571E-01	0.542
SN-113	3.376E+00		3.498E+00	6.233E+00	3.571E-01	0.542
IN-114M	5.113E+00		1.697E+01	2.486E+01	1.407E+00	0.206
CD-115	1.675E-03		9.406E-04	Half-Life too short		
SN-117M	-7.005E+00		5.128E+00	7.791E+00	4.131E-01	-0.899
SB-122	2.107E+02		3.352E+02	5.775E+02	3.300E+01	0.365
I-123	-1.848E+04		8.285E+03	Half-Life too short		
TE-123M	-2.657E+00		2.383E+00	3.683E+00	1.981E-01	-0.721
I-124	2.796E+01		8.728E+01	1.458E+02	8.357E+00	0.192

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
SB-124	6.525E-01		5.763E+00	9.714E+00	7.228E-01	0.067
SB-125	6.881E+00		6.986E+00	1.248E+01	7.115E-01	0.552
TE-125M	-3.362E+02		9.040E+02	1.336E+03	1.285E+02	-0.252
I-126	-4.371E+00		1.615E+01	2.533E+01	1.457E+00	-0.173
SB-126	2.720E+00		1.047E+01	1.740E+01	1.093E+00	0.156
SN-126	-2.836E+00		7.057E+00	1.019E+01	1.200E+00	-0.278
SB-127	7.495E+01		1.762E+02	2.964E+02	3.120E+01	0.253
XE-127	-1.754E+00		3.954E+00	6.276E+00	3.744E-01	-0.279
I-131	-3.489E+00		1.151E+01	1.883E+01	1.286E+00	-0.185
TE-132	8.869E+01		1.047E+02	1.766E+02	2.702E+01	0.502
BA-133	-5.622E-01		3.271E+00	5.411E+00	6.425E-01	-0.104
I-133	1.082E+00		2.076E+00	Half-Life too short		
CS-134	1.614E+00		3.057E+00	5.397E+00	3.850E-01	0.299
CS-135	5.441E+00		1.225E+01	2.028E+01	1.867E+00	0.268
I-135	-3.354E+14		2.031E+14	Half-Life too short		
CS-136	8.060E-01		7.283E+00	1.215E+01	9.295E-01	0.066
BA-137M	1.068E+00		2.628E+00	4.427E+00	2.527E-01	0.241
CS-137	1.129E+00		2.778E+00	4.680E+00	2.683E-01	0.241
CE-139	-9.425E-01		2.470E+00	3.978E+00	2.043E-01	-0.237
BA-140	2.252E+01		2.574E+01	4.355E+01	1.415E+01	0.517
LA-140	-3.441E-01		6.409E+00	1.048E+01	7.997E-01	-0.033
CE-141	-4.451E-01		5.269E+00	8.672E+00	5.084E-01	-0.051
CE-143	-1.178E-03		1.953E-02	Half-Life too short		
CE-144	-1.020E+01		1.663E+01	2.660E+01	3.796E+00	-0.383
PM-144	-5.032E-01		2.657E+00	4.193E+00	2.537E-01	-0.120
PR-144	-3.415E+01		1.803E+02	2.846E+02	1.720E+01	-0.120
PM-146	-2.889E+00		3.409E+00	5.210E+00	4.396E-01	-0.555
ND-147	-4.375E+01		5.279E+01	7.904E+01	1.065E+01	-0.554
PM-149	9.482E-03		8.376E-03	Half-Life too short		
EU-152	-5.794E+00		7.868E+00	1.253E+01	9.226E-01	-0.462
GD-153	-5.274E-01		7.581E+00	1.066E+01	1.017E+00	-0.049
EU-154	-5.139E+00		7.322E+00	1.030E+01	1.096E+00	-0.499
EU-155	1.567E+00		8.718E+00	1.472E+01	1.233E+00	0.106
TB-160	-3.584E+00		1.135E+01	1.819E+01	1.450E+00	-0.197
HO-166M	-3.377E+00		5.864E+00	7.881E+00	4.882E-01	-0.429
TM-171	-2.505E+03		3.237E+03	4.285E+03	5.326E+02	-0.585
HF-175	-2.279E+00		2.917E+00	4.627E+00	3.118E-01	-0.493
LU-176	1.111E+00		2.080E+00	3.447E+00	2.609E-01	0.322
LU-177	-5.309E+01		1.264E+02	1.838E+02	1.122E+01	-0.289
LU-177M	2.522E+00		1.541E+01	2.330E+01	1.257E+00	0.108
HF-181	-5.139E-01		3.374E+00	5.484E+00	3.067E-01	-0.094
W-181	3.767E+01		4.602E+01	6.505E+01	8.249E+00	0.579
TA-182	-9.176E+00		1.218E+01	1.751E+01	1.189E+00	-0.524
RE-183	8.843E+00		9.156E+00	1.580E+01	8.237E-01	0.560
RE-184	1.329E+01		2.004E+01	3.362E+01	2.453E+00	0.395
OS-185	2.415E+00		3.139E+00	5.497E+00	3.145E-01	0.439
RE-188	1.069E+01		1.393E+01	2.385E+01	1.285E+00	0.448
W-188	9.545E+01		5.650E+02	9.162E+02	7.205E+01	0.104

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
IR-192	-1.697E+00		2.664E+00	4.285E+00	3.169E-01	-0.396
AU-195	7.337E+00		2.010E+01	3.132E+01	2.907E+00	0.234
TL-200	-1.606E-01		1.168E-01	Half-Life too short		
TL-201	-3.695E+02		1.094E+03	1.766E+03	9.117E+01	-0.209
TL-202	-2.636E+00		6.329E+00	1.012E+01	5.544E-01	-0.260
HG-203	4.030E+00		3.320E+00	5.750E+00	4.777E-01	0.701
BI-207	2.660E+00		3.655E+00	6.525E+00	4.621E-01	0.408
TL-207	-2.546E+01		5.121E+01	8.303E+01	1.417E+01	-0.307
TL-208	8.693E+00	+	6.127E+00	5.702E+00	3.776E-01	1.525
PO-209	-9.366E+01		4.841E+02	7.823E+02	6.386E+01	-0.120
BI-210	9.922E+01		6.766E+02	1.090E+03	1.204E+02	0.091
PB-210	9.922E+01		6.766E+02	1.090E+03	1.204E+02	0.091
PO-210	9.922E+01		6.766E+02	1.090E+03	1.125E+02	0.091
BI-211	-9.741E+00		1.958E+01	2.752E+01	1.955E+00	-0.354
PB-211	-2.904E+01		7.290E+01	1.137E+02	7.084E+01	-0.255
BI-212	-2.751E+01		2.569E+01	2.994E+01	2.435E+00	-0.919
PB-212	1.165E+00	+	1.227E+01	9.024E+00	7.427E-01	0.129
PO-212	1.165E+00	+	1.227E+01	9.024E+00	7.427E-01	0.129
BI-214	2.193E+00		7.205E+00	1.120E+01	8.655E-01	0.196
PB-214	-8.169E+00		6.744E+00	8.809E+00	7.751E-01	-0.927
PO-214	-8.169E+00		6.744E+00	8.809E+00	7.751E-01	-0.927
PO-215	-2.546E+01		5.121E+01	8.303E+01	1.417E+01	-0.307
PO-216	1.165E+00	+	1.227E+01	9.024E+00	7.427E-01	0.129
PO-218	-8.169E+00		6.744E+00	8.809E+00	7.751E-01	-0.927
RN-219	-1.731E+01		3.024E+01	4.783E+01	6.418E+00	-0.362
RN-220	1.868E+03		1.934E+03	3.449E+03	1.967E+02	0.542
RA-223	-2.546E+01		5.121E+01	8.303E+01	1.417E+01	-0.307
RA-224	5.519E+01		5.347E+01	9.144E+01	6.369E+00	0.604
AC-227	-2.000E+01		3.276E+01	5.046E+01	7.414E+00	-0.396
PA-227	1.000E+35	+	4.371E+34	Half-Life too short		
TH-227	-2.000E+01		3.282E+01	5.046E+01	8.835E+00	-0.396
AC-228	5.148E+00	+	1.436E+01	1.899E+01	2.063E+00	0.271
RA-228	5.148E+00	+	1.436E+01	1.899E+01	2.063E+00	0.271
TH-228	1.165E+00	+	1.227E+01	9.024E+00	7.427E-01	0.129
TH-229	1.916E+01		4.098E+01	6.863E+01	3.940E+00	0.279
TH-230	-8.685E+02		5.780E+03	1.726E+03	1.120E+04	-0.503
PA-231	-6.477E+01		1.211E+02	1.856E+02	2.752E+01	-0.349
TH-231	-2.178E+01		4.599E+01	6.431E+01	1.253E+01	-0.339
U-231	3.258E+01		1.465E+02	2.202E+02	2.170E+01	0.148
TH-232	5.766E+01		4.187E+03	5.840E+03	6.148E+04	0.010
PA-233	2.111E+00		5.037E+00	8.717E+00	6.755E-01	0.242
PA-234	-2.664E+00		2.089E+01	3.395E+01	6.267E+00	-0.078
PA-234M	1.619E+02	+	6.395E+02	7.514E+02	6.819E+01	0.216
U-234	1.341E+04		1.345E+05	1.663E+04	1.663E+05	0.806
U-235	-2.030E+01		2.081E+01	2.831E+01	4.603E+00	-0.717
NP-236	4.361E-01		6.394E+00	1.057E+01	5.559E-01	0.041
NP-237	-8.053E+00		2.117E+01	3.053E+01	7.246E+00	-0.264
PU-237	6.911E+01		2.947E+02	4.224E+02	5.927E+01	0.164

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
NP-239	8.267E+00		1.536E+01	2.629E+01	1.809E+00	0.314
AM-241	4.794E+00		2.044E+01	2.931E+01	4.227E+00	0.164
AM-243	-3.648E+00		5.302E+00	7.956E+00	9.294E-01	-0.459
CM-243	7.176E+00		7.913E+00	1.380E+01	1.171E+00	0.520
AM-246	-2.938E+00		1.005E+01	1.515E+01	1.053E+00	-0.194
CM-247	-2.487E+00		2.788E+00	4.301E+00	2.301E-01	-0.578
CF-249	-2.487E+00		3.021E+00	4.704E+00	2.555E-01	-0.529
CF-251	1.389E+00		1.066E+01	1.760E+01	9.421E-01	0.079
ANH-511	-5.804E+00		4.705E+00	7.942E+00	4.487E-01	-0.731

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202005629		
Acquisition date	: 5-JAN-2010 09:08:19	Detector SN#	:
Detector ID	: GAM03	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 04:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 04:00:00.90	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 18-DEC-2009 12:00:00	Nuclide Library	: LIQUI
Sample ID	: G1202005629	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 20-AUG-2009 10:22:10	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act Error	DLC (pCi/FILTER)	TPU
RA-226	2.106E+01	1.288E+02	4.569E+01	6.572E+01
TH-234	2.667E+02	2.322E+02	1.042E+02	1.185E+02
U-238	2.667E+02	2.322E+02	1.042E+02	1.185E+02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L Act error	DLC (pCi/FILTER)	TPU
BE-7	1.173E+01	2.414E+01	2.117E+01	1.232E+01 NOT IDENT.
NA-22	-1.608E+00	2.533E+00	1.852E+00	1.293E+00 NOT IDENT.
NA-24	1.152E+09	1.254E+09	0.000E+00	6.400E+08 SHORT HLIF
AL-26	5.768E-01	2.203E+00	1.949E+00	1.124E+00 NOT IDENT.
K-40	-1.035E+01	3.736E+01	2.626E+01	1.906E+01 NOT IDENT.
TI-44	9.723E-02	2.687E+00	2.322E+00	1.371E+00 NOT IDENT.
SC-46	1.482E-01	2.429E+00	2.074E+00	1.239E+00 NOT IDENT.
V-48	4.000E+00	5.385E+00	4.932E+00	2.748E+00 NOT IDENT.
CR-51	-1.430E+01	2.948E+01	2.450E+01	1.504E+01 NOT IDENT.
MN-52	-7.383E-01	1.826E+01	1.540E+01	9.315E+00 NOT IDENT.
MN-54	2.183E+00	2.605E+00	2.397E+00	1.329E+00 NOT IDENT.
CO-56	-1.191E-01	3.160E+00	2.675E+00	1.612E+00 NOT IDENT.
CO-57	2.326E+00	2.043E+00	1.828E+00	1.043E+00 NOT IDENT.
CO-58	8.297E-01	2.419E+00	2.147E+00	1.234E+00 NOT IDENT.
FE-59	-1.385E+00	7.001E+00	5.704E+00	3.572E+00 NOT IDENT.
CO-60	-1.993E-01	2.637E+00	2.142E+00	1.346E+00 NOT IDENT.
ZN-65	-1.351E+00	5.914E+00	4.785E+00	3.017E+00 NOT IDENT.
GE-68	5.913E+01	8.739E+01	7.637E+01	4.459E+01 NOT IDENT.
AS-73	1.251E+02	1.287E+02	1.092E+02	6.568E+01 NOT IDENT.
AS-74	1.945E-01	7.697E+00	6.407E+00	3.927E+00 NOT IDENT.
SE-75	-1.980E+00	3.549E+00	2.799E+00	1.811E+00 NOT IDENT.
BR-77	5.361E+02	1.778E+03	1.529E+03	9.072E+02 FAIL ABUN
SR-82	5.749E+00	2.623E+01	2.295E+01	1.338E+01 NOT IDENT.
RB-83	1.280E+00	5.322E+00	4.552E+00	2.715E+00 NOT IDENT.

RB-84	1.167E+00	5.632E+00	4.876E+00	2.873E+00	NOT IDENT.
KR-85	-2.547E+03	8.713E+02	6.016E+02	4.452E+02	NOT IDENT.
SR-85	-1.345E+01	4.601E+00	3.177E+00	2.351E+00	NOT IDENT.
RB-86	8.779E+01	5.327E+01	5.387E+01	2.719E+01	NOT IDENT.
Y-88	6.544E-01	2.772E+00	2.425E+00	1.414E+00	NOT IDENT.
ZR-88	2.070E+00	2.393E+00	2.160E+00	1.221E+00	NOT IDENT.
Y-91	4.802E+02	1.131E+03	9.932E+02	5.772E+02	NOT IDENT.
NB-94	-3.615E-02	2.460E+00	2.018E+00	1.255E+00	NOT IDENT.
NB-95	-2.516E+00	3.855E+00	2.811E+00	1.967E+00	NOT IDENT.
NB-95M	1.035E+00	1.070E+01	7.784E+00	5.457E+00	NOT IDENT.
ZR-95	-4.920E-01	4.850E+00	4.106E+00	2.474E+00	NOT IDENT.
NB-97	-9.374E+07	1.280E+08	0.000E+00	6.532E+07	SHORT HLIF
ZR-97	-7.335E+09	3.258E+09	0.000E+00	1.664E+09	SHORT HLIF
MO-99	1.132E+03	1.620E+03	1.478E+03	8.265E+02	NOT IDENT.
TC-99M	-6.402E+21	7.567E+21	0.000E+00	0.000E+00	SHORT HLIF
RH-101	-2.472E-01	3.050E+00	2.173E+00	1.556E+00	NOT IDENT.
RH-102	-2.143E+00	2.195E+00	1.684E+00	1.120E+00	NOT IDENT.
RU-103	2.260E-01	3.298E+00	2.785E+00	1.683E+00	NOT IDENT.
RH-106	7.133E+00	2.551E+01	2.167E+01	1.301E+01	NOT IDENT.
RU-106	7.133E+00	2.550E+01	2.167E+01	1.301E+01	NOT IDENT.
AG-108M	-1.228E+00	2.422E+00	1.961E+00	1.236E+00	NOT IDENT.
CD-109	-1.518E+00	7.001E+01	5.299E+01	3.572E+01	NOT IDENT.
AG-110M	-2.543E+00	2.969E+00	2.167E+00	1.515E+00	NOT IDENT.
IN-111	1.184E+02	1.886E+02	1.432E+02	9.626E+01	NOT IDENT.
IN-113M	3.376E+00	3.428E+00	3.118E+00	1.750E+00	NOT IDENT.
SN-113	3.376E+00	3.428E+00	3.118E+00	1.750E+00	NOT IDENT.
IN-114M	5.113E+00	1.663E+01	1.244E+01	8.484E+00	NOT IDENT.
CD-115	1.675E+03	1.844E+03	0.000E+00	9.408E+02	SHORT HLIF
SN-117M	-7.005E+00	5.025E+00	3.898E+00	2.565E+00	NOT IDENT.
SB-122	2.107E+02	3.285E+02	2.889E+02	1.676E+02	NOT IDENT.
I-123	-1.848E+10	1.624E+10	0.000E+00	8.287E+09	SHORT HLIF
TE-123M	-2.657E+00	2.335E+00	1.843E+00	1.192E+00	NOT IDENT.
I-124	2.796E+01	8.553E+01	7.295E+01	4.364E+01	NOT IDENT.
SB-124	6.525E-01	5.648E+00	4.860E+00	2.882E+00	NOT IDENT.
SB-125	6.881E+00	6.846E+00	6.242E+00	3.493E+00	NOT IDENT.
TE-125M	-3.362E+02	8.859E+02	6.686E+02	4.520E+02	NOT IDENT.
I-126	-4.371E+00	1.582E+01	1.267E+01	8.073E+00	NOT IDENT.
SB-126	2.720E+00	1.026E+01	8.705E+00	5.236E+00	NOT IDENT.
SN-126	-2.836E+00	6.916E+00	5.097E+00	3.529E+00	FAIL ABUN
SB-127	7.495E+01	1.727E+02	1.483E+02	8.812E+01	NOT IDENT.
XE-127	-1.754E+00	3.875E+00	3.140E+00	1.977E+00	NOT IDENT.
I-131	-3.489E+00	1.128E+01	9.420E+00	5.756E+00	NOT IDENT.
TE-132	8.869E+01	1.026E+02	8.835E+01	5.234E+01	NOT IDENT.
BA-133	-5.622E-01	3.206E+00	2.707E+00	1.636E+00	NOT IDENT.
I-133	1.082E+06	4.069E+06	0.000E+00	2.076E+06	SHORT HLIF
CS-134	1.614E+00	2.996E+00	2.700E+00	1.529E+00	NOT IDENT.
CS-135	5.441E+00	1.201E+01	1.015E+01	6.126E+00	NOT IDENT.
I-135	-3.354E+20	3.981E+20	0.000E+00	0.000E+00	SHORT HLIF
CS-136	8.060E-01	7.137E+00	6.079E+00	3.641E+00	NOT IDENT.
BA-137M	1.068E+00	2.576E+00	2.215E+00	1.314E+00	NOT IDENT.
CS-137	1.129E+00	2.723E+00	2.342E+00	1.389E+00	NOT IDENT.
CE-139	-9.425E-01	2.421E+00	1.990E+00	1.235E+00	NOT IDENT.
BA-140	2.252E+01	2.523E+01	2.179E+01	1.287E+01	NOT IDENT.
LA-140	-3.441E-01	6.281E+00	5.241E+00	3.205E+00	NOT IDENT.
CE-141	-4.451E-01	5.164E+00	4.338E+00	2.635E+00	NOT IDENT.
CE-143	-1.178E+03	3.828E+04	0.000E+00	1.953E+04	SHORT HLIF
CE-144	-1.020E+01	1.630E+01	1.331E+01	8.317E+00	NOT IDENT.
PM-144	-5.032E-01	2.604E+00	2.098E+00	1.329E+00	NOT IDENT.
PR-144	-3.415E+01	1.767E+02	1.424E+02	9.018E+01	NOT IDENT.
PM-146	-2.889E+00	3.341E+00	2.607E+00	1.705E+00	NOT IDENT.
ND-147	-4.375E+01	5.173E+01	3.954E+01	2.640E+01	FAIL ABUN
PM-149	9.482E+03	1.642E+04	0.000E+00	8.377E+03	SHORT HLIF
EU-152	-5.794E+00	7.711E+00	6.268E+00	3.935E+00	NOT IDENT.
GD-153	-5.274E-01	7.430E+00	5.331E+00	3.791E+00	NOT IDENT.
EU-154	-5.139E+00	7.176E+00	5.155E+00	3.662E+00	NOT IDENT.
EU-155	1.567E+00	8.544E+00	7.362E+00	4.359E+00	NOT IDENT.
TB-160	-3.584E+00	1.112E+01	9.102E+00	5.673E+00	NOT IDENT.
HO-166M	-3.377E+00	5.747E+00	3.943E+00	2.932E+00	FAIL ABUN
TM-171	-2.505E+03	3.173E+03	2.144E+03	1.619E+03	NOT IDENT.
HF-175	-2.279E+00	2.859E+00	2.315E+00	1.459E+00	NOT IDENT.
LU-176	1.111E+00	2.039E+00	1.725E+00	1.040E+00	NOT IDENT.
LU-177	-5.309E+01	1.239E+02	9.195E+01	6.319E+01	NOT IDENT.
LU-177M	2.522E+00	1.510E+01	1.166E+01	7.704E+00	NOT IDENT.
HF-181	-5.139E-01	3.307E+00	2.743E+00	1.687E+00	NOT IDENT.
W-181	3.767E+01	4.510E+01	3.255E+01	2.301E+01	NOT IDENT.
TA-182	-9.176E+00	1.194E+01	8.760E+00	6.091E+00	FAIL ABUN
RE-183	8.843E+00	8.972E+00	7.903E+00	4.579E+00	NOT IDENT.
RE-184	1.329E+01	1.964E+01	1.682E+01	1.002E+01	NOT IDENT.

OS-185	2.415E+00	3.076E+00	2.750E+00	1.570E+00	NOT IDENT.
RE-188	1.069E+01	1.365E+01	1.193E+01	6.963E+00	NOT IDENT.
W-188	9.545E+01	5.537E+02	4.584E+02	2.825E+02	FAIL ABUN
IR-192	-1.697E+00	2.611E+00	2.144E+00	1.332E+00	NOT IDENT.
AU-195	7.337E+00	1.970E+01	1.567E+01	1.005E+01	NOT IDENT.
TL-200	-1.606E+05	2.289E+05	0.000E+00	1.168E+05	SHORT HLIF
TL-201	-3.695E+02	1.073E+03	8.836E+02	5.472E+02	NOT IDENT.
TL-202	-2.636E+00	6.203E+00	5.062E+00	3.165E+00	NOT IDENT.
HG-203	4.030E+00	3.254E+00	2.877E+00	1.661E+00	NOT IDENT.
BI-207	2.660E+00	3.582E+00	3.264E+00	1.828E+00	NOT IDENT.
TL-207	-2.546E+01	5.018E+01	4.154E+01	2.560E+01	NOT IDENT.
TL-208	8.693E+00	6.005E+00	2.853E+00	3.065E+00	FAIL ABUN
PO-209	-9.366E+01	4.744E+02	3.914E+02	2.421E+02	NOT IDENT.
BI-210	9.922E+01	6.631E+02	5.452E+02	3.383E+02	NOT IDENT.
PB-210	9.922E+01	6.631E+02	5.452E+02	3.383E+02	NOT IDENT.
PO-210	9.922E+01	6.631E+02	5.452E+02	3.383E+02	NOT IDENT.
BI-211	-9.741E+00	1.919E+01	1.377E+01	9.790E+00	NOT IDENT.
PB-211	-2.904E+01	7.144E+01	5.689E+01	3.645E+01	NOT IDENT.
BI-212	-2.751E+01	2.517E+01	1.498E+01	1.285E+01	NOT IDENT.
PB-212	1.165E+00	1.202E+01	4.515E+00	6.134E+00	FAIL ABUN
PO-212	1.165E+00	1.202E+01	4.515E+00	6.134E+00	FAIL ABUN
BI-214	2.193E+00	7.061E+00	5.603E+00	3.602E+00	NOT IDENT.
PB-214	-8.169E+00	6.609E+00	4.407E+00	3.373E+00	NOT IDENT.
PO-214	-8.169E+00	6.609E+00	4.407E+00	3.373E+00	NOT IDENT.
PO-215	-2.546E+01	5.018E+01	4.154E+01	2.560E+01	NOT IDENT.
PO-216	1.165E+00	1.202E+01	4.515E+00	6.134E+00	FAIL ABUN
PO-218	-8.169E+00	6.609E+00	4.407E+00	3.373E+00	NOT IDENT.
RN-219	-1.731E+01	2.964E+01	2.393E+01	1.512E+01	NOT IDENT.
RN-220	1.868E+03	1.895E+03	1.726E+03	9.673E+02	NOT IDENT.
RA-223	-2.546E+01	5.018E+01	4.154E+01	2.560E+01	NOT IDENT.
RA-224	5.519E+01	5.240E+01	4.574E+01	2.674E+01	NOT IDENT.
AC-227	-2.000E+01	3.211E+01	2.525E+01	1.638E+01	NOT IDENT.
PA-227	1.000E+41	8.567E+40	0.000E+00	0.000E+00	SHORT HLIF
TH-227	-2.000E+01	3.216E+01	2.525E+01	1.641E+01	NOT IDENT.
AC-228	5.148E+00	1.407E+01	9.500E+00	7.179E+00	FAIL ABUN
RA-228	5.148E+00	1.407E+01	9.500E+00	7.179E+00	FAIL ABUN
TH-228	1.165E+00	1.202E+01	4.515E+00	6.134E+00	FAIL ABUN
TH-229	1.916E+01	4.016E+01	3.433E+01	2.049E+01	NOT IDENT.
TH-230	-8.685E+02	5.665E+03	8.638E+02	2.890E+03	NOT IDENT.
PA-231	-6.477E+01	1.187E+02	9.285E+01	6.056E+01	NOT IDENT.
TH-231	-2.178E+01	4.507E+01	3.218E+01	2.300E+01	NOT IDENT.
U-231	3.258E+01	1.436E+02	1.102E+02	7.325E+01	FAIL ABUN
TH-232	5.766E+01	4.103E+03	2.922E+03	2.093E+03	NOT IDENT.
PA-233	2.111E+00	4.937E+00	4.361E+00	2.519E+00	NOT IDENT.
PA-234	-2.664E+00	2.047E+01	1.699E+01	1.045E+01	FAIL ABUN
PA-234M	1.619E+02	6.267E+02	3.759E+02	3.197E+02	FAIL ABUN
U-234	1.341E+04	1.318E+05	8.320E+03	6.723E+04	NOT IDENT.
U-235	-2.030E+01	2.039E+01	1.416E+01	1.041E+01	FAIL ABUN
NP-236	4.361E-01	6.266E+00	5.286E+00	3.197E+00	NOT IDENT.
NP-237	-8.053E+00	2.074E+01	1.527E+01	1.058E+01	NOT IDENT.
PU-237	6.911E+01	2.888E+02	2.113E+02	1.473E+02	NOT IDENT.
NP-239	8.267E+00	1.506E+01	1.315E+01	7.683E+00	NOT IDENT.
AM-241	4.794E+00	2.003E+01	1.466E+01	1.022E+01	NOT IDENT.
AM-243	-3.648E+00	5.196E+00	3.980E+00	2.651E+00	NOT IDENT.
CM-243	7.176E+00	7.755E+00	6.902E+00	3.957E+00	NOT IDENT.
AM-246	-2.938E+00	9.854E+00	7.581E+00	5.028E+00	NOT IDENT.
CM-247	-2.487E+00	2.733E+00	2.152E+00	1.394E+00	NOT IDENT.
CF-249	-2.487E+00	2.960E+00	2.354E+00	1.510E+00	NOT IDENT.
CF-251	1.389E+00	1.045E+01	8.805E+00	5.331E+00	NOT IDENT.
ANH-511	-5.804E+00	4.611E+00	3.973E+00	2.353E+00	NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	159.0960
46.50	159.0960
46.50	159.0960
48.70	168.8992
49.72	181.6958
51.35	180.0788
52.39	157.7798
52.97	140.9273
53.15	140.9812
53.20	144.4072
53.44	155.8569
54.07	167.4550
56.28	189.9650
56.28	189.9660
57.37	0.0000
57.53	174.3870
57.53	174.3878
57.60	174.4117
57.98	173.6264
57.98	173.6264
59.00	174.3258
59.32	160.6196
59.32	160.6196
59.40	160.6452
59.54	160.6895
59.54	160.6895
59.72	159.0182
60.01	159.1091
61.10	155.9822
61.14	155.9942
61.30	164.7116
63.00	160.0330
63.29	160.1210
63.29	160.1210
63.58	160.2093
64.28	160.4216
64.62	0.0000
65.12	151.9422
65.20	151.9651
65.20	151.9651
66.05	178.4479
66.72	182.1714
66.83	189.2167
66.91	189.2447
67.20	189.3452
67.20	189.3452
67.67	179.6820
67.75	178.3038
67.85	178.3364
68.90	158.9794
68.90	158.9794
69.30	156.0441
69.67	156.1482
70.82	196.7608
70.82	196.7608
70.83	196.7651
72.80	198.3328
72.80	198.3328
72.87	198.3567
72.87	198.3567
74.67	213.1879
74.81	184.8073
74.81	184.8073
74.81	184.8073
74.81	184.8073
74.81	184.8073
74.81	184.8073

74.81	184.8073
74.97	184.8572
74.97	184.8572
75.28	162.7254
75.70	162.8420
77.11	190.8819
77.11	190.8819
77.11	190.8819
77.11	190.8819
77.11	190.8819
77.11	190.8819
77.11	190.8819
78.38	183.2428
79.62	186.3061
79.80	207.8649
79.80	207.8649
80.11	207.9711
80.18	207.9950
80.30	217.0028
80.30	217.0028
80.57	217.0988
81.00	216.3534
81.07	216.3782
81.07	216.3782
81.07	216.3782
82.60	170.1118
83.37	191.9490
83.78	192.0757
83.78	192.0757
83.78	192.0757
84.21	191.3050
84.21	191.3050
84.90	175.5119
85.43	173.5920
86.29	195.5555
86.50	208.6611
86.54	208.6743
86.59	208.6901
86.72	198.5856
86.79	198.6073
86.94	218.9546
87.30	219.0772
87.30	219.0772
87.30	219.0772
87.30	219.0772
87.30	219.0772
87.30	219.0772
87.30	219.0772
87.57	209.0092
87.88	201.8486
88.03	201.8953
88.36	191.8254
88.47	191.8584
89.36	190.6656
89.95	190.8375
91.11	175.1213
92.29	175.4326
92.38	175.4561
92.38	175.4561
93.35	175.7109
94.00	170.0182
94.67	174.5866
94.67	174.5880
94.90	177.5821
94.90	177.5821
94.90	177.5821
95.87	161.6686
95.87	161.6686
96.73	157.4580
97.43	166.4557
98.44	143.8327
98.44	143.8327
98.88	156.0492
99.55	168.9956
99.55	168.9956
99.86	179.2330
100.00	192.2062
100.10	192.2348

103.18	164.2954
103.76	160.7125
105.00	161.9196
105.31	174.0912
108.00	191.5517
109.28	188.1392
110.05	0.0000
111.00	156.6753
111.00	156.6753
111.76	180.3113
112.95	201.2887
115.19	188.6726
115.19	188.6726
115.19	188.6726
116.30	175.7182
117.00	165.4758
117.00	165.4758
117.66	181.7043
121.11	180.6016
121.62	173.1084
121.78	158.8731
122.06	156.0735
122.32	161.8361
122.32	161.8361
122.32	161.8361
123.07	164.8464
127.23	196.3419
129.76	157.5562
131.20	167.4514
133.02	200.6066
133.54	193.0084
135.34	192.4503
136.00	184.8564
136.25	182.9741
136.48	183.0231
140.51	223.7636
140.51	0.0000
142.18	177.4025
142.65	176.5203
143.76	183.5780
144.24	179.7689
144.24	179.7689
144.24	179.7689
145.22	182.8997
145.44	182.9453
147.16	197.0175
152.43	195.1993
152.70	180.4645
153.22	173.6595
154.21	154.0886
154.21	154.0886
154.21	154.0886
155.03	161.1446
156.02	160.3253
158.56	203.4282
159.00	0.0000
159.00	205.5076
160.31	173.9773
161.27	164.2006
162.32	160.3944
162.64	167.4239
163.35	172.5334
163.89	184.6034
165.85	186.9758
167.43	188.2783
171.28	188.0058
171.86	184.0904
172.10	175.0793
176.55	173.8293
176.60	180.9133
181.06	185.1512
184.41	162.9346
185.71	163.1360
186.00	163.1812
186.21	163.2129
190.27	155.6448
192.34	138.1620
193.63	156.1307

197.04	152.4974
198.01	148.5066
198.60	166.1271
200.40	158.1291
201.83	185.2383
202.84	168.8337
205.31	165.0520
208.36	161.3326
208.81	161.3965
209.75	152.1498
209.75	152.1498
210.97	146.0519
215.65	143.5003
216.55	136.2733
218.09	123.8562
222.10	146.3937
223.80	153.9844
226.40	150.0906
227.00	145.9343
227.08	144.8873
227.20	144.9009
228.16	136.5478
228.18	136.5497
228.18	136.5497
231.56	0.0000
235.69	138.0263
236.00	132.9475
236.00	132.9475
238.63	132.3744
238.63	132.3744
238.63	132.3744
238.63	132.3744
239.00	132.4132
240.98	132.6223
241.98	132.7273
241.98	132.7273
241.98	132.7273
244.69	116.7065
245.39	120.2048
247.94	145.0245
248.90	147.4387
249.79	152.9258
252.40	100.3572
252.85	124.1405
252.85	124.1405
254.15	0.0000
256.20	146.1031
256.20	146.1031
260.50	130.2924
260.90	0.0000
262.80	121.8164
264.65	125.2513
268.24	109.2041
268.79	107.0634
269.46	106.0227
269.46	106.0227
269.46	106.0227
271.23	128.0491
273.65	119.5032
276.40	115.3484
277.35	111.0297
277.60	118.7463
277.60	118.7463
278.00	116.5796
278.60	101.2258
279.20	91.3626
279.53	104.5963
280.46	109.0728
281.68	114.6815
283.67	111.5306
284.30	103.8481
285.00	97.2665
285.90	0.0000
286.10	89.5998
286.10	89.5998
287.40	83.0383
288.45	0.0000
290.67	93.2157

290.80	93.2234
291.72	101.0573
293.26	0.0000
293.70	97.8600
295.21	105.7545
295.21	105.7545
295.21	105.7545
295.96	109.1494
296.50	92.4783
297.23	88.0649
298.57	112.6926
299.80	99.3862
299.80	99.3862
300.09	99.4066
300.09	99.4066
300.09	99.4066
300.09	99.4066
300.12	99.4080
301.29	102.8416
302.84	119.7350
303.76	113.0902
303.91	113.1026
304.40	100.8174
304.40	100.8174
304.84	99.7271
306.84	99.8602
308.46	105.5851
311.98	96.3745
316.51	101.1801
318.01	96.7585
319.02	95.0127
319.41	95.0358
320.08	99.6042
323.87	108.0195
323.87	108.0195
323.87	108.0195
325.23	87.2180
328.77	100.1642
329.70	94.7565
329.70	94.7565
330.00	93.8643
333.44	107.7686
334.20	107.8190
334.20	107.8190
334.30	107.8262
338.28	89.7743
338.28	89.7743
338.28	89.7743
338.32	89.7767
338.32	89.7767
340.50	117.4188
340.57	115.5902
343.40	110.2793
344.27	112.1769
345.85	92.9590
350.59	0.0000
351.07	97.8727
351.92	105.3136
351.92	105.3136
351.92	105.3136
355.39	0.0000
356.01	87.9794
364.48	89.3566
366.43	81.0729
367.43	76.4586
367.94	0.0000
369.80	87.7693
374.96	79.6055
383.85	71.5422
387.95	88.6930
388.63	95.3348
391.69	68.0792
391.69	68.0792
392.90	70.0173
398.62	73.0889
400.65	74.1219
401.10	80.7936
401.81	78.9240

402.60	87.5202
404.84	82.8656
410.95	86.0098
411.60	83.1725
413.65	72.7372
414.70	72.7789
415.30	69.9283
415.76	73.7788
417.63	0.0000
418.52	65.2516
423.70	71.2060
427.08	62.6577
427.89	57.8628
432.53	78.3056
433.00	80.2593
433.93	73.5257
439.47	76.6489
439.56	76.6528
439.89	70.8426
443.98	64.1848
444.90	71.0262
445.03	71.0306
445.03	71.0306
445.03	71.0306
453.90	80.1492
463.38	56.9614
468.07	59.0632
473.00	69.0746
475.06	75.0713
475.35	72.1178
476.78	58.3280
477.59	54.3951
477.96	55.3937
482.03	63.4328
484.57	66.4872
487.03	60.6053
490.36	0.0000
492.35	0.0000
497.08	63.8914
507.63	0.0000
510.53	0.0000
510.84	71.3380
511.00	76.3669
511.85	79.4127
511.85	79.4127
513.99	241.4941
513.99	241.4941
520.41	56.5154
520.65	55.5116
527.90	0.0000
528.96	0.0000
529.64	49.6580
529.87	0.0000
531.02	68.9563
537.32	54.9149
543.00	58.1119
546.56	0.0000
549.76	41.9249
552.65	61.4312
555.20	56.3750
563.23	60.6867
563.90	54.5307
568.70	70.1084
569.32	68.0641
569.50	61.8809
569.67	69.1052
573.80	53.7291
574.00	53.9625
574.64	51.6809
578.91	55.2266
579.30	0.0000
583.14	47.7171
585.48	47.7643
591.81	48.5853
592.07	62.4727
593.00	64.2336
595.88	55.2722
600.56	65.8270

602.52	0.0000
602.71	64.8396
602.71	64.8396
603.60	84.7415
604.41	99.4207
604.70	101.5256
609.31	70.2584
610.33	66.0916
612.46	95.5478
614.37	89.3164
618.01	69.4531
621.84	54.8057
621.84	54.8057
631.29	51.8388
633.02	43.4043
633.10	43.4063
634.78	55.0888
635.90	47.6938
636.97	51.9548
645.85	36.1756
646.12	36.1798
656.30	40.5958
657.75	55.5826
657.90	0.0000
661.65	43.8908
661.65	43.8908
664.57	0.0000
666.33	54.6930
666.33	54.6930
675.00	51.6457
677.61	53.8501
685.20	45.3633
692.80	46.5735
695.00	52.0313
696.49	53.1451
696.49	53.1451
697.00	48.8156
697.49	44.4844
698.33	36.9011
698.50	37.9890
699.00	43.4238
702.63	48.9166
706.10	58.7738
706.58	0.0000
706.67	43.5459
709.31	37.0493
711.68	46.8969
713.82	53.4813
717.42	34.9727
720.50	29.5405
721.93	0.0000
722.20	30.6530
722.78	31.7549
722.78	31.7549
722.89	37.2307
722.95	37.2315
723.30	37.2365
724.18	28.4838
727.18	39.4813
733.00	40.6621
735.90	48.5876
739.58	33.9641
742.81	43.1923
744.21	42.2939
747.13	38.6555
751.79	42.4063
752.31	42.4137
753.82	25.8307
755.35	30.4595
756.15	38.7769
756.87	36.9401
763.13	33.3179
763.93	38.8811
765.79	37.0532
766.42	37.0614
766.84	33.3596
776.49	32.5398
778.00	30.6965

778.57	33.4929
778.89	33.4966
783.80	31.6882
785.46	39.1665
792.07	28.9723
795.84	31.8162
796.30	31.8210
798.80	53.3911
801.93	29.0675
805.60	30.0417
810.29	27.2672
810.76	25.3905
815.85	33.9104
817.79	32.0469
818.51	24.5120
819.60	22.6348
826.30	30.2454
828.27	0.0000
831.60	53.0195
831.96	47.3440
834.83	33.1714
836.80	0.0000
846.75	46.6174
848.13	58.0587
856.28	0.0000
856.80	47.7193
860.37	43.9514
867.32	31.5988
867.82	36.3919
871.10	38.3464
873.19	32.6158
874.81	32.6318
875.33	0.0000
876.40	34.5688
879.36	45.1727
880.27	35.5712
880.51	34.6121
881.50	38.4701
883.24	36.5659
884.67	32.7314
889.25	25.0648
896.60	29.9518
898.02	28.9984
899.00	23.2056
903.28	29.6896
911.07	29.1125
911.07	29.1125
919.63	35.0244
920.93	30.1719
925.00	31.1823
925.24	33.1339
926.50	38.9958
935.52	33.2343
937.48	39.1219
944.10	29.3982
946.00	32.3561
949.00	27.4776
962.29	35.4639
964.01	42.3806
966.15	38.4620
968.20	28.6165
969.11	34.5464
969.11	34.5464
977.42	26.7133
980.50	36.6387
983.50	23.7861
989.30	37.7225
996.32	34.1023
1001.03	28.8832
1001.68	28.8885
1004.76	41.0198
1021.30	0.0000
1024.50	0.0000
1034.80	32.1680
1036.00	28.1561
1037.82	19.1152
1038.57	19.1191
1038.76	0.0000

1045.16	25.2024
1046.59	21.1777
1048.07	20.1774
1050.47	20.1904
1050.47	20.1904
1062.04	22.2784
1063.62	24.3135
1076.63	12.1987
1077.35	15.2515
1078.86	22.3778
1085.78	15.2850
1093.90	26.5501
1099.22	36.8130
1112.02	29.7528
1112.84	30.7849
1115.52	32.8594
1120.29	30.8435
1120.51	29.8178
1121.28	27.7668
1124.00	0.0000
1129.67	26.7956
1131.51	0.0000
1147.95	0.0000
1167.94	22.8907
1173.22	21.8784
1175.09	17.7194
1177.93	23.9902
1189.05	27.1934
1204.90	22.0485
1205.75	0.0000
1213.00	25.2471
1221.42	32.6764
1230.97	24.2990
1235.34	15.8636
1236.41	0.0000
1238.25	22.2236
1246.25	22.2655
1260.41	0.0000
1271.85	21.3322
1274.45	23.4797
1274.54	22.4125
1291.56	22.5005
1298.22	0.0000
1312.09	32.2937
1325.50	22.6731
1325.50	22.6731
1332.49	19.4648
1333.61	24.8774
1360.21	21.4494
1362.66	0.0000
1365.15	21.4727
1368.21	15.8812
1368.53	0.0000
1376.25	23.3956
1384.27	8.4372
1394.10	10.3340
1395.20	11.2759
1407.95	17.9026
1434.06	10.4218
1436.60	13.2710
1457.56	0.0000
1460.81	18.1021
1489.15	15.3326
1509.49	19.2446
1596.49	11.7464
1620.62	15.7338
1678.03	0.0000
1691.02	9.9641
1691.02	9.9641
1706.46	0.0000
1750.46	0.0000
1764.49	15.1454
1770.23	20.2141
1771.40	14.1528
1791.20	0.0000
1808.65	8.1403
1836.01	10.2239

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202005629

Total Uranium Activity	7.8409E+02	ug/g
Total Uranium Counting Unc.	6.9081E+02	ug/g
Total Uranium Tpu	3.5254E-04	ug/g
Total Uranium Mda	3.1013E+02	ug/g

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 937282	SAMPLE ID	: G1202005629
ANALYST	: MXR1	DETECTOR	: GAM03
SAMPLE DATE	: 18-DEC-2009 12:00:00.00	COUNT TIME	: 0 04:00:00.00
ANALYSIS DATE:	5-JAN-2010 09:08:19.70	SAMPLE ALQT:	1.000 FILTER

GROSS GAMMA ACTIVITY	(pCi/FILTER)	: 2.337E+01
GROSS GAMMA ERROR	(pCi/FILTER)	: 3.519E+01
GROSS GAMMA MDA	(pCi/FILTER)	: 4.553E+01
GROSS GAMMA DLC	(pCi/FILTER)	: 2.180E+01

VAX/VMS Nuclide Identification Report Generated 4-JAN-2010 20:55:59.41

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005630.CNF;1
Sample date : 4-JAN-2010 00:00:00. Acquisition date : 4-JAN-2010 19:55:27.
Sample ID : G1202005630 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM07 Detector geometry: JAR
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:00.93 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.45	3287	765	1.05	118.56	113	11	9.13E-01	2.4	
2	0	87.96	1248	338	1.08	175.56	170	11	3.47E-01	4.0	
3	0	122.07	221	170	1.10	243.77	239	8	6.13E-02	12.3	
4	0	661.74*	1723	72	1.40	1322.95	1315	15	4.79E-01	2.6	
5	0	1173.44	1382	47	1.94	2346.23	2338	17	3.84E-01	2.9	
6	0	1332.73	1298	18	1.97	2664.78	2656	19	3.60E-01	2.9	

Flag: "*" = Peak area was modified by background subtraction

VMS Nuclide Identification Report V3.1 Generated 4-JAN-2010 20:56:02

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005630.CNF;1
Analyses by : PEAK V16.9,PEAKEFF V2.2,ENBACK V1.6,NID V3.4,MINACT V2.8
Sample title : MXR1
Sample date : 4-JAN-2010 00:00:00 Acquisition date : 4-JAN-2010 19:55:27
Sample ID : G1202005630 Sample quantity : 1.0000 FILTER
Sample type : LIQUID Sample geometry :
Detector name : GAMMA7 Detector geometry: JAR
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:00.93 0.0%
Peak Width (FWHM): 3.00 Confidence level : 5.00 %
Energy tolerance : 1.50 keV Half life ratio : 8.00
Errors propagated: Yes Systematic Error : 0.00 %
Efficiency type : Empirical Efficiencies at : Peak Energy
Abundance limit : 75.00 WTM error limit : 3.00

Full Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CO-57	+	122.06	*	3.866E+01	9.784E+00	9.325E+00	5.842E-01	4.146
		136.48		7.942E+01	4.788E+01	8.397E+01	5.689E+00	0.946
CO-60	+	1173.22		9.565E+02	7.877E+01	1.692E+01	9.828E-01	56.517
	+	1332.49	*	9.946E+02	8.780E+01	1.066E+01	7.111E-01	93.337
CD-109	+	88.03	*	5.454E+03	5.912E+02	2.910E+02	2.113E+01	18.742
SN-126		64.28		-5.407E+00	1.056E+02	1.595E+02	2.235E+01	-0.034
	+	86.94		2.277E+03	9.535E+02	1.223E+02	5.026E+01	18.611
	+	87.57	*	5.477E+02	5.937E+01	2.931E+01	2.120E+00	18.688
BA-137M	+	661.65	*	8.265E+02	7.004E+01	1.711E+01	1.135E+00	48.307
CS-137	+	661.65	*	8.737E+02	7.418E+01	1.809E+01	1.203E+00	48.307
TH-232	+	59.00	*	4.649E+05	4.894E+06	1.430E+04	1.505E+05	32.518
NP-237	+	86.50	*	1.608E+03	3.749E+02	8.667E+01	1.893E+01	18.555
		95.87		-1.252E+02	2.098E+02	3.251E+02	7.824E+01	-0.385
PU-237	+	59.54	*	2.728E+04	2.181E+03	8.237E+02	5.256E+01	33.122
AM-241	+	59.54	*	2.460E+03	2.132E+02	7.428E+01	5.351E+00	33.122

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7		477.59	*	2.303E+01	9.531E+01	1.555E+02	1.049E+01	0.148
NA-22		1274.54	*	1.663E+00	7.481E+00	1.288E+01	8.205E-01	0.129
NA-24		1368.53	*	2.332E+00	1.345E+01	2.322E+01	1.549E+00	0.100
AL-26		1129.67		-5.077E+01	5.481E+02	9.064E+02	5.617E+01	-0.056
		1808.65	*	-2.493E+00	6.136E+00	8.922E+00	5.107E-01	-0.279
K-40		1460.81	*	2.259E+01	7.557E+01	1.389E+02	9.551E+00	0.163
TI-44		67.85		9.727E-01	9.143E+00	1.514E+01	9.631E-01	0.064
		78.38	*	-7.053E+00	7.749E+00	1.214E+01	8.138E-01	-0.581
SC-46		889.25	*	-8.182E-01	1.296E+01	2.092E+01	1.588E+00	-0.039
		1120.51		-9.965E+00	1.419E+01	2.208E+01	1.386E+00	-0.451
V-48		944.10		-4.076E+01	2.106E+02	3.351E+02	2.489E+01	-0.122
		983.50	*	-2.822E+00	1.584E+01	2.511E+01	1.815E+00	-0.112
		1312.09		-5.544E+00	8.307E+00	1.180E+01	7.741E-01	-0.470
CR-51		320.08	*	2.052E+00	6.946E+01	1.145E+02	7.636E+00	0.018

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
MN-52		744.21		-1.072E+00	1.262E+01	2.060E+01	1.449E+00	-0.052
		848.13		6.014E+02	4.363E+02	7.857E+02	5.856E+01	0.765
		935.52		5.899E+00	1.892E+01	3.131E+01	2.338E+00	0.188
		1246.25		1.405E+02	2.114E+02	3.886E+02	2.410E+01	0.362
	+	1333.61		2.179E+04	1.924E+03	2.808E+03	1.874E+02	7.761
		1434.06	*	-7.346E+00	6.362E+00	5.966E+00	3.933E-01	-1.231
MN-54		834.83	*	5.796E+00	1.158E+01	1.974E+01	1.462E+00	0.294
CO-56		846.75	*	9.474E+00	1.328E+01	2.286E+01	1.702E+00	0.414
		977.42		-1.657E+02	1.047E+03	1.664E+03	1.208E+02	-0.100
		1037.82		6.334E+01	9.917E+01	1.749E+02	1.305E+01	0.362
		1175.09		3.940E+04	3.227E+03	5.174E+03	3.010E+02	7.615
		1238.25		5.550E-01	1.065E+01	1.808E+01	1.176E+00	0.031
		1360.21		3.235E+01	1.255E+02	2.212E+02	1.473E+01	0.146
		1771.40		-1.526E+01	4.252E+01	6.377E+01	3.729E+00	-0.239
CO-58		810.76	*	7.446E+00	1.144E+01	1.978E+01	1.451E+00	0.377
FE-59		142.65		-1.006E+02	4.707E+02	7.401E+02	4.229E+01	-0.136
		192.34		-7.452E+01	1.805E+02	2.976E+02	3.461E+01	-0.250
		1099.22	*	2.660E+00	2.556E+01	4.310E+01	3.170E+00	0.062
		1291.56		-1.854E+00	2.046E+01	3.326E+01	2.641E+00	-0.056
ZN-65		1115.52	*	8.379E+00	2.865E+01	4.901E+01	3.102E+00	0.171
GE-68		1077.35	*	-2.709E+02	4.351E+02	6.887E+02	4.556E+01	-0.393
AS-73		53.44	*	-7.556E+01	2.360E+02	3.876E+02	2.448E+01	-0.195
AS-74		595.88	*	-3.421E+00	1.512E+01	2.476E+01	1.581E+00	-0.138
		634.78		-5.682E+01	6.547E+01	1.007E+02	6.585E+00	-0.564
SE-75		66.05		-4.228E+02	8.658E+02	1.391E+03	1.203E+02	-0.304
		96.73		-8.855E+01	1.533E+02	2.392E+02	3.005E+01	-0.370
	+	121.11		1.985E+02	5.222E+01	7.844E+01	7.476E+00	2.530
		136.00		8.936E+00	8.845E+00	1.498E+01	8.929E-01	0.596
		198.60		-1.960E+02	4.136E+02	6.828E+02	4.693E+01	-0.287
		264.65	*	-9.294E+00	1.078E+01	1.688E+01	1.044E+00	-0.551
		279.53		3.900E+00	2.589E+01	4.334E+01	2.901E+00	0.090
		303.91		-2.668E+02	5.164E+02	8.200E+02	7.997E+01	-0.325
		400.65		-4.978E+01	7.611E+01	1.174E+02	1.032E+01	-0.424
BR-77	+	87.88		1.855E+04	2.011E+03	2.609E+03	1.893E+02	7.111
		200.40		-4.376E+02	6.440E+02	1.046E+03	5.756E+01	-0.419
		239.00		-6.808E+00	3.913E+01	6.574E+01	3.871E+00	-0.104
		249.79		-1.100E+02	2.783E+02	4.529E+02	2.714E+01	-0.243
		281.68		1.345E+02	3.616E+02	6.136E+02	3.834E+01	0.219
		297.23		3.349E+00	2.102E+02	3.476E+02	2.147E+01	0.010
		303.76		-4.420E+02	7.318E+02	1.155E+03	7.092E+01	-0.383
		439.47		-4.026E+02	7.670E+02	1.188E+03	6.606E+01	-0.339
		484.57		9.418E+02	1.189E+03	2.019E+03	1.178E+02	0.466
		520.65	*	-1.912E+01	4.938E+01	8.077E+01	4.870E+00	-0.237
		574.64		3.151E+02	9.230E+02	1.589E+03	9.996E+01	0.198
		578.91		-2.929E+02	4.078E+02	6.433E+02	4.060E+01	-0.455
		585.48		5.304E+02	7.914E+02	1.388E+03	8.798E+01	0.382
		755.35		2.519E+02	7.855E+02	1.329E+03	9.410E+01	0.190
		817.79		-5.316E+02	7.241E+02	1.095E+03	8.039E+01	-0.485
SR-82		698.33		-3.658E+03	6.239E+03	9.699E+03	6.612E+02	-0.377

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	776.49	*	1.688E+01	8.524E+01	1.422E+02	1.020E+01	0.119
	1395.20		-3.530E+02	1.103E+03	1.632E+03	1.082E+02	-0.216
RB-83	520.41	*	-1.179E+01	1.852E+01	2.964E+01	1.787E+00	-0.398
	529.64		3.509E+01	2.862E+01	5.236E+01	3.181E+00	0.670
	552.65		2.175E+00	5.141E+01	8.662E+01	5.361E+00	0.025
RB-84	881.50	*	1.273E+01	2.063E+01	3.517E+01	2.662E+00	0.362
KR-85	513.99	*	-2.609E+03	2.264E+03	3.513E+03	2.106E+02	-0.743
SR-85	513.99	*	-1.151E+01	9.986E+00	1.550E+01	9.290E-01	-0.743
RB-86	1076.63	*	-1.846E+02	1.719E+02	2.604E+02	1.724E+01	-0.709
Y-88	898.02		1.138E+00	1.501E+01	2.451E+01	1.880E+00	0.046
	1836.01	*	3.087E+00	5.769E+00	1.114E+01	6.284E-01	0.277
ZR-88	392.90	*	4.903E+00	9.328E+00	1.566E+01	8.218E-01	0.313
Y-91	1204.90	*	-1.487E+03	3.185E+03	4.916E+03	2.939E+02	-0.302
NB-94	702.63	*	-4.021E+00	1.015E+01	1.617E+01	1.105E+00	-0.249
	871.10		-1.538E+01	1.390E+01	2.038E+01	1.536E+00	-0.754
NB-95	765.79	*	4.450E+00	1.077E+01	1.834E+01	1.307E+00	0.243
NB-95M	235.69	*	-2.509E+01	2.651E+01	4.181E+01	3.166E+00	-0.600
ZR-95	724.18		8.224E+00	2.332E+01	3.963E+01	3.110E+00	0.207
	756.15	*	9.772E+00	1.857E+01	3.197E+01	2.598E+00	0.306
NB-97	657.90	*	2.298E+01	2.854E+01	4.467E+01	2.957E+00	0.514
	1024.50		9.486E+02	3.116E+03	5.142E+03	3.590E+02	0.184
ZR-97	254.15		-4.444E+02	1.171E+03	1.903E+03	1.148E+02	-0.233
	355.39		9.248E+01	7.860E+02	1.299E+03	7.407E+01	0.071
	507.63	*	-8.709E+02	4.900E+02	6.735E+02	4.014E+01	-1.293
	602.52		3.225E+02	1.466E+03	2.493E+03	1.598E+02	0.129
	1021.30		-2.043E+02	2.657E+03	4.235E+03	2.966E+02	-0.048
	1147.95		9.417E+01	1.062E+03	1.785E+03	1.078E+02	0.053
	1362.66		2.845E+02	9.304E+02	1.658E+03	1.103E+02	0.172
	1750.46		3.641E+02	9.874E+02	1.826E+03	1.080E+02	0.199
MO-99	140.51		-1.580E+02	1.630E+02	2.328E+02	6.271E+01	-0.679
	181.06		-7.559E+00	1.023E+02	1.727E+02	2.932E+01	-0.044
	366.43		-1.880E+02	7.175E+02	1.148E+03	6.404E+01	-0.164
	739.58	*	-1.015E+02	1.033E+02	1.527E+02	2.189E+01	-0.665
	778.00		-5.579E+01	3.119E+02	5.033E+02	3.613E+01	-0.111
TC-99M	140.51	*	-5.710E+01	5.699E+01	8.413E+01	5.045E+00	-0.679
RH-101	127.23		3.126E+00	7.599E+00	1.251E+01	7.633E-01	0.250
	198.01	*	3.995E+00	8.008E+00	1.394E+01	7.639E-01	0.287
	325.23		2.474E+01	6.379E+01	1.074E+02	6.436E+00	0.230
RH-102	418.52		-1.856E+01	9.444E+01	1.506E+02	8.163E+00	-0.123
	475.06	*	-5.230E+00	1.095E+01	1.696E+01	9.797E-01	-0.308
	631.29		1.438E+01	1.639E+01	2.923E+01	1.907E+00	0.492
	697.49		-6.364E+00	2.053E+01	3.288E+01	2.240E+00	-0.194
	766.84		2.179E+00	3.175E+01	5.243E+01	3.739E+00	0.042
	1046.59		3.040E+01	4.254E+01	7.527E+01	5.145E+00	0.404
	1112.84		6.646E+01	7.742E+01	1.382E+02	8.757E+00	0.481
RU-103	497.08	*	4.476E+00	9.840E+00	1.633E+01	2.072E+00	0.274
	610.33		5.460E+01	1.679E+02	2.860E+02	4.482E+01	0.191
RH-106	511.85		-7.588E+01	5.408E+01	9.059E+01	5.420E+00	-0.838
	621.84	*	1.082E+01	8.711E+01	1.467E+02	1.774E+01	0.074

---- Non-Identified Nuclides ----

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	1050.47		-1.145E+02	8.276E+02	1.372E+03	9.344E+01	-0.083
RU-106	511.85		-7.588E+01	5.408E+01	9.059E+01	5.420E+00	-0.838
	621.84	*	1.082E+01	8.710E+01	1.467E+02	9.521E+00	0.074
	1050.47		-1.145E+02	8.276E+02	1.372E+03	9.344E+01	-0.083
AG-108M	433.93	*	-9.322E+00	1.143E+01	1.731E+01	1.046E+00	-0.538
	614.37		-3.300E+00	1.095E+01	1.777E+01	1.227E+00	-0.186
	722.95		1.311E+01	1.145E+01	2.083E+01	1.531E+00	0.630
AG-110M	657.75	*	6.384E+00	1.257E+01	1.913E+01	1.330E+00	0.334
	677.61		-6.353E+01	9.006E+01	1.393E+02	9.781E+00	-0.456
	706.67		1.837E+01	6.323E+01	1.069E+02	7.649E+00	0.172
	763.93		3.469E+01	4.643E+01	8.134E+01	6.029E+00	0.426
	884.67		9.032E+00	1.826E+01	3.088E+01	2.438E+00	0.292
	937.48		4.736E+00	4.761E+01	7.754E+01	6.062E+00	0.061
	1384.27		-2.108E+00	2.004E+01	3.175E+01	2.207E+00	-0.066
IN-111	171.28		1.777E+00	7.858E+00	1.261E+01	6.592E-01	0.141
	245.39	*	-4.501E+00	8.999E+00	1.456E+01	8.662E-01	-0.309
IN-113M	391.69	*	1.007E+01	1.362E+01	2.318E+01	1.313E+00	0.434
SN-113	391.69	*	1.007E+01	1.362E+01	2.318E+01	1.313E+00	0.434
IN-114M	190.27	*	1.265E+01	3.526E+01	6.081E+01	3.287E+00	0.208
CD-115	260.90		1.607E+01	4.060E+02	6.772E+02	4.128E+01	0.024
	492.35		-5.522E+01	1.315E+02	2.023E+02	1.189E+01	-0.273
	527.90	*	1.425E+00	3.824E+01	6.458E+01	3.918E+00	0.022
SN-117M	156.02		-7.772E+01	2.513E+02	3.903E+02	2.110E+01	-0.199
	158.56	*	2.186E+00	6.327E+00	1.028E+01	5.500E-01	0.213
SB-122	563.90	*	8.648E+00	1.616E+01	2.817E+01	1.758E+00	0.307
	692.80		1.771E+01	3.095E+02	5.146E+02	3.494E+01	0.034
I-123	159.00	*	6.732E+00	1.841E+01	2.996E+01	1.600E+00	0.225
	528.96		1.813E+03	1.793E+03	3.240E+03	1.968E+02	0.560
TE-123M	159.00	*	2.282E+00	6.243E+00	1.016E+01	5.509E-01	0.225
I-124	602.71	*	6.153E+00	1.731E+01	2.974E+01	1.907E+00	0.207
	722.78		1.352E+02	1.123E+02	2.051E+02	1.422E+01	0.659
	1325.50		-1.716E+02	9.083E+02	1.227E+03	8.138E+01	-0.140
	1376.25		-2.059E+02	2.824E+02	2.999E+02	1.993E+01	-0.687
	1509.49		-7.673E+00	2.350E+02	3.794E+02	2.462E+01	-0.020
	1691.02		-2.769E+00	8.174E+01	1.307E+02	7.958E+00	-0.021
SB-124	602.71		3.253E+00	9.149E+00	1.572E+01	1.009E+00	0.207
	645.85		-1.189E+02	1.275E+02	1.930E+02	1.398E+01	-0.616
	709.31		6.258E+01	7.647E+02	1.272E+03	8.740E+01	0.049
	713.82		2.892E+02	4.184E+02	7.311E+02	7.945E+01	0.396
	722.78		1.036E+02	8.609E+01	1.571E+02	1.126E+01	0.659
	968.20		6.458E+01	7.202E+02	1.171E+03	8.560E+01	0.055
	1045.16		-1.897E+01	7.901E+02	1.323E+03	9.058E+01	-0.014
	1325.50		-1.404E+02	7.434E+02	1.004E+03	6.661E+01	-0.140
	1368.21		5.662E+01	2.166E+02	3.818E+02	4.701E+01	0.148
	1436.60		2.264E+02	4.853E+02	8.988E+02	5.923E+01	0.252
	1691.02	*	-5.005E-01	1.477E+01	2.362E+01	1.550E+00	-0.021
SB-125	427.89	*	-2.620E+01	3.132E+01	4.740E+01	2.722E+00	-0.553
	463.38		5.407E+01	9.950E+01	1.656E+02	1.107E+01	0.326
	600.56		-4.953E+00	5.019E+01	8.310E+01	6.014E+00	-0.060

---- Non-Identified Nuclides ----

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	635.90		-4.147E+01	8.197E+01	1.302E+02	9.679E+00	-0.319
TE-125M	109.28	*	-4.619E+02	1.650E+03	2.613E+03	2.238E+02	-0.177
I-126	388.63		-3.861E+01	3.180E+01	4.717E+01	2.492E+00	-0.818
	666.33	*	-1.493E+01	2.738E+01	3.641E+01	2.423E+00	-0.410
	753.82		-2.509E+01	2.120E+02	3.446E+02	2.438E+01	-0.073
SB-126	223.80		-2.071E+02	4.890E+02	7.996E+02	4.589E+01	-0.259
	278.60		-4.412E+01	2.820E+02	4.626E+02	2.892E+01	-0.095
	296.50		2.464E+01	1.627E+02	2.697E+02	1.667E+01	0.091
	414.70		-2.445E+00	1.127E+01	1.796E+01	9.693E-01	-0.136
	415.30		-5.150E+02	9.430E+02	1.465E+03	7.913E+01	-0.352
	555.20		5.028E+02	5.183E+02	9.355E+02	5.802E+01	0.537
	573.80		3.549E+01	1.340E+02	2.293E+02	1.442E+01	0.155
	593.00		4.590E+00	1.202E+02	2.016E+02	1.285E+01	0.023
	656.30		-1.467E+01	5.555E+02	7.979E+02	5.278E+01	-0.018
	666.33		-6.040E+00	1.107E+01	1.472E+01	9.800E-01	-0.410
	675.00		6.805E+01	2.638E+02	4.471E+02	2.996E+01	0.152
	695.00		2.390E+00	9.455E+00	1.601E+01	1.089E+00	0.149
	697.00		-2.241E+01	3.237E+01	4.966E+01	3.382E+00	-0.451
	720.50	*	-4.550E+00	1.849E+01	2.975E+01	2.059E+00	-0.153
	856.80		-2.604E+01	7.536E+01	1.189E+02	8.896E+00	-0.219
	989.30		1.405E+02	2.349E+02	3.967E+02	2.854E+01	0.354
	1034.80		5.307E+02	1.407E+03	2.436E+03	1.685E+02	0.218
	1213.00		-1.764E+02	3.841E+02	5.894E+02	3.549E+01	-0.299
SB-127	61.10		2.486E+04	2.328E+03	3.615E+03	2.300E+02	6.876
	252.40		3.977E+01	8.852E+01	1.491E+02	6.109E+01	0.267
	290.80		3.195E+02	4.516E+02	7.788E+02	4.846E+01	0.410
	411.60		2.343E+02	3.014E+02	5.121E+02	6.309E+01	0.457
	444.90		5.080E+01	2.557E+02	4.178E+02	3.341E+01	0.122
	473.00		1.307E+01	4.739E+01	7.749E+01	6.681E+00	0.169
	543.00		7.139E+00	3.847E+02	6.476E+02	7.110E+01	0.011
	603.60		1.061E+02	2.454E+02	4.240E+02	3.628E+01	0.250
	685.20	*	1.031E+01	3.285E+01	5.579E+01	3.975E+00	0.185
	698.50		-1.693E+02	3.163E+02	4.938E+02	6.482E+01	-0.343
	722.20		6.206E+02	6.333E+02	1.136E+03	7.888E+01	0.546
	783.80		-2.837E+01	8.948E+01	1.424E+02	1.287E+01	-0.199
XE-127	57.60		1.307E+04	2.280E+03	3.698E+03	2.348E+02	3.535
	145.22		-4.054E+01	1.207E+02	1.881E+02	1.063E+01	-0.216
	172.10		5.839E+00	2.378E+01	3.819E+01	1.999E+00	0.153
	202.84	*	1.132E+01	9.142E+00	1.636E+01	9.045E-01	0.692
	374.96		1.909E+01	4.649E+01	7.790E+01	4.261E+00	0.245
I-131	80.18		1.124E+02	3.093E+02	5.148E+02	3.499E+01	0.218
	284.30		1.454E+01	1.133E+02	1.892E+02	1.282E+01	0.077
	364.48	*	4.806E+00	1.031E+01	1.737E+01	1.081E+00	0.277
	636.97		6.779E+00	1.372E+02	2.291E+02	1.627E+01	0.030
	722.89		6.566E+02	5.632E+02	1.026E+03	7.113E+01	0.640
TE-132	49.72		1.731E+02	2.555E+02	4.332E+02	2.743E+01	0.400
	111.76		-2.200E+02	3.076E+02	4.715E+02	3.017E+01	-0.467
	116.30		-3.581E+01	3.148E+02	5.036E+02	3.187E+01	-0.071
	228.16	*	-2.463E+00	8.384E+00	1.380E+01	1.760E+00	-0.179

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BA-133	53.15		-6.431E+02	1.144E+03	1.865E+03	1.178E+02	-0.345
	79.62		5.197E+01	2.925E+02	4.828E+02	6.884E+01	0.108
	81.00		3.944E+00	2.304E+01	3.799E+01	5.693E+00	0.104
	276.40		7.249E+00	9.020E+01	1.504E+02	1.980E+01	0.048
	302.84		-2.763E+01	3.734E+01	5.810E+01	6.876E+00	-0.476
	356.01	*	-1.658E+00	1.286E+01	2.088E+01	2.404E+00	-0.079
	383.85		6.957E+01	9.821E+01	1.669E+02	1.775E+01	0.417
I-133	510.53		-5.059E+02	1.207E+03	2.154E+03	1.295E+02	-0.235
	529.87	*	2.188E+01	1.976E+01	3.587E+01	2.218E+00	0.610
	706.58		4.160E+02	1.395E+03	2.361E+03	1.626E+02	0.176
	856.28		-5.963E+02	2.023E+03	3.206E+03	2.408E+02	-0.186
	875.33		4.736E+02	5.859E+02	1.014E+03	8.700E+01	0.467
	1236.41		-2.323E+01	9.852E+02	1.625E+03	1.005E+02	-0.014
	1298.22		-1.816E+02	6.046E+02	9.332E+02	7.283E+01	-0.195
CS-134	475.35		-9.123E+01	6.918E+02	1.099E+03	6.348E+01	-0.083
	563.23		3.069E+01	1.043E+02	1.789E+02	1.136E+01	0.172
	569.32		-6.204E+01	5.842E+01	8.855E+01	5.692E+00	-0.701
	604.70		5.772E+00	9.016E+00	1.584E+01	1.022E+00	0.364
	795.84	*	1.065E+01	1.464E+01	2.548E+01	1.867E+00	0.418
	801.93		-4.289E+01	1.321E+02	2.095E+02	1.536E+01	-0.205
	1038.57		9.223E+02	1.396E+03	2.466E+03	1.699E+02	0.374
	1167.94		-2.338E+02	7.719E+02	1.050E+03	6.149E+01	-0.223
	1365.15		2.322E-01	1.783E+02	2.932E+02	2.098E+01	0.001
CS-135	268.24	*	6.102E+01	4.226E+01	7.572E+01	6.008E+00	0.806
I-135	288.45		-2.224E+02	1.870E+03	3.069E+03	3.061E+02	-0.072
	417.63		-3.766E+02	2.176E+03	3.476E+03	3.035E+02	-0.108
	546.56		1.950E+02	9.690E+02	1.655E+03	1.515E+02	0.118
	836.80		-6.810E+02	1.527E+03	2.385E+03	2.469E+02	-0.286
	1038.76		1.070E+03	1.513E+03	2.676E+03	2.749E+02	0.400
	1124.00		-2.603E+02	3.254E+03	5.390E+03	4.936E+02	-0.048
	1131.51		-9.296E+01	4.961E+02	8.122E+02	7.671E+01	-0.114
	1260.41	*	1.040E+02	2.225E+02	3.993E+02	2.757E+01	0.260
	1457.56		-4.978E+02	8.128E+02	1.147E+03	1.102E+02	-0.434
	1678.03		-2.357E+01	4.781E+02	7.582E+02	7.910E+01	-0.031
	1706.46		-1.168E+02	1.247E+03	1.948E+03	2.084E+02	-0.060
	1791.20		-5.609E+02	8.079E+02	1.093E+03	9.530E+01	-0.513
CS-136	66.91		3.651E+00	7.152E+01	1.182E+02	1.689E+01	0.031
	86.29		1.201E+03	2.312E+02	3.364E+02	4.006E+01	3.572
	153.22		-1.568E+01	6.782E+01	1.060E+02	7.368E+00	-0.148
	163.89		1.541E+01	1.154E+02	1.846E+02	1.254E+01	0.083
	176.55		2.670E+01	4.052E+01	7.120E+01	4.303E+00	0.375
	273.65		-4.552E+01	5.213E+01	8.113E+01	5.652E+00	-0.561
	340.57		-6.581E+00	1.589E+01	2.525E+01	1.568E+00	-0.261
	818.51		-4.376E+00	1.224E+01	1.925E+01	1.413E+00	-0.227
	1048.07	*	1.265E+01	1.855E+01	3.278E+01	2.384E+00	0.386
	1235.34		-3.394E+00	4.036E+01	6.581E+01	6.701E+00	-0.052
CE-139	165.85	*	-2.517E+00	6.538E+00	1.006E+01	5.219E-01	-0.250
BA-140	162.64		-2.787E+01	8.332E+01	1.290E+02	7.796E+00	-0.216
	304.84		-6.945E+01	1.630E+02	2.592E+02	7.094E+01	-0.268

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		423.70		2.807E+02	3.118E+02	5.141E+02	1.631E+02	0.546
		537.32	*	-7.408E+00	3.597E+01	5.939E+01	1.935E+01	-0.125
LA-140		328.77		-8.430E+00	3.793E+01	6.133E+01	4.073E+00	-0.137
		432.53		7.199E+01	3.173E+02	5.205E+02	3.201E+01	0.138
		487.03		-7.740E+00	2.188E+01	3.402E+01	2.248E+00	-0.227
		751.79		-3.393E+01	2.447E+02	3.970E+02	3.241E+01	-0.085
		815.85		-5.089E+01	5.168E+01	7.622E+01	6.462E+00	-0.668
		867.82		1.680E+02	2.522E+02	4.318E+02	3.472E+01	0.389
		919.63		1.912E+02	5.391E+02	8.972E+02	8.784E+01	0.213
		925.24		-2.101E+02	2.214E+02	3.286E+02	2.671E+01	-0.639
		1596.49	*	2.680E+00	6.521E+00	1.185E+01	7.496E-01	0.226
CE-141		145.44	*	1.034E+00	1.045E+01	1.679E+01	9.883E-01	0.062
CE-143		57.37		1.126E+03	3.364E+02	5.409E+02	3.444E+01	2.081
		231.56		1.383E+02	4.582E+02	7.780E+02	2.378E+02	0.178
		293.26	*	1.101E+01	2.630E+01	4.445E+01	8.906E+00	0.248
		350.59		3.929E+02	3.743E+02	6.284E+02	1.884E+02	0.625
		490.36		-2.179E+02	6.917E+02	1.072E+03	3.277E+02	-0.203
		664.57		5.710E+03	1.897E+03	1.316E+03	4.145E+02	4.337
		721.93		1.876E+02	2.894E+02	4.982E+02	1.411E+02	0.377
CE-144		80.11		1.593E+02	4.714E+02	7.838E+02	5.323E+01	0.203
		133.54	*	-3.911E+01	4.893E+01	7.372E+01	1.051E+01	-0.530
PM-144		476.78		7.879E+00	2.378E+01	3.904E+01	2.705E+00	0.202
		618.01		-4.365E+00	8.890E+00	1.415E+01	9.600E-01	-0.308
		696.49	*	-4.285E+00	9.020E+00	1.419E+01	9.659E-01	-0.302
		778.57		1.932E+02	7.516E+02	1.260E+03	9.046E+01	0.153
PR-144		696.49	*	-2.882E+02	6.067E+02	9.542E+02	6.496E+01	-0.302
		1489.15		-1.462E+03	1.893E+03	2.245E+03	1.464E+02	-0.651
PM-146		453.90	*	3.039E+00	1.542E+01	2.514E+01	2.143E+00	0.121
		633.02		1.968E+02	4.181E+02	7.132E+02	2.635E+02	0.276
		735.90		3.267E+01	4.862E+01	8.325E+01	2.344E+01	0.392
		747.13		-9.763E+00	2.877E+01	4.577E+01	6.010E+00	-0.213
ND-147		91.11		3.860E+00	2.326E+01	3.427E+01	2.716E+00	0.113
		319.41		-1.667E+02	3.636E+02	5.776E+02	3.487E+01	-0.289
		439.89		-4.474E+02	8.082E+02	1.248E+03	6.942E+01	-0.358
		531.02	*	3.092E+01	6.787E+01	1.180E+02	1.610E+01	0.262
PM-149		285.90	*	-1.017E+02	2.757E+02	4.443E+02	6.367E+01	-0.229
EU-152	+	121.78		1.162E+02	2.995E+01	4.613E+01	3.674E+00	2.518
		244.69		4.011E+01	9.245E+01	1.579E+02	9.386E+00	0.254
		344.27	*	1.414E+01	2.591E+01	4.414E+01	2.894E+00	0.320
		443.98		2.575E+02	3.311E+02	5.624E+02	3.142E+01	0.458
		778.89		2.782E+01	8.942E+01	1.505E+02	1.081E+01	0.185
		867.32		2.584E+02	3.248E+02	5.613E+02	4.222E+01	0.460
		964.01		-9.503E+01	1.000E+02	1.470E+02	1.078E+01	-0.646
		1085.78		-1.600E+01	1.389E+02	2.301E+02	1.508E+01	-0.070
		1112.02		4.231E+01	1.105E+02	1.904E+02	1.208E+01	0.222
		1407.95		1.189E+00	2.502E+01	4.162E+01	2.755E+00	0.029
GD-153		69.67		-2.499E+01	3.269E+02	5.360E+02	3.427E+01	-0.047
		83.37		-6.949E+02	3.956E+03	5.740E+03	4.001E+02	-0.121
		97.43	*	5.349E+00	1.575E+01	2.614E+01	1.772E+00	0.205

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		103.18		-4.295E+00	2.054E+01	3.278E+01	2.158E+00	-0.131
EU-154	+	123.07		8.146E+01	2.148E+01	3.104E+01	3.002E+00	2.625
		247.94		-1.834E+01	9.837E+01	1.623E+02	1.566E+01	-0.113
		591.81		-7.682E+01	1.850E+02	2.981E+02	3.017E+01	-0.258
		723.30		3.646E+01	4.951E+01	8.696E+01	6.989E+00	0.419
		756.87		2.562E+01	2.363E+02	3.922E+02	4.285E+01	0.065
		873.19		9.902E-02	1.170E+02	1.903E+02	2.190E+01	0.001
		996.32		-4.568E+01	1.425E+02	2.222E+02	3.801E+01	-0.206
		1004.76		-3.002E+01	7.429E+01	1.144E+02	1.209E+01	-0.262
		1274.45	*	2.638E+00	2.144E+01	3.625E+01	3.515E+00	0.073
EU-155		48.70		2.301E+02	6.276E+02	1.057E+03	6.683E+01	0.218
	+	60.01		7.960E+04	6.362E+03	6.447E+03	4.107E+02	12.346
	+	86.54		6.560E+02	7.157E+01	7.601E+01	5.527E+00	8.630
		105.31	*	1.083E+01	2.254E+01	3.765E+01	2.510E+00	0.288
TB-160	+	86.79		1.536E+03	1.665E+02	1.999E+02	1.436E+01	7.684
		197.04		4.260E+01	1.203E+02	2.078E+02	1.137E+01	0.205
		215.65		-2.630E+01	1.618E+02	2.694E+02	1.524E+01	-0.098
		298.57		-2.161E+01	2.517E+01	3.901E+01	2.407E+00	-0.554
		879.36	*	-3.073E+01	5.047E+01	7.782E+01	5.884E+00	-0.395
		962.29		-4.248E+00	1.643E+02	2.649E+02	1.944E+01	-0.016
		966.15		-2.484E+01	5.768E+01	8.924E+01	6.532E+00	-0.278
		1177.93		1.497E+02	9.541E+01	1.681E+02	9.805E+00	0.890
		1271.85		3.477E+00	9.892E+01	1.647E+02	1.044E+01	0.021
HO-166M		80.57		3.735E+01	6.256E+01	1.052E+02	7.167E+00	0.355
		184.41		-3.883E+00	7.856E+00	1.321E+01	7.064E-01	-0.294
		280.46		1.440E+00	2.195E+01	3.653E+01	2.284E+00	0.039
		410.95		5.543E+01	8.067E+01	1.366E+02	7.339E+00	0.406
		711.68	*	2.719E+00	1.961E+01	3.278E+01	2.256E+00	0.083
		752.31		-1.237E+01	8.498E+01	1.378E+02	9.738E+00	-0.090
		810.29		-1.542E+00	2.064E+01	3.352E+01	2.450E+00	-0.046
TM-171		51.35		1.519E+03	8.912E+03	1.490E+04	9.409E+02	0.102
		52.39		-7.680E+02	4.781E+03	7.892E+03	4.984E+02	-0.097
	+	59.40		4.150E+05	3.317E+04	3.525E+04	2.249E+03	11.774
		66.72	*	-1.184E+03	5.474E+03	8.925E+03	5.662E+02	-0.133
HF-175	+	89.36		8.515E+03	9.230E+02	9.656E+02	6.930E+01	8.818
		343.40	*	6.229E-01	8.450E+00	1.391E+01	8.110E-01	0.045
		433.00		1.706E+02	6.198E+02	1.020E+03	5.630E+01	0.167
LU-176	+	88.36		1.299E+03	1.408E+02	1.803E+02	1.306E+01	7.203
		201.83		3.043E+00	7.542E+00	1.298E+01	7.161E-01	0.235
		306.84	*	5.341E+00	7.128E+00	1.231E+01	7.534E-01	0.434
		401.10		-8.614E+02	2.110E+03	3.318E+03	1.760E+02	-0.260
LU-177		112.95		2.532E+01	8.015E+01	1.321E+02	8.411E+00	0.192
		208.36	*	-3.530E+01	5.990E+01	9.745E+01	5.442E+00	-0.362
LU-177M		52.97		-1.552E+02	4.797E+02	7.878E+02	4.975E+01	-0.197
		54.07		-8.763E+01	2.906E+02	4.270E+02	2.698E+01	-0.205
		61.30		4.183E+03	5.182E+02	8.905E+02	5.652E+01	4.698
	+	121.62		5.611E+02	1.420E+02	2.231E+02	1.396E+01	2.515
		147.16		1.043E+02	1.383E+02	2.317E+02	1.299E+01	0.450
		171.86		2.255E+01	1.179E+02	1.887E+02	9.875E+00	0.120

---- Non-Identified Nuclides ----

Nuclide		Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		218.09		-1.511E+02	2.054E+02	3.302E+02	1.876E+01	-0.458
		268.79		1.823E+02	1.987E+02	3.481E+02	2.147E+01	0.524
		319.02		-4.127E+01	6.495E+01	1.017E+02	6.140E+00	-0.406
		367.43		-1.128E+00	2.642E+02	4.308E+02	2.397E+01	-0.003
		413.65	*	-2.427E+01	5.545E+01	8.694E+01	4.685E+00	-0.279
HF-181		56.28		2.729E+02	2.911E+02	4.460E+02	2.825E+01	0.612
		57.53		8.582E+02	1.875E+02	3.040E+02	1.930E+01	2.823
		65.20		-5.800E+01	1.445E+02	2.335E+02	1.478E+01	-0.248
		133.02		-3.306E+00	1.217E+01	1.913E+01	1.138E+00	-0.173
		136.25		1.189E+02	8.732E+01	1.509E+02	8.851E+00	0.788
		345.85		-9.408E+00	4.246E+01	6.836E+01	3.968E+00	-0.138
		482.03	*	-8.115E+00	1.204E+01	1.828E+01	1.063E+00	-0.444
W-181		56.28		1.248E+02	1.327E+02	2.033E+02	1.287E+01	0.614
		57.53		3.875E+02	8.537E+01	1.384E+02	8.783E+00	2.801
		65.20	*	-2.624E+01	6.535E+01	1.056E+02	6.687E+00	-0.248
TA-182		67.75		1.818E+00	2.000E+01	3.310E+01	2.104E+00	0.055
		100.10		5.470E+00	3.368E+01	5.524E+01	3.691E+00	0.099
		152.43		3.255E+00	6.641E+01	1.060E+02	5.820E+00	0.031
		222.10		3.261E+01	8.480E+01	1.450E+02	8.297E+00	0.225
		1001.68		9.708E+01	6.396E+02	1.054E+03	7.510E+01	0.092
		1121.28		-1.261E+01	3.963E+01	6.406E+01	4.015E+00	-0.197
		1189.05		7.429E+01	6.611E+01	1.241E+02	7.313E+00	0.599
		1221.42	*	8.596E+00	3.633E+01	6.220E+01	3.774E+00	0.138
		1230.97		-2.341E+01	6.736E+01	1.043E+02	6.386E+00	-0.224
RE-183	+	57.98		2.604E+03	2.082E+02	1.779E+02	1.131E+01	14.638
	+	59.32		1.497E+03	1.197E+02	1.278E+02	8.151E+00	11.716
		67.20		-4.796E+00	3.422E+01	5.600E+01	3.556E+00	-0.086
		162.32	*	-8.560E+00	2.290E+01	3.534E+01	1.860E+00	-0.242
		208.81		1.074E+01	2.020E+02	3.410E+02	1.906E+01	0.032
		291.72		1.356E+02	2.279E+02	3.903E+02	2.422E+01	0.347
RE-184	+	57.98		1.043E+04	8.335E+02	7.124E+02	4.527E+01	14.638
	+	59.32		5.989E+03	4.787E+02	5.112E+02	3.261E+01	11.716
		67.20		-1.920E+01	1.369E+02	2.241E+02	1.423E+01	-0.086
		161.27		6.342E+00	7.901E+01	1.260E+02	6.664E+00	0.050
		216.55		1.320E+01	6.153E+01	1.047E+02	5.931E+00	0.126
		252.85	*	3.757E+01	5.737E+01	9.940E+01	5.984E+00	0.378
		318.01		2.027E+01	1.087E+02	1.814E+02	1.097E+01	0.112
		792.07		1.794E+02	3.089E+02	5.305E+02	3.839E+01	0.338
		903.28		6.131E+01	3.812E+02	6.260E+02	4.760E+01	0.098
		920.93		2.621E+01	1.789E+02	2.930E+02	2.207E+01	0.089
OS-185	+	59.72		4.233E+03	3.383E+02	3.520E+02	2.245E+01	12.023
		61.14		7.569E+02	7.342E+01	1.166E+02	7.401E+00	6.494
		69.30		-2.076E+01	5.503E+01	8.889E+01	5.677E+00	-0.234
		592.07		-3.428E+02	6.660E+02	1.063E+03	6.769E+01	-0.322
		646.12	*	-1.422E+01	1.156E+01	1.693E+01	1.114E+00	-0.840
		717.42		-2.658E+02	2.350E+02	3.418E+02	2.361E+01	-0.778
		874.81		1.228E+02	2.031E+02	3.466E+02	2.615E+01	0.354
		880.27		4.882E+01	2.836E+02	4.672E+02	3.534E+01	0.104
RE-188		155.03	*	1.312E+00	3.228E+01	5.147E+01	2.794E+00	0.025

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		477.96		1.309E+02	9.413E+02	1.525E+03	8.832E+01	0.086
		633.10		3.253E+02	7.233E+02	1.250E+03	8.162E+01	0.260
W-188		63.58		2.504E+03	9.458E+03	1.458E+04	9.227E+02	0.172
		227.08		1.437E+03	2.912E+03	5.012E+03	2.893E+02	0.287
		290.67	*	1.170E+03	1.776E+03	3.054E+03	1.897E+02	0.383
IR-192		295.96		-1.047E+01	2.431E+01	3.875E+01	2.430E+00	-0.270
		308.46		9.364E-01	2.545E+01	4.205E+01	2.596E+00	0.022
		316.51	*	-2.237E+00	7.823E+00	1.259E+01	7.663E-01	-0.178
		468.07		-1.100E+00	2.263E+01	3.620E+01	2.400E+00	-0.030
		604.41		8.848E+01	1.094E+02	1.939E+02	2.265E+01	0.456
		612.46		1.006E+02	1.713E+02	2.992E+02	2.419E+01	0.336
AU-195		65.12		-1.249E+01	3.111E+01	5.027E+01	3.183E+00	-0.248
		66.83		-3.078E+00	1.743E+01	2.848E+01	1.807E+00	-0.108
		75.70		1.681E+01	3.442E+01	5.794E+01	3.817E+00	0.290
		98.88	*	1.033E+01	4.497E+01	7.409E+01	4.982E+00	0.139
		129.76		-1.780E+02	6.400E+02	1.008E+03	6.079E+01	-0.177
TL-200		367.94	*	4.020E+00	1.516E+01	2.520E+01	1.400E+00	0.160
		579.30		-8.636E+01	1.167E+02	1.836E+02	1.159E+01	-0.470
		828.27		-3.352E+01	1.867E+02	2.997E+02	2.212E+01	-0.112
		1205.75		-1.278E+01	5.510E+01	8.837E+01	5.287E+00	-0.145
TL-201		68.90		-1.029E+01	3.802E+01	6.177E+01	3.940E+00	-0.167
		70.82		1.575E+01	2.149E+01	3.655E+01	2.348E+00	0.431
		80.30		1.815E+01	4.463E+01	7.442E+01	5.062E+00	0.244
		135.34		4.190E-01	2.428E+02	3.873E+02	2.281E+01	0.001
		167.43	*	-2.022E+01	6.622E+01	1.026E+02	5.328E+00	-0.197
TL-202		68.90		-1.069E+01	3.950E+01	6.418E+01	4.094E+00	-0.167
		70.82		1.632E+01	2.227E+01	3.787E+01	2.432E+00	0.431
		80.30		1.881E+01	4.626E+01	7.714E+01	5.246E+00	0.244
		439.56	*	-5.879E+00	1.069E+01	1.653E+01	9.190E-01	-0.356
HG-203		70.83		1.281E+02	1.760E+02	2.984E+02	3.680E+01	0.429
		72.87		2.286E+00	1.008E+02	1.658E+02	1.976E+01	0.014
		82.60		5.197E+01	2.421E+02	3.582E+02	4.568E+01	0.145
		279.20	*	9.408E-01	8.475E+00	1.415E+01	9.327E-01	0.066
BI-207		72.80		1.817E+00	3.661E+01	6.030E+01	3.908E+00	0.030
		74.97		8.815E+00	2.061E+01	3.452E+01	2.264E+00	0.255
		84.90		1.581E+01	5.161E+01	7.700E+01	5.439E+00	0.205
		569.67		-7.877E+00	9.377E+00	1.455E+01	9.120E-01	-0.541
		1063.62	*	-1.043E+01	1.894E+01	3.041E+01	2.042E+00	-0.343
		1770.23		2.228E+01	1.108E+02	1.936E+02	1.133E+01	0.115
TL-207		81.07		1.019E+01	5.105E+01	8.429E+01	5.768E+00	0.121
		83.78		4.365E+00	3.462E+01	5.113E+01	3.577E+00	0.085
		94.90		-1.944E+01	4.773E+01	7.562E+01	5.207E+00	-0.257
	+	122.32		2.772E+03	7.076E+02	1.094E+03	7.755E+01	2.534
		144.24		-1.612E+01	1.529E+02	2.424E+02	1.729E+01	-0.067
		154.21		2.821E+00	8.531E+01	1.360E+02	9.144E+00	0.021
		269.46		3.706E+01	5.017E+01	8.702E+01	5.587E+00	0.426
		323.87	*	1.937E+02	1.876E+02	3.249E+02	5.390E+01	0.596
		338.28		2.605E-01	2.785E+02	4.551E+02	4.813E+01	0.001
		445.03		9.274E+01	7.785E+02	1.265E+03	1.285E+02	0.073

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
TL-208		72.80		1.952E+01	3.934E+02	6.481E+02	4.200E+01	0.030
		74.97		9.465E+01	2.214E+02	3.707E+02	4.053E+01	0.255
		277.35		5.906E+00	9.306E+01	1.550E+02	1.675E+01	0.038
		510.84		-3.697E+01	5.191E+01	9.064E+01	9.296E+00	-0.408
		583.14	*	4.273E+00	1.192E+01	2.082E+01	1.489E+00	0.205
		763.13		3.254E+02	6.384E+02	1.095E+03	1.432E+02	0.297
		860.37		1.134E-02	1.065E+02	1.725E+02	1.418E+01	0.000
		1093.90		4.432E+02	3.781E+03	6.385E+03	1.441E+03	0.069
PO-209		260.50		-2.205E+02	2.574E+03	4.260E+03	2.595E+02	-0.052
		262.80		6.453E+02	7.112E+03	1.190E+04	7.272E+02	0.054
		896.60	*	8.930E+01	2.910E+03	4.734E+03	3.607E+02	0.019
BI-210		46.50	*	-1.046E+03	7.901E+02	1.266E+03	9.439E+01	-0.826
PB-210		46.50	*	-1.046E+03	7.901E+02	1.266E+03	9.439E+01	-0.826
PO-210		46.50	*	-1.046E+03	7.890E+02	1.266E+03	8.005E+01	-0.826
BI-211		72.87		1.422E+01	6.269E+02	1.031E+03	6.686E+01	0.014
		351.07	*	4.341E+01	6.183E+01	1.066E+02	6.808E+00	0.407
PB-211		404.84	*	4.393E+01	2.940E+02	4.797E+02	2.988E+02	0.092
		427.08		-2.054E+02	7.166E+02	1.115E+03	6.891E+02	-0.184
		831.96		-4.339E+01	4.129E+02	6.659E+02	4.162E+02	-0.065
BI-212		727.18	*	-3.287E+01	8.594E+01	1.365E+02	1.176E+01	-0.241
		785.46		-3.733E+02	5.896E+02	9.105E+02	6.565E+01	-0.410
		1620.62		1.215E+02	2.286E+02	4.250E+02	2.664E+01	0.286
PB-212		74.81		4.338E+00	7.220E+01	1.189E+02	1.357E+01	0.036
		77.11		-3.012E+01	4.168E+01	6.595E+01	4.384E+00	-0.457
	+	87.30		2.535E+03	3.739E+02	3.564E+02	4.396E+01	7.112
		115.19		5.587E+02	8.229E+02	1.383E+03	8.759E+01	0.404
		238.63	*	-4.036E-01	1.585E+01	2.683E+01	1.985E+00	-0.015
		300.09		1.190E+02	1.868E+02	3.218E+02	2.738E+01	0.370
PO-212		74.81		4.338E+00	7.220E+01	1.189E+02	1.357E+01	0.036
		77.11		-3.012E+01	4.168E+01	6.595E+01	4.384E+00	-0.457
	+	87.30		2.535E+03	3.739E+02	3.564E+02	4.396E+01	7.112
		115.19		5.587E+02	8.229E+02	1.383E+03	8.759E+01	0.404
		238.63	*	-4.036E-01	1.585E+01	2.683E+01	1.985E+00	-0.015
		300.09		1.190E+02	1.868E+02	3.218E+02	2.738E+01	0.370
BI-214		609.31	*	-5.048E+00	2.019E+01	3.285E+01	2.716E+00	-0.154
		1120.29		-7.805E+01	9.454E+01	1.452E+02	1.324E+01	-0.538
		1764.49		8.578E+00	4.887E+01	8.889E+01	5.218E+00	0.097
PB-214		74.81		7.468E+00	1.243E+02	2.046E+02	2.024E+01	0.036
		77.11		-5.159E+01	7.150E+01	1.130E+02	1.142E+01	-0.457
	+	87.30		4.339E+03	5.772E+02	6.101E+02	6.442E+01	7.112
		241.98		-6.006E+01	9.630E+01	1.553E+02	1.266E+01	-0.387
		295.21		7.425E-01	3.772E+01	6.205E+01	5.458E+00	0.012
		351.92	*	3.488E+00	2.173E+01	3.623E+01	2.986E+00	0.096
PO-214		74.81		7.468E+00	1.243E+02	2.046E+02	2.024E+01	0.036
		77.11		-5.159E+01	7.150E+01	1.130E+02	1.142E+01	-0.457
	+	87.30		4.339E+03	5.772E+02	6.101E+02	6.442E+01	7.112
		241.98		-6.006E+01	9.630E+01	1.553E+02	1.266E+01	-0.387
		295.21		7.425E-01	3.772E+01	6.205E+01	5.458E+00	0.012
		351.92	*	3.488E+00	2.173E+01	3.623E+01	2.986E+00	0.096

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
PO-215		81.07		1.019E+01	5.105E+01	8.429E+01	5.768E+00	0.121
		83.78		4.365E+00	3.462E+01	5.113E+01	3.577E+00	0.085
		94.90		-1.944E+01	4.773E+01	7.562E+01	5.207E+00	-0.257
	+	122.32		2.772E+03	7.076E+02	1.094E+03	7.755E+01	2.534
		144.24		-1.612E+01	1.529E+02	2.424E+02	1.729E+01	-0.067
		154.21		2.821E+00	8.531E+01	1.360E+02	9.144E+00	0.021
		269.46		3.706E+01	5.017E+01	8.702E+01	5.587E+00	0.426
		323.87	*	1.937E+02	1.876E+02	3.249E+02	5.390E+01	0.596
		338.28		2.605E-01	2.785E+02	4.551E+02	4.813E+01	0.001
		445.03		9.274E+01	7.785E+02	1.265E+03	1.285E+02	0.073
PO-216		74.81		4.338E+00	7.220E+01	1.189E+02	1.357E+01	0.036
		77.11		-3.012E+01	4.168E+01	6.595E+01	4.384E+00	-0.457
	+	87.30		2.535E+03	3.739E+02	3.564E+02	4.396E+01	7.112
		115.19		5.587E+02	8.229E+02	1.383E+03	8.759E+01	0.404
		238.63	*	-4.036E-01	1.585E+01	2.683E+01	1.985E+00	-0.015
		300.09		1.190E+02	1.868E+02	3.218E+02	2.738E+01	0.370
PO-218		74.81		7.468E+00	1.243E+02	2.046E+02	2.024E+01	0.036
		77.11		-5.159E+01	7.150E+01	1.130E+02	1.142E+01	-0.457
	+	87.30		4.339E+03	5.772E+02	6.101E+02	6.442E+01	7.112
		241.98		-6.006E+01	9.630E+01	1.553E+02	1.266E+01	-0.387
		295.21		7.425E-01	3.772E+01	6.205E+01	5.458E+00	0.012
		351.92	*	3.488E+00	2.173E+01	3.623E+01	2.986E+00	0.096
RN-219		271.23		1.203E+01	6.210E+01	1.045E+02	8.765E+00	0.115
		401.81	*	-3.111E+01	1.296E+02	2.064E+02	2.766E+01	-0.151
RN-220		549.76	*	-6.103E+03	7.434E+03	1.158E+04	7.153E+02	-0.527
RA-223		81.07		1.019E+01	5.105E+01	8.429E+01	5.768E+00	0.121
		83.78		4.365E+00	3.462E+01	5.113E+01	3.577E+00	0.085
		94.90		-1.944E+01	4.773E+01	7.562E+01	5.207E+00	-0.257
	+	122.32		2.772E+03	7.076E+02	1.094E+03	7.755E+01	2.534
		144.24		-1.612E+01	1.529E+02	2.424E+02	1.729E+01	-0.067
		154.21		2.821E+00	8.531E+01	1.360E+02	9.144E+00	0.021
		269.46		3.706E+01	5.017E+01	8.702E+01	5.587E+00	0.426
		323.87	*	1.937E+02	1.876E+02	3.249E+02	5.390E+01	0.596
		338.28		2.605E-01	2.785E+02	4.551E+02	4.813E+01	0.001
		445.03		9.274E+01	7.785E+02	1.265E+03	1.285E+02	0.073
RA-224		240.98	*	-2.286E+01	1.787E+02	2.965E+02	1.752E+01	-0.077
RA-226		186.21	*	8.367E+01	1.896E+02	3.163E+02	2.321E+02	0.265
AC-227		79.80		1.039E+02	3.744E+02	6.201E+02	1.292E+02	0.168
		236.00		-4.157E+01	5.663E+01	9.042E+01	9.481E+00	-0.460
		256.20	*	5.676E-01	1.005E+02	1.674E+02	2.355E+01	0.003
		286.10		-2.813E+02	4.197E+02	6.613E+02	7.792E+01	-0.425
		299.80		8.254E+01	3.569E+02	5.982E+02	9.821E+01	0.138
		304.40		-7.620E+01	5.036E+02	8.217E+02	1.431E+02	-0.093
		329.70		-8.954E+01	2.500E+02	3.996E+02	5.011E+01	-0.224
		334.20		8.465E+02	6.568E+02	1.139E+03	2.093E+02	0.743
PA-227		64.62	*	-3.193E+05	6.568E+02	Half-Life too short		
		110.05		-3.063E+04	6.568E+02	Half-Life too short		
TH-227		79.80		1.039E+02	3.744E+02	6.201E+02	1.310E+02	0.168
		94.00		-2.308E+02	3.997E+02	6.486E+02	1.373E+02	-0.356

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
		236.00		-4.157E+01	5.659E+01	9.042E+01	8.224E+00	-0.460
		256.20	*	5.676E-01	1.005E+02	1.674E+02	2.844E+01	0.003
		286.10		-2.813E+02	5.045E+02	6.613E+02	6.626E+02	-0.425
		299.80		8.254E+01	3.569E+02	5.982E+02	9.821E+01	0.138
		304.40		-7.620E+01	5.036E+02	8.217E+02	1.431E+02	-0.093
		329.70		-8.954E+01	2.500E+02	3.996E+02	5.011E+01	-0.224
		334.20		8.465E+02	6.568E+02	1.139E+03	2.093E+02	0.743
AC-228		338.32		2.410E-01	6.673E+01	1.091E+02	4.448E+01	0.002
		911.07	*	3.613E+01	5.581E+01	9.482E+01	9.921E+00	0.381
		969.11		-1.265E+01	8.568E+01	1.362E+02	3.118E+01	-0.093
RA-228		338.32		2.410E-01	6.673E+01	1.091E+02	4.448E+01	0.002
		911.07	*	3.613E+01	5.581E+01	9.482E+01	9.921E+00	0.381
		969.11		-1.265E+01	8.568E+01	1.362E+02	3.118E+01	-0.093
TH-228		74.81		4.338E+00	7.220E+01	1.189E+02	7.902E+00	0.036
		77.11		-3.012E+01	4.168E+01	6.595E+01	4.384E+00	-0.457
	+	87.30		2.535E+03	2.748E+02	3.564E+02	2.572E+01	7.112
		238.63	*	-4.036E-01	1.585E+01	2.683E+01	1.985E+00	-0.015
		300.09		1.190E+02	1.993E+02	3.218E+02	1.898E+02	0.370
TH-229		85.43		3.007E+01	5.171E+01	7.824E+01	5.552E+00	0.384
	+	88.47		7.477E+02	8.106E+01	1.035E+02	7.483E+00	7.227
		100.00		5.827E+00	3.843E+01	6.299E+01	4.210E+00	0.093
		193.63	*	-7.028E+01	1.199E+02	1.956E+02	1.064E+01	-0.359
		210.97		6.552E+01	1.835E+02	3.148E+02	1.766E+01	0.208
TH-230		67.67	*	1.795E+02	2.557E+03	3.766E+03	2.443E+04	0.048
PA-231		283.67	*	-1.511E+02	4.062E+02	6.548E+02	9.148E+01	-0.231
		301.29		1.778E+01	1.393E+02	2.320E+02	2.472E+01	0.077
		330.00		-3.902E+02	5.711E+02	8.701E+02	2.727E+02	-0.449
TH-231		84.21	*	4.955E+01	1.311E+02	1.962E+02	3.360E+01	0.253
U-231		84.21		5.213E+01	1.377E+02	2.064E+02	1.449E+01	0.253
		92.29		-2.395E+01	4.177E+01	6.135E+01	4.301E+00	-0.390
		95.87	*	-1.338E+01	2.221E+01	3.474E+01	2.377E+00	-0.385
		108.00		-3.134E-01	4.092E+01	6.614E+01	4.275E+00	-0.005
PA-233		75.28		2.014E+02	5.971E+02	9.952E+02	1.423E+02	0.202
	+	86.59		1.072E+04	2.961E+03	1.275E+03	3.364E+02	8.411
		300.12		6.082E+01	9.661E+01	1.660E+02	2.257E+01	0.366
		311.98	*	4.334E+00	1.849E+01	3.092E+01	1.989E+00	0.140
		340.50		-6.222E+01	1.646E+02	2.615E+02	6.009E+01	-0.238
		398.62		-8.778E+00	6.715E+02	1.088E+03	2.802E+02	-0.008
		415.76		-7.482E+01	5.438E+02	8.708E+02	1.783E+02	-0.086
PA-234		63.00		-1.268E+01	3.130E+02	4.742E+02	6.806E+01	-0.027
		94.67		-1.267E+01	3.441E+01	5.464E+01	6.160E+00	-0.232
		98.44		1.374E+01	2.072E+01	3.272E+01	1.817E+01	0.420
		99.86		2.000E+01	9.762E+01	1.606E+02	1.074E+01	0.125
		111.00		-1.955E+01	3.957E+01	6.161E+01	6.544E+00	-0.317
		131.20		1.386E+01	2.432E+01	4.042E+01	2.423E+00	0.343
		152.70		-4.800E+01	7.191E+01	1.080E+02	1.695E+01	-0.444
		186.00		1.412E+02	2.973E+02	5.191E+02	1.582E+02	0.272
		226.40		8.640E+01	1.053E+02	1.838E+02	2.122E+01	0.470
		227.20		4.385E+01	1.135E+02	1.942E+02	1.121E+01	0.226

---- Non-Identified Nuclides ----

Nuclide	Line Energy Ided (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
	248.90		2.982E+01	2.218E+02	3.728E+02	8.028E+01	0.080
	293.70		9.630E+01	1.793E+02	3.051E+02	4.952E+01	0.316
	369.80		-7.992E+01	2.612E+02	4.155E+02	8.623E+01	-0.192
	568.70		-2.019E+02	3.042E+02	4.824E+02	3.022E+01	-0.419
	569.50		-7.822E+01	8.261E+01	1.268E+02	7.946E+00	-0.617
	574.00		2.071E+02	4.180E+02	7.288E+02	4.583E+01	0.284
	699.00		-5.764E+01	1.930E+02	3.090E+02	5.666E+01	-0.187
	706.10		1.192E+02	3.347E+02	5.621E+02	2.489E+02	0.212
	733.00		-5.948E+01	1.229E+02	1.927E+02	4.164E+01	-0.309
	742.81		6.981E+01	4.193E+02	6.963E+02	4.667E+02	0.100
	796.30		1.379E+02	2.911E+02	4.928E+02	1.313E+02	0.280
	805.60		6.929E+00	3.435E+02	5.628E+02	1.705E+02	0.012
	819.60		-1.727E+02	4.361E+02	6.751E+02	2.549E+02	-0.256
	826.30		-1.615E+01	2.884E+02	4.682E+02	2.084E+02	-0.034
	831.60		-3.524E+01	2.158E+02	3.465E+02	1.023E+02	-0.102
	876.40		1.630E+02	3.670E+02	5.528E+02	5.679E+02	0.295
	880.51		3.084E+01	1.126E+02	1.871E+02	1.415E+01	0.165
	883.24		6.772E+01	1.229E+02	1.945E+02	1.305E+02	0.348
	899.00		-1.315E+02	3.407E+02	5.268E+02	2.293E+02	-0.250
	925.00		-6.519E+02	5.059E+02	7.256E+02	5.452E+01	-0.898
	926.50		-2.572E+01	7.402E+01	1.159E+02	2.888E+01	-0.222
	946.00	*	-6.427E+01	1.362E+02	2.112E+02	3.852E+01	-0.304
	949.00		4.915E+01	1.981E+02	3.260E+02	2.414E+01	0.151
	980.50		-1.584E+01	3.009E+02	4.825E+02	3.495E+01	-0.033
	1394.10		1.274E+02	1.892E+02	3.367E+02	2.184E+02	0.378
PA-234M	766.42		2.032E+02	3.368E+03	5.557E+03	2.807E+03	0.037
	1001.03	*	-2.639E+02	1.640E+03	2.623E+03	2.283E+02	-0.101
TH-234	63.29	*	6.192E+01	2.701E+02	4.156E+02	7.069E+01	0.149
	92.38		-6.855E+01	1.164E+02	1.700E+02	2.954E+01	-0.403
U-234	53.20	*	-1.086E+04	1.105E+05	3.323E+04	3.324E+05	-0.327
U-235	89.95		9.786E+02	4.180E+02	5.078E+02	1.548E+02	1.927
	93.35		-3.005E+01	1.297E+02	2.069E+02	5.701E+01	-0.145
	105.00		1.402E+02	2.219E+02	3.686E+02	1.080E+02	0.380
	143.76	*	-1.669E+01	4.624E+01	7.179E+01	1.168E+01	-0.233
	163.35		3.206E+01	1.076E+02	1.740E+02	3.100E+01	0.184
	185.71		5.324E+00	1.093E+01	1.928E+01	1.033E+00	0.276
	205.31		-1.316E+02	1.336E+02	2.094E+02	3.748E+01	-0.629
NP-236	94.67		-9.552E+00	2.609E+01	4.146E+01	2.859E+00	-0.230
	98.44		1.040E+01	1.458E+01	2.473E+01	1.667E+00	0.420
	111.00		-1.479E+01	2.991E+01	4.661E+01	2.984E+00	-0.317
	160.31	*	1.294E+01	1.895E+01	3.146E+01	1.670E+00	0.411
U-238	63.29	*	6.192E+01	2.701E+02	4.156E+02	7.069E+01	0.149
	92.38		-6.855E+01	1.159E+02	1.700E+02	1.191E+01	-0.403
NP-239	99.55		1.213E+01	3.205E+01	5.332E+01	3.573E+00	0.228
	117.00	*	-2.443E+01	5.380E+01	7.429E+01	4.686E+00	-0.329
	209.75		3.656E+01	1.791E+02	3.049E+02	1.707E+01	0.120
	228.18		-1.676E+01	5.752E+01	9.472E+01	5.477E+00	-0.177
	277.60		6.952E+00	4.412E+01	7.393E+01	4.616E+00	0.094
	334.30		4.821E+02	3.629E+02	6.460E+02	3.821E+01	0.746

---- Non-Identified Nuclides ----

Nuclide	Line Ided	Energy (keV)	Key	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
AM-243		74.67	*	2.293E-01	1.169E+01	1.922E+01	1.258E+00	0.012
	+	86.72		6.031E+04	6.538E+03	7.623E+03	5.472E+02	7.911
		117.66		-1.345E+02	1.067E+03	1.516E+03	9.548E+01	-0.089
		142.18		-1.248E+03	3.692E+03	5.742E+03	3.287E+02	-0.217
CM-243		99.55		1.247E+01	3.295E+01	5.482E+01	3.673E+00	0.228
		103.76	*	-5.792E-01	2.000E+01	3.233E+01	2.123E+00	-0.018
		117.00		-2.511E+01	5.530E+01	7.636E+01	4.817E+00	-0.329
		209.75		3.600E+01	1.764E+02	3.003E+02	1.681E+01	0.120
		228.18		-1.692E+01	5.806E+01	9.562E+01	5.529E+00	-0.177
		277.60		7.002E+00	4.443E+01	7.447E+01	4.650E+00	0.094
AM-246		798.80		-2.044E+01	4.629E+01	7.266E+01	5.278E+00	-0.281
		1036.00		9.088E+01	1.066E+02	1.912E+02	1.321E+01	0.475
		1062.04		-1.787E+01	8.284E+01	1.363E+02	9.170E+00	-0.131
		1078.86	*	2.165E+01	5.026E+01	8.715E+01	5.756E+00	0.248
CM-247		278.00		1.590E+01	1.849E+02	3.083E+02	1.926E+01	0.052
		287.40		-1.832E+01	3.339E+02	5.506E+02	3.427E+01	-0.033
		402.60	*	2.447E+00	1.150E+01	1.894E+01	1.006E+00	0.129
CF-249		252.85		1.495E+02	2.283E+02	3.955E+02	2.381E+01	0.378
		333.44		2.865E+01	4.720E+01	8.059E+01	4.773E+00	0.356
		387.95	*	-1.562E+01	1.329E+01	1.978E+01	1.047E+00	-0.790
CF-251		176.60	*	1.937E+01	2.967E+01	5.213E+01	2.750E+00	0.372
		227.00		5.123E+01	1.009E+02	1.738E+02	1.003E+01	0.295
		285.00		-5.764E+01	4.586E+02	7.527E+02	4.693E+01	-0.077
ANH-511		511.00	*	-9.662E+00	1.109E+01	1.924E+01	1.150E+00	-0.502

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA300:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005630		
Acquisition date	: 4-JAN-2010 19:55:27	Detector SN#	:
Detector ID	: GAM07	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 01:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 01:00:00.93	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 4-JAN-2010 00:00:00	Nuclide Library	: LIQUI
Sample ID	: G1202005630	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

Standard Weight	: 0.00000		
CALIB. DATE/TIME	: 20-JUL-2009 14:01:33	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	
CO-57	3.866E+01	9.589E+00	9.325E+00	0.000E+00
CO-60	9.946E+02	8.604E+01	1.066E+01	0.000E+00
CD-109	5.454E+03	5.794E+02	2.910E+02	0.000E+00
SN-126	5.477E+02	5.818E+01	2.931E+01	0.000E+00
BA-137M	8.265E+02	6.864E+01	1.711E+01	0.000E+00
CS-137	8.737E+02	7.270E+01	1.809E+01	0.000E+00
TH-232	4.649E+05	4.796E+06	1.430E+04	0.000E+00
NP-237	1.608E+03	3.674E+02	8.667E+01	0.000E+00
PU-237	2.728E+04	2.137E+03	8.237E+02	0.000E+00
AM-241	2.460E+03	2.089E+02	7.428E+01	0.000E+00

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)		
BE-7	2.303E+01		9.340E+01	1.555E+02	0.000E+00	NOT IDENT.
NA-22	1.663E+00		7.331E+00	1.288E+01	0.000E+00	NOT IDENT.
NA-24	2.332E+00		1.318E+01	2.322E+01	0.000E+00	NOT IDENT.
AL-26	-2.493E+00		6.013E+00	8.922E+00	0.000E+00	NOT IDENT.
K-40	2.259E+01		7.405E+01	1.389E+02	0.000E+00	NOT IDENT.
TI-44	-7.053E+00		7.594E+00	1.214E+01	0.000E+00	NOT IDENT.
SC-46	-8.182E-01		1.270E+01	2.092E+01	0.000E+00	NOT IDENT.
V-48	-2.822E+00		1.552E+01	2.511E+01	0.000E+00	NOT IDENT.
CR-51	2.052E+00		6.807E+01	1.145E+02	0.000E+00	NOT IDENT.
MN-52	-7.346E+00		6.235E+00	5.966E+00	0.000E+00	FAIL ABUN
MN-54	5.796E+00		1.135E+01	1.974E+01	0.000E+00	NOT IDENT.
CO-56	9.474E+00		1.301E+01	2.286E+01	0.000E+00	NOT IDENT.
CO-58	7.446E+00		1.121E+01	1.978E+01	0.000E+00	NOT IDENT.
FE-59	2.660E+00		2.505E+01	4.310E+01	0.000E+00	NOT IDENT.
ZN-65	8.379E+00		2.807E+01	4.901E+01	0.000E+00	NOT IDENT.
GE-68	-2.709E+02		4.264E+02	6.887E+02	0.000E+00	NOT IDENT.
AS-73	-7.556E+01		2.313E+02	3.876E+02	0.000E+00	NOT IDENT.

AS-74	-3.421E+00	1.481E+01	2.476E+01	0.000E+00	NOT IDENT.
SE-75	-9.294E+00	1.056E+01	1.688E+01	0.000E+00	FAIL ABUN
BR-77	-1.912E+01	4.840E+01	8.077E+01	0.000E+00	FAIL ABUN
SR-82	1.688E+01	8.353E+01	1.422E+02	0.000E+00	NOT IDENT.
RB-83	-1.179E+01	1.815E+01	2.964E+01	0.000E+00	NOT IDENT.
RB-84	1.273E+01	2.022E+01	3.517E+01	0.000E+00	NOT IDENT.
KR-85	-2.609E+03	2.219E+03	3.513E+03	0.000E+00	NOT IDENT.
SR-85	-1.151E+01	9.787E+00	1.550E+01	0.000E+00	NOT IDENT.
RB-86	-1.846E+02	1.684E+02	2.604E+02	0.000E+00	NOT IDENT.
Y-88	3.087E+00	5.653E+00	1.114E+01	0.000E+00	NOT IDENT.
ZR-88	4.903E+00	9.141E+00	1.566E+01	0.000E+00	NOT IDENT.
Y-91	-1.487E+03	3.121E+03	4.916E+03	0.000E+00	NOT IDENT.
NB-94	-4.021E+00	9.947E+00	1.617E+01	0.000E+00	NOT IDENT.
NB-95	4.450E+00	1.055E+01	1.834E+01	0.000E+00	NOT IDENT.
NB-95M	-2.509E+01	2.598E+01	4.181E+01	0.000E+00	NOT IDENT.
ZR-95	9.772E+00	1.820E+01	3.197E+01	0.000E+00	NOT IDENT.
NB-97	2.298E+01	2.797E+01	4.467E+01	0.000E+00	NOT IDENT.
ZR-97	-8.709E+02	4.802E+02	6.735E+02	0.000E+00	NOT IDENT.
MO-99	-1.015E+02	1.012E+02	1.527E+02	0.000E+00	NOT IDENT.
TC-99M	-5.710E+01	5.585E+01	8.413E+01	0.000E+00	NOT IDENT.
RH-101	3.995E+00	7.848E+00	1.394E+01	0.000E+00	NOT IDENT.
RH-102	-5.230E+00	1.073E+01	1.696E+01	0.000E+00	NOT IDENT.
RU-103	4.476E+00	9.643E+00	1.633E+01	0.000E+00	NOT IDENT.
RH-106	1.082E+01	8.537E+01	1.467E+02	0.000E+00	NOT IDENT.
RU-106	1.082E+01	8.536E+01	1.467E+02	0.000E+00	NOT IDENT.
AG-108M	-9.322E+00	1.120E+01	1.731E+01	0.000E+00	NOT IDENT.
AG-110M	6.384E+00	1.232E+01	1.913E+01	0.000E+00	NOT IDENT.
IN-111	-4.501E+00	8.819E+00	1.456E+01	0.000E+00	NOT IDENT.
IN-113M	1.007E+01	1.334E+01	2.318E+01	0.000E+00	NOT IDENT.
SN-113	1.007E+01	1.334E+01	2.318E+01	0.000E+00	NOT IDENT.
IN-114M	1.265E+01	3.456E+01	6.081E+01	0.000E+00	NOT IDENT.
CD-115	1.425E+00	3.748E+01	6.458E+01	0.000E+00	NOT IDENT.
SN-117M	2.186E+00	6.200E+00	1.028E+01	0.000E+00	NOT IDENT.
SB-122	8.648E+00	1.584E+01	2.817E+01	0.000E+00	NOT IDENT.
I-123	6.732E+00	1.804E+01	2.996E+01	0.000E+00	NOT IDENT.
TE-123M	2.282E+00	6.118E+00	1.016E+01	0.000E+00	NOT IDENT.
I-124	6.153E+00	1.696E+01	2.974E+01	0.000E+00	NOT IDENT.
SB-124	-5.005E-01	1.448E+01	2.362E+01	0.000E+00	NOT IDENT.
SB-125	-2.620E+01	3.069E+01	4.740E+01	0.000E+00	NOT IDENT.
TE-125M	-4.619E+02	1.617E+03	2.613E+03	0.000E+00	NOT IDENT.
I-126	-1.493E+01	2.684E+01	3.641E+01	0.000E+00	NOT IDENT.
SB-126	-4.550E+00	1.812E+01	2.975E+01	0.000E+00	NOT IDENT.
SB-127	1.031E+01	3.219E+01	5.579E+01	0.000E+00	NOT IDENT.
XE-127	1.132E+01	8.959E+00	1.636E+01	0.000E+00	NOT IDENT.
I-131	4.806E+00	1.011E+01	1.737E+01	0.000E+00	NOT IDENT.
TE-132	-2.463E+00	8.216E+00	1.380E+01	0.000E+00	NOT IDENT.
BA-133	-1.658E+00	1.261E+01	2.088E+01	0.000E+00	NOT IDENT.
I-133	2.188E+01	1.936E+01	3.587E+01	0.000E+00	NOT IDENT.
CS-134	1.065E+01	1.435E+01	2.548E+01	0.000E+00	NOT IDENT.
CS-135	6.102E+01	4.141E+01	7.572E+01	0.000E+00	NOT IDENT.
I-135	1.040E+02	2.180E+02	3.993E+02	0.000E+00	NOT IDENT.
CS-136	1.265E+01	1.818E+01	3.278E+01	0.000E+00	NOT IDENT.
CE-139	-2.517E+00	6.407E+00	1.006E+01	0.000E+00	NOT IDENT.
BA-140	-7.408E+00	3.525E+01	5.939E+01	0.000E+00	NOT IDENT.
LA-140	2.680E+00	6.391E+00	1.185E+01	0.000E+00	NOT IDENT.
CE-141	1.034E+00	1.024E+01	1.679E+01	0.000E+00	NOT IDENT.
CE-143	1.101E+01	2.578E+01	4.445E+01	0.000E+00	NOT IDENT.
CE-144	-3.911E+01	4.795E+01	7.372E+01	0.000E+00	NOT IDENT.
PM-144	-4.285E+00	8.840E+00	1.419E+01	0.000E+00	NOT IDENT.
PR-144	-2.882E+02	5.945E+02	9.542E+02	0.000E+00	NOT IDENT.
PM-146	3.039E+00	1.511E+01	2.514E+01	0.000E+00	NOT IDENT.
ND-147	3.092E+01	6.651E+01	1.180E+02	0.000E+00	NOT IDENT.
PM-149	-1.017E+02	2.702E+02	4.443E+02	0.000E+00	NOT IDENT.
EU-152	1.414E+01	2.540E+01	4.414E+01	0.000E+00	FAIL ABUN
GD-153	5.349E+00	1.543E+01	2.614E+01	0.000E+00	NOT IDENT.
EU-154	2.638E+00	2.101E+01	3.625E+01	0.000E+00	FAIL ABUN
EU-155	1.083E+01	2.209E+01	3.765E+01	0.000E+00	FAIL ABUN
TB-160	-3.073E+01	4.946E+01	7.782E+01	0.000E+00	FAIL ABUN
HO-166M	2.719E+00	1.922E+01	3.278E+01	0.000E+00	NOT IDENT.
TM-171	-1.184E+03	5.364E+03	8.925E+03	0.000E+00	FAIL ABUN
HF-175	6.229E-01	8.281E+00	1.391E+01	0.000E+00	FAIL ABUN
LU-176	5.341E+00	6.985E+00	1.231E+01	0.000E+00	FAIL ABUN
LU-177	-3.530E+01	5.870E+01	9.745E+01	0.000E+00	NOT IDENT.
LU-177M	-2.427E+01	5.434E+01	8.694E+01	0.000E+00	FAIL ABUN
HF-181	-8.115E+00	1.180E+01	1.828E+01	0.000E+00	NOT IDENT.
W-181	-2.624E+01	6.405E+01	1.056E+02	0.000E+00	NOT IDENT.
TA-182	8.596E+00	3.560E+01	6.220E+01	0.000E+00	NOT IDENT.
RE-183	-8.560E+00	2.244E+01	3.534E+01	0.000E+00	FAIL ABUN

RE-184	3.757E+01	5.622E+01	9.940E+01	0.000E+00	FAIL ABUN
OS-185	-1.422E+01	1.133E+01	1.693E+01	0.000E+00	FAIL ABUN
RE-188	1.312E+00	3.164E+01	5.147E+01	0.000E+00	NOT IDENT.
W-188	1.170E+03	1.740E+03	3.054E+03	0.000E+00	NOT IDENT.
IR-192	-2.237E+00	7.666E+00	1.259E+01	0.000E+00	NOT IDENT.
AU-195	1.033E+01	4.407E+01	7.409E+01	0.000E+00	NOT IDENT.
TL-200	4.020E+00	1.486E+01	2.520E+01	0.000E+00	NOT IDENT.
TL-201	-2.022E+01	6.489E+01	1.026E+02	0.000E+00	NOT IDENT.
TL-202	-5.879E+00	1.048E+01	1.653E+01	0.000E+00	NOT IDENT.
HG-203	9.408E-01	8.305E+00	1.415E+01	0.000E+00	NOT IDENT.
BI-207	-1.043E+01	1.856E+01	3.041E+01	0.000E+00	NOT IDENT.
TL-207	1.937E+02	1.838E+02	3.249E+02	0.000E+00	FAIL ABUN
TL-208	4.273E+00	1.168E+01	2.082E+01	0.000E+00	NOT IDENT.
PO-209	8.930E+01	2.852E+03	4.734E+03	0.000E+00	NOT IDENT.
BI-210	-1.046E+03	7.743E+02	1.266E+03	0.000E+00	NOT IDENT.
PB-210	-1.046E+03	7.743E+02	1.266E+03	0.000E+00	NOT IDENT.
PO-210	-1.046E+03	7.732E+02	1.266E+03	0.000E+00	NOT IDENT.
BI-211	4.341E+01	6.059E+01	1.066E+02	0.000E+00	NOT IDENT.
PB-211	4.393E+01	2.882E+02	4.797E+02	0.000E+00	NOT IDENT.
BI-212	-3.287E+01	8.422E+01	1.365E+02	0.000E+00	NOT IDENT.
PB-212	-4.036E-01	1.553E+01	2.683E+01	0.000E+00	FAIL ABUN
PO-212	-4.036E-01	1.553E+01	2.683E+01	0.000E+00	FAIL ABUN
BI-214	-5.048E+00	1.979E+01	3.285E+01	0.000E+00	NOT IDENT.
PB-214	3.488E+00	2.129E+01	3.623E+01	0.000E+00	FAIL ABUN
PO-214	3.488E+00	2.129E+01	3.623E+01	0.000E+00	FAIL ABUN
PO-215	1.937E+02	1.838E+02	3.249E+02	0.000E+00	FAIL ABUN
PO-216	-4.036E-01	1.553E+01	2.683E+01	0.000E+00	FAIL ABUN
PO-218	3.488E+00	2.129E+01	3.623E+01	0.000E+00	FAIL ABUN
RN-219	-3.111E+01	1.270E+02	2.064E+02	0.000E+00	NOT IDENT.
RN-220	-6.103E+03	7.285E+03	1.158E+04	0.000E+00	NOT IDENT.
RA-223	1.937E+02	1.838E+02	3.249E+02	0.000E+00	FAIL ABUN
RA-224	-2.286E+01	1.751E+02	2.965E+02	0.000E+00	NOT IDENT.
RA-226	8.367E+01	1.858E+02	3.163E+02	0.000E+00	NOT IDENT.
AC-227	5.676E-01	9.849E+01	1.674E+02	0.000E+00	NOT IDENT.
PA-227	0.000E+00	6.253E+11	0.000E+00	0.000E+00	SHORT HLIF
TH-227	5.676E-01	9.849E+01	1.674E+02	0.000E+00	NOT IDENT.
AC-228	3.613E+01	5.469E+01	9.482E+01	0.000E+00	NOT IDENT.
RA-228	3.613E+01	5.469E+01	9.482E+01	0.000E+00	NOT IDENT.
TH-228	-4.036E-01	1.553E+01	2.683E+01	0.000E+00	FAIL ABUN
TH-229	-7.028E+01	1.175E+02	1.956E+02	0.000E+00	FAIL ABUN
TH-230	1.795E+02	2.506E+03	3.766E+03	0.000E+00	NOT IDENT.
PA-231	-1.511E+02	3.981E+02	6.548E+02	0.000E+00	NOT IDENT.
TH-231	4.955E+01	1.285E+02	1.962E+02	0.000E+00	NOT IDENT.
U-231	-1.338E+01	2.177E+01	3.474E+01	0.000E+00	NOT IDENT.
PA-233	4.334E+00	1.812E+01	3.092E+01	0.000E+00	FAIL ABUN
PA-234	-6.427E+01	1.335E+02	2.112E+02	0.000E+00	NOT IDENT.
PA-234M	-2.639E+02	1.607E+03	2.623E+03	0.000E+00	NOT IDENT.
TH-234	6.192E+01	2.647E+02	4.156E+02	0.000E+00	NOT IDENT.
U-234	-1.086E+04	1.083E+05	3.323E+04	0.000E+00	NOT IDENT.
U-235	-1.669E+01	4.532E+01	7.179E+01	0.000E+00	NOT IDENT.
NP-236	1.294E+01	1.857E+01	3.146E+01	0.000E+00	NOT IDENT.
U-238	6.192E+01	2.647E+02	4.156E+02	0.000E+00	NOT IDENT.
NP-239	-2.443E+01	5.272E+01	7.429E+01	0.000E+00	NOT IDENT.
AM-243	2.293E-01	1.146E+01	1.922E+01	0.000E+00	FAIL ABUN
CM-243	-5.792E-01	1.960E+01	3.233E+01	0.000E+00	NOT IDENT.
AM-246	2.165E+01	4.925E+01	8.715E+01	0.000E+00	NOT IDENT.
CM-247	2.447E+00	1.127E+01	1.894E+01	0.000E+00	NOT IDENT.
CF-249	-1.562E+01	1.303E+01	1.978E+01	0.000E+00	NOT IDENT.
CF-251	1.937E+01	2.908E+01	5.213E+01	0.000E+00	NOT IDENT.
ANH-511	-9.662E+00	1.086E+01	1.924E+01	0.000E+00	NOT IDENT.

VAX/VMS Nuclide Identification Report Generated 4-JAN-2010 20:55:56.97

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005630.CNF;1
Sample date : 4-JAN-2010 00:00:00. Acquisition date : 4-JAN-2010 19:55:27.
Sample ID : G1202005630 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM07 Detector geometry: JAR
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:00.93 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Pk	It	Energy	Area	Bkgnd	FWHM	Channel	Left	Pw	Cts/Sec	%Err	Fit
1	0	59.45	3287	765	1.05	118.56	113	11	9.13E-01	2.4	
2	0	87.96	1248	338	1.08	175.56	170	11	3.47E-01	4.0	
3	0	122.07	221	170	1.10	243.77	239	8	6.13E-02	12.3	
4	0	661.74	1724	72	1.40	1322.95	1315	15	4.79E-01	2.6	
5	0	1173.44	1382	47	1.94	2346.23	2338	17	3.84E-01	2.9	
6	0	1332.73	1298	18	1.97	2664.78	2656	19	3.60E-01	2.9	

VAX/VMS Nuclide Identification Report Generated 4-JAN-2010 20:56:00.37

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

Configuration : DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005630.CNF;1
Sample date : 4-JAN-2010 00:00:00. Acquisition date : 4-JAN-2010 19:55:27.
Sample ID : G1202005630 Sample quantity : 1.00000E+00 FILTER
Detector name : GAM07 Detector geometry: JAR
Elapsed live time: 0 01:00:00.00 Elapsed real time: 0 01:00:00.93 0.0%
Energy tolerance : 1.50000 keV Analyst Initials : MXR1
Abundance limit : 75.00000 Sensitivity : 5.00000
Batch ID : 937282 Detector SN# :
Matrix Spike ID : LCS ID : 1032-A

Nuclide Line Activity Report

Nuclide Type:

Nuclide	Energy	Area	%Abn	%Eff	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	2-Sigma %Error
CO-57	122.06	221	85.51*	5.019E+00	3.858E+01	3.866E+01	25.31
	136.48	------	10.60	4.935E+00	------ Line Not Found		------
CO-60	1173.22	1382	100.00	1.085E+00	9.562E+02	9.565E+02	8.24
	1332.49	1298	100.00*	9.799E-01	9.943E+02	9.946E+02	8.83
CD-109	88.03	1248	3.72*	4.624E+00	5.447E+03	5.454E+03	10.84
SN-126	64.28	------	9.60	3.240E+00	------ Line Not Found		------
	86.94	1248	8.90	4.624E+00	2.277E+03	2.277E+03	41.88
	87.57	1248	37.00*	4.624E+00	5.477E+02	5.477E+02	10.84
BA-137M	661.65	1723	89.98*	1.739E+00	8.264E+02	8.265E+02	8.47
CS-137	661.65	1723	85.12*	1.739E+00	8.736E+02	8.737E+02	8.49
TH-232	59.00	3287	0.19*	2.794E+00	4.649E+05	4.649E+05	1052.66
NP-237	86.50	1248	12.60*	4.624E+00	1.608E+03	1.608E+03	23.31
	95.87	------	2.60	4.835E+00	------ Line Not Found		------
PU-237	59.54	3287	3.28*	2.794E+00	2.693E+04	2.728E+04	7.99
AM-241	59.54	3287	35.90*	2.794E+00	2.460E+03	2.460E+03	8.66

Flag: "*" = Keyline

Sample ID : G1202005630 Acquisition date : 4-JAN-2010 19:55:27

Total number of lines in spectrum 6
Number of unidentified lines 0
Number of lines tentatively identified by NID 6 100.00%

Nuclide Type :

Nuclide	Hlife	Decay	Uncorrected pCi/FILTER	Decay Corr pCi/FILTER	Decay Corr 2-Sigma Error	2-Sigma %Error	Flags
CO-57	270.90D	1.00	3.858E+01	3.866E+01	0.978E+01	25.31	
CO-60	5.27Y	1.00	9.943E+02	9.946E+02	0.878E+02	8.83	
CD-109	464.00D	1.00	5.447E+03	5.454E+03	0.591E+03	10.84	
SN-126	1.00E+05Y	1.00	5.477E+02	5.477E+02	0.594E+02	10.84	
BA-137M	30.17Y	1.00	8.264E+02	8.265E+02	0.700E+02	8.47	
CS-137	30.17Y	1.00	8.736E+02	8.737E+02	0.742E+02	8.49	
TH-232	1.41E+10Y	1.00	4.649E+05	4.649E+05	48.94E+05	1052.66	
NP-237	2.14E+06Y	1.00	1.608E+03	1.608E+03	0.375E+03	23.31	
PU-237	45.20D	1.01	2.693E+04	2.728E+04	0.218E+04	7.99	
AM-241	432.20Y	1.00	2.460E+03	2.460E+03	0.213E+03	8.66	
	Total Activity :		5.046E+05	5.050E+05			

Grand Total Activity : 5.046E+05 5.050E+05

Flags: "K" = Keyline not found "M" = Manually accepted
"E" = Manually edited "A" = Nuclide specific abn. limit

None

Flags: "T" = Tentatively associated

VAX/VMS Nuclide Identification Report Generated 4-JAN-2010 20:56:05.77

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: DKA100:[CANBERRA.GAMMA.ARCHIVE.GAMMA]G1202005630.CNF;1		
Acquisition date	: 4-JAN-2010 19:55:27.	Detector SN#	:
Detector ID	: GAM07	Sensitivity	: 5.00000
Geometry	: JAR	Energy tolerance	: 1.50000
Elapsed live time	: 0 01:00:00.00	Abundance limit	: 75.00000
Elapsed real time	: 0 01:00:00.93	Half life ratio	: 8.00000

SAMPLE DATA

Sample date	: 4-JAN-2010 00:00:00.	Nuclide Library	: LIQUID
Sample ID	: G1202005630	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.00000E+00 FILTER

QC DATA

CALIB. DATE/TIME	: 20-JUL-2009 14:01:33.1	MS Isotope	:
MSD ID	:	MSD Isotope	:
LCS ID	: 1032-A	LCS Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
CO-57	3.866E+01	9.784E+00	9.325E+00	5.842E-01	4.146
CO-60	9.946E+02	8.780E+01	1.066E+01	7.111E-01	93.337
CD-109	5.454E+03	5.912E+02	2.910E+02	2.113E+01	18.742
SN-126	5.477E+02	5.937E+01	2.931E+01	2.120E+00	18.688
BA-137M	8.265E+02	7.004E+01	1.711E+01	1.135E+00	48.307
CS-137	8.737E+02	7.418E+01	1.809E+01	1.203E+00	48.307
TH-232	4.649E+05	4.894E+06	1.430E+04	1.505E+05	32.518
NP-237	1.608E+03	3.749E+02	8.667E+01	1.893E+01	18.555
PU-237	2.728E+04	2.181E+03	8.237E+02	5.256E+01	33.122
AM-241	2.460E+03	2.132E+02	7.428E+01	5.351E+00	33.122

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
BE-7	2.303E+01		9.531E+01	1.555E+02	1.049E+01	0.148
NA-22	1.663E+00		7.481E+00	1.288E+01	8.205E-01	0.129

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
NA-24	2.332E+00		1.345E+01	2.322E+01	1.549E+00	0.100
AL-26	-2.493E+00		6.136E+00	8.922E+00	5.107E-01	-0.279
K-40	2.259E+01		7.557E+01	1.389E+02	9.551E+00	0.163
TI-44	-7.053E+00		7.749E+00	1.214E+01	8.138E-01	-0.581
SC-46	-8.182E-01		1.296E+01	2.092E+01	1.588E+00	-0.039
V-48	-2.822E+00		1.584E+01	2.511E+01	1.815E+00	-0.112
CR-51	2.052E+00		6.946E+01	1.145E+02	7.636E+00	0.018
MN-52	-7.346E+00		6.362E+00	5.966E+00	3.933E-01	-1.231
MN-54	5.796E+00		1.158E+01	1.974E+01	1.462E+00	0.294
CO-56	9.474E+00		1.328E+01	2.286E+01	1.702E+00	0.414
CO-58	7.446E+00		1.144E+01	1.978E+01	1.451E+00	0.377
FE-59	2.660E+00		2.556E+01	4.310E+01	3.170E+00	0.062
ZN-65	8.379E+00		2.865E+01	4.901E+01	3.102E+00	0.171
GE-68	-2.709E+02		4.351E+02	6.887E+02	4.556E+01	-0.393
AS-73	-7.556E+01		2.360E+02	3.876E+02	2.448E+01	-0.195
AS-74	-3.421E+00		1.512E+01	2.476E+01	1.581E+00	-0.138
SE-75	-9.294E+00		1.078E+01	1.688E+01	1.044E+00	-0.551
BR-77	-1.912E+01		4.938E+01	8.077E+01	4.870E+00	-0.237
SR-82	1.688E+01		8.524E+01	1.422E+02	1.020E+01	0.119
RB-83	-1.179E+01		1.852E+01	2.964E+01	1.787E+00	-0.398
RB-84	1.273E+01		2.063E+01	3.517E+01	2.662E+00	0.362
KR-85	-2.609E+03		2.264E+03	3.513E+03	2.106E+02	-0.743
SR-85	-1.151E+01		9.986E+00	1.550E+01	9.290E-01	-0.743
RB-86	-1.846E+02		1.719E+02	2.604E+02	1.724E+01	-0.709
Y-88	3.087E+00		5.769E+00	1.114E+01	6.284E-01	0.277
ZR-88	4.903E+00		9.328E+00	1.566E+01	8.218E-01	0.313
Y-91	-1.487E+03		3.185E+03	4.916E+03	2.939E+02	-0.302
NB-94	-4.021E+00		1.015E+01	1.617E+01	1.105E+00	-0.249
NB-95	4.450E+00		1.077E+01	1.834E+01	1.307E+00	0.243
NB-95M	-2.509E+01		2.651E+01	4.181E+01	3.166E+00	-0.600
ZR-95	9.772E+00		1.857E+01	3.197E+01	2.598E+00	0.306
NB-97	2.298E+01		2.854E+01	4.467E+01	2.957E+00	0.514
ZR-97	-8.709E+02		4.900E+02	6.735E+02	4.014E+01	-1.293
MO-99	-1.015E+02		1.033E+02	1.527E+02	2.189E+01	-0.665
TC-99M	-5.710E+01		5.699E+01	8.413E+01	5.045E+00	-0.679
RH-101	3.995E+00		8.008E+00	1.394E+01	7.639E-01	0.287
RH-102	-5.230E+00		1.095E+01	1.696E+01	9.797E-01	-0.308
RU-103	4.476E+00		9.840E+00	1.633E+01	2.072E+00	0.274
RH-106	1.082E+01		8.711E+01	1.467E+02	1.774E+01	0.074
RU-106	1.082E+01		8.710E+01	1.467E+02	9.521E+00	0.074
AG-108M	-9.322E+00		1.143E+01	1.731E+01	1.046E+00	-0.538
AG-110M	6.384E+00		1.257E+01	1.913E+01	1.330E+00	0.334
IN-111	-4.501E+00		8.999E+00	1.456E+01	8.662E-01	-0.309
IN-113M	1.007E+01		1.362E+01	2.318E+01	1.313E+00	0.434
SN-113	1.007E+01		1.362E+01	2.318E+01	1.313E+00	0.434
IN-114M	1.265E+01		3.526E+01	6.081E+01	3.287E+00	0.208
CD-115	1.425E+00		3.824E+01	6.458E+01	3.918E+00	0.022
SN-117M	2.186E+00		6.327E+00	1.028E+01	5.500E-01	0.213

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
SB-122	8.648E+00		1.616E+01	2.817E+01	1.758E+00	0.307
I-123	6.732E+00		1.841E+01	2.996E+01	1.600E+00	0.225
TE-123M	2.282E+00		6.243E+00	1.016E+01	5.509E-01	0.225
I-124	6.153E+00		1.731E+01	2.974E+01	1.907E+00	0.207
SB-124	-5.005E-01		1.477E+01	2.362E+01	1.550E+00	-0.021
SB-125	-2.620E+01		3.132E+01	4.740E+01	2.722E+00	-0.553
TE-125M	-4.619E+02		1.650E+03	2.613E+03	2.238E+02	-0.177
I-126	-1.493E+01		2.738E+01	3.641E+01	2.423E+00	-0.410
SB-126	-4.550E+00		1.849E+01	2.975E+01	2.059E+00	-0.153
SB-127	1.031E+01		3.285E+01	5.579E+01	3.975E+00	0.185
XE-127	1.132E+01		9.142E+00	1.636E+01	9.045E-01	0.692
I-131	4.806E+00		1.031E+01	1.737E+01	1.081E+00	0.277
TE-132	-2.463E+00		8.384E+00	1.380E+01	1.760E+00	-0.179
BA-133	-1.658E+00		1.286E+01	2.088E+01	2.404E+00	-0.079
I-133	2.188E+01		1.976E+01	3.587E+01	2.218E+00	0.610
CS-134	1.065E+01		1.464E+01	2.548E+01	1.867E+00	0.418
CS-135	6.102E+01		4.226E+01	7.572E+01	6.008E+00	0.806
I-135	1.040E+02		2.225E+02	3.993E+02	2.757E+01	0.260
CS-136	1.265E+01		1.855E+01	3.278E+01	2.384E+00	0.386
CE-139	-2.517E+00		6.538E+00	1.006E+01	5.219E-01	-0.250
BA-140	-7.408E+00		3.597E+01	5.939E+01	1.935E+01	-0.125
LA-140	2.680E+00		6.521E+00	1.185E+01	7.496E-01	0.226
CE-141	1.034E+00		1.045E+01	1.679E+01	9.883E-01	0.062
CE-143	1.101E+01		2.630E+01	4.445E+01	8.906E+00	0.248
CE-144	-3.911E+01		4.893E+01	7.372E+01	1.051E+01	-0.530
PM-144	-4.285E+00		9.020E+00	1.419E+01	9.659E-01	-0.302
PR-144	-2.882E+02		6.067E+02	9.542E+02	6.496E+01	-0.302
PM-146	3.039E+00		1.542E+01	2.514E+01	2.143E+00	0.121
ND-147	3.092E+01		6.787E+01	1.180E+02	1.610E+01	0.262
PM-149	-1.017E+02		2.757E+02	4.443E+02	6.367E+01	-0.229
EU-152	1.414E+01		2.591E+01	4.414E+01	2.894E+00	0.320
GD-153	5.349E+00		1.575E+01	2.614E+01	1.772E+00	0.205
EU-154	2.638E+00		2.144E+01	3.625E+01	3.515E+00	0.073
EU-155	1.083E+01		2.254E+01	3.765E+01	2.510E+00	0.288
TB-160	-3.073E+01		5.047E+01	7.782E+01	5.884E+00	-0.395
HO-166M	2.719E+00		1.961E+01	3.278E+01	2.256E+00	0.083
TM-171	-1.184E+03		5.474E+03	8.925E+03	5.662E+02	-0.133
HF-175	6.229E-01		8.450E+00	1.391E+01	8.110E-01	0.045
LU-176	5.341E+00		7.128E+00	1.231E+01	7.534E-01	0.434
LU-177	-3.530E+01		5.990E+01	9.745E+01	5.442E+00	-0.362
LU-177M	-2.427E+01		5.545E+01	8.694E+01	4.685E+00	-0.279
HF-181	-8.115E+00		1.204E+01	1.828E+01	1.063E+00	-0.444
W-181	-2.624E+01		6.535E+01	1.056E+02	6.687E+00	-0.248
TA-182	8.596E+00		3.633E+01	6.220E+01	3.774E+00	0.138
RE-183	-8.560E+00		2.290E+01	3.534E+01	1.860E+00	-0.242
RE-184	3.757E+01		5.737E+01	9.940E+01	5.984E+00	0.378
OS-185	-1.422E+01		1.156E+01	1.693E+01	1.114E+00	-0.840
RE-188	1.312E+00		3.228E+01	5.147E+01	2.794E+00	0.025

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
W-188	1.170E+03		1.776E+03	3.054E+03	1.897E+02	0.383
IR-192	-2.237E+00		7.823E+00	1.259E+01	7.663E-01	-0.178
AU-195	1.033E+01		4.497E+01	7.409E+01	4.982E+00	0.139
TL-200	4.020E+00		1.516E+01	2.520E+01	1.400E+00	0.160
TL-201	-2.022E+01		6.622E+01	1.026E+02	5.328E+00	-0.197
TL-202	-5.879E+00		1.069E+01	1.653E+01	9.190E-01	-0.356
HG-203	9.408E-01		8.475E+00	1.415E+01	9.327E-01	0.066
BI-207	-1.043E+01		1.894E+01	3.041E+01	2.042E+00	-0.343
TL-207	1.937E+02		1.876E+02	3.249E+02	5.390E+01	0.596
TL-208	4.273E+00		1.192E+01	2.082E+01	1.489E+00	0.205
PO-209	8.930E+01		2.910E+03	4.734E+03	3.607E+02	0.019
BI-210	-1.046E+03		7.901E+02	1.266E+03	9.439E+01	-0.826
PB-210	-1.046E+03		7.901E+02	1.266E+03	9.439E+01	-0.826
PO-210	-1.046E+03		7.890E+02	1.266E+03	8.005E+01	-0.826
BI-211	4.341E+01		6.183E+01	1.066E+02	6.808E+00	0.407
PB-211	4.393E+01		2.940E+02	4.797E+02	2.988E+02	0.092
BI-212	-3.287E+01		8.594E+01	1.365E+02	1.176E+01	-0.241
PB-212	-4.036E-01		1.585E+01	2.683E+01	1.985E+00	-0.015
PO-212	-4.036E-01		1.585E+01	2.683E+01	1.985E+00	-0.015
BI-214	-5.048E+00		2.019E+01	3.285E+01	2.716E+00	-0.154
PB-214	3.488E+00		2.173E+01	3.623E+01	2.986E+00	0.096
PO-214	3.488E+00		2.173E+01	3.623E+01	2.986E+00	0.096
PO-215	1.937E+02		1.876E+02	3.249E+02	5.390E+01	0.596
PO-216	-4.036E-01		1.585E+01	2.683E+01	1.985E+00	-0.015
PO-218	3.488E+00		2.173E+01	3.623E+01	2.986E+00	0.096
RN-219	-3.111E+01		1.296E+02	2.064E+02	2.766E+01	-0.151
RN-220	-6.103E+03		7.434E+03	1.158E+04	7.153E+02	-0.527
RA-223	1.937E+02		1.876E+02	3.249E+02	5.390E+01	0.596
RA-224	-2.286E+01		1.787E+02	2.965E+02	1.752E+01	-0.077
RA-226	8.367E+01		1.896E+02	3.163E+02	2.321E+02	0.265
AC-227	5.676E-01		1.005E+02	1.674E+02	2.355E+01	0.003
PA-227	-3.193E+05		3.190E+05	Half-Life too short		
TH-227	5.676E-01		1.005E+02	1.674E+02	2.844E+01	0.003
AC-228	3.613E+01		5.581E+01	9.482E+01	9.921E+00	0.381
RA-228	3.613E+01		5.581E+01	9.482E+01	9.921E+00	0.381
TH-228	-4.036E-01		1.585E+01	2.683E+01	1.985E+00	-0.015
TH-229	-7.028E+01		1.199E+02	1.956E+02	1.064E+01	-0.359
TH-230	1.795E+02		2.557E+03	3.766E+03	2.443E+04	0.048
PA-231	-1.511E+02		4.062E+02	6.548E+02	9.148E+01	-0.231
TH-231	4.955E+01		1.311E+02	1.962E+02	3.360E+01	0.253
U-231	-1.338E+01		2.221E+01	3.474E+01	2.377E+00	-0.385
PA-233	4.334E+00		1.849E+01	3.092E+01	1.989E+00	0.140
PA-234	-6.427E+01		1.362E+02	2.112E+02	3.852E+01	-0.304
PA-234M	-2.639E+02		1.640E+03	2.623E+03	2.283E+02	-0.101
TH-234	6.192E+01		2.701E+02	4.156E+02	7.069E+01	0.149
U-234	-1.086E+04		1.105E+05	3.323E+04	3.324E+05	-0.327
U-235	-1.669E+01		4.624E+01	7.179E+01	1.168E+01	-0.233
NP-236	1.294E+01		1.895E+01	3.146E+01	1.670E+00	0.411

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L. Ided	Act error	MDA (pCi/FILTER)	MDA error	Act/MDA
U-238	6.192E+01		2.701E+02	4.156E+02	7.069E+01	0.149
NP-239	-2.443E+01		5.380E+01	7.429E+01	4.686E+00	-0.329
AM-243	2.293E-01		1.169E+01	1.922E+01	1.258E+00	0.012
CM-243	-5.792E-01		2.000E+01	3.233E+01	2.123E+00	-0.018
AM-246	2.165E+01		5.026E+01	8.715E+01	5.756E+00	0.248
CM-247	2.447E+00		1.150E+01	1.894E+01	1.006E+00	0.129
CF-249	-1.562E+01		1.329E+01	1.978E+01	1.047E+00	-0.790
CF-251	1.937E+01		2.967E+01	5.213E+01	2.750E+00	0.372
ANH-511	-9.662E+00		1.109E+01	1.924E+01	1.150E+00	-0.502

VAX/VMS Nuclide Identification Report Generated

GEL Laboratories LLC
2040 Savage Road
Charleston, SC 29414

DETECTOR DATA

Configuration	: SYS$SYSROOT:[ALPHA.ARCHIVE.GAMMA]G1202005630		
Acquisition date	: 4-JAN-2010 19:55:27	Detector SN#	:
Detector ID	: GAM07	Sensitivity	: 5.000
Geometry	: JAR	Energy tolerance	: 1.500
Elapsed live time	: 0 01:00:00.00	Abundance limit	: 75.000
Elapsed real time	: 0 01:00:00.93	Half life ratio	: 8.000

SAMPLE DATA

Sample date	: 4-JAN-2010 00:00:00	Nuclide Library	: LIQUI
Sample ID	: G1202005630	Analyst initials	: MXR1
Batch Number	: 937282	Sample Quantity	: 1.0000E+00 FILTER
Recovery	: 1.00000	Carrier Weight	: 0.00000

QC DATA

CALIB. DATE/TIME	: 20-JUL-2009 14:01:33	MS Isotope	:
MSD DPM	: 0.000	MSD Isotope	:
LCS DPM	: 0.000	LCS Isotope	:
LCSD DPM	: 0.000	LCSD Isotope	:

Combined Activity-MDA Report

---- Identified Nuclides ----

Nuclide	Activity (pCi/FILTER)	Act Error	DLC (pCi/FILTER)	TPU
CO-57	3.866E+01	9.589E+00	4.665E+00	4.907E+00
CO-60	9.946E+02	8.604E+01	5.331E+00	4.501E+01
CD-109	5.454E+03	5.794E+02	1.456E+02	3.006E+02
SN-126	5.477E+02	5.818E+01	1.466E+01	3.019E+01
BA-137M	8.265E+02	6.864E+01	8.559E+00	3.598E+01
CS-137	8.737E+02	7.270E+01	9.048E+00	3.811E+01
TH-232	4.649E+05	4.796E+06	7.152E+03	2.447E+06
NP-237	1.608E+03	3.674E+02	4.336E+01	1.881E+02
PU-237	2.728E+04	2.137E+03	4.121E+02	1.124E+03
AM-241	2.460E+03	2.089E+02	3.716E+01	1.094E+02

---- Non-Identified Nuclides ----

Nuclide	Key-Line Activity (pCi/FILTER)	K.L Act error	DLC (pCi/FILTER)	TPU
BE-7	2.303E+01	9.340E+01	7.780E+01	4.765E+01 NOT IDENT.
NA-22	1.663E+00	7.331E+00	6.445E+00	3.740E+00 NOT IDENT.
NA-24	2.332E+00	1.318E+01	1.162E+01	6.726E+00 NOT IDENT.
AL-26	-2.493E+00	6.013E+00	4.464E+00	3.068E+00 NOT IDENT.
K-40	2.259E+01	7.405E+01	6.949E+01	3.778E+01 NOT IDENT.
TI-44	-7.053E+00	7.594E+00	6.071E+00	3.875E+00 NOT IDENT.
SC-46	-8.182E-01	1.270E+01	1.046E+01	6.479E+00 NOT IDENT.
V-48	-2.822E+00	1.552E+01	1.256E+01	7.918E+00 NOT IDENT.
CR-51	2.052E+00	6.807E+01	5.727E+01	3.473E+01 NOT IDENT.
MN-52	-7.346E+00	6.235E+00	2.985E+00	3.182E+00 FAIL ABUN
MN-54	5.796E+00	1.135E+01	9.877E+00	5.791E+00 NOT IDENT.
CO-56	9.474E+00	1.301E+01	1.144E+01	6.641E+00 NOT IDENT.
CO-58	7.446E+00	1.121E+01	9.893E+00	5.720E+00 NOT IDENT.
FE-59	2.660E+00	2.505E+01	2.156E+01	1.278E+01 NOT IDENT.
ZN-65	8.379E+00	2.807E+01	2.452E+01	1.432E+01 NOT IDENT.
GE-68	-2.709E+02	4.264E+02	3.445E+02	2.176E+02 NOT IDENT.
AS-73	-7.556E+01	2.313E+02	1.939E+02	1.180E+02 NOT IDENT.

AS-74	-3.421E+00	1.481E+01	1.239E+01	7.558E+00	NOT IDENT.
SE-75	-9.294E+00	1.056E+01	8.445E+00	5.390E+00	FAIL ABUN
BR-77	-1.912E+01	4.840E+01	4.041E+01	2.469E+01	FAIL ABUN
SR-82	1.688E+01	8.353E+01	7.114E+01	4.262E+01	NOT IDENT.
RB-83	-1.179E+01	1.815E+01	1.483E+01	9.259E+00	NOT IDENT.
RB-84	1.273E+01	2.022E+01	1.760E+01	1.032E+01	NOT IDENT.
KR-85	-2.609E+03	2.219E+03	1.758E+03	1.132E+03	NOT IDENT.
SR-85	-1.151E+01	9.787E+00	7.753E+00	4.994E+00	NOT IDENT.
RB-86	-1.846E+02	1.684E+02	1.303E+02	8.596E+01	NOT IDENT.
Y-88	3.087E+00	5.653E+00	5.572E+00	2.885E+00	NOT IDENT.
ZR-88	4.903E+00	9.141E+00	7.836E+00	4.664E+00	NOT IDENT.
Y-91	-1.487E+03	3.121E+03	2.459E+03	1.592E+03	NOT IDENT.
NB-94	-4.021E+00	9.947E+00	8.088E+00	5.075E+00	NOT IDENT.
NB-95	4.450E+00	1.055E+01	9.174E+00	5.385E+00	NOT IDENT.
NB-95M	-2.509E+01	2.598E+01	2.092E+01	1.326E+01	NOT IDENT.
ZR-95	9.772E+00	1.820E+01	1.600E+01	9.285E+00	NOT IDENT.
NB-97	2.298E+01	2.797E+01	2.235E+01	1.427E+01	NOT IDENT.
ZR-97	-8.709E+02	4.802E+02	3.369E+02	2.451E+02	NOT IDENT.
MO-99	-1.015E+02	1.012E+02	7.641E+01	5.167E+01	NOT IDENT.
TC-99M	-5.710E+01	5.585E+01	4.209E+01	2.850E+01	NOT IDENT.
RH-101	3.995E+00	7.848E+00	6.973E+00	4.004E+00	NOT IDENT.
RH-102	-5.230E+00	1.073E+01	8.485E+00	5.477E+00	NOT IDENT.
RU-103	4.476E+00	9.643E+00	8.169E+00	4.920E+00	NOT IDENT.
RH-106	1.082E+01	8.537E+01	7.341E+01	4.356E+01	NOT IDENT.
RU-106	1.082E+01	8.536E+01	7.341E+01	4.355E+01	NOT IDENT.
AG-108M	-9.322E+00	1.120E+01	8.662E+00	5.715E+00	NOT IDENT.
AG-110M	6.384E+00	1.232E+01	9.572E+00	6.284E+00	NOT IDENT.
IN-111	-4.501E+00	8.819E+00	7.284E+00	4.500E+00	NOT IDENT.
IN-113M	1.007E+01	1.334E+01	1.160E+01	6.809E+00	NOT IDENT.
SN-113	1.007E+01	1.334E+01	1.160E+01	6.809E+00	NOT IDENT.
IN-114M	1.265E+01	3.456E+01	3.042E+01	1.763E+01	NOT IDENT.
CD-115	1.425E+00	3.748E+01	3.231E+01	1.912E+01	NOT IDENT.
SN-117M	2.186E+00	6.200E+00	5.144E+00	3.164E+00	NOT IDENT.
SB-122	8.648E+00	1.584E+01	1.409E+01	8.080E+00	NOT IDENT.
I-123	6.732E+00	1.804E+01	1.499E+01	9.206E+00	NOT IDENT.
TE-123M	2.282E+00	6.118E+00	5.082E+00	3.122E+00	NOT IDENT.
I-124	6.153E+00	1.696E+01	1.488E+01	8.654E+00	NOT IDENT.
SB-124	-5.005E-01	1.448E+01	1.182E+01	7.387E+00	NOT IDENT.
SB-125	-2.620E+01	3.069E+01	2.371E+01	1.566E+01	NOT IDENT.
TE-125M	-4.619E+02	1.617E+03	1.307E+03	8.248E+02	NOT IDENT.
I-126	-1.493E+01	2.684E+01	1.821E+01	1.369E+01	NOT IDENT.
SB-126	-4.550E+00	1.812E+01	1.488E+01	9.243E+00	NOT IDENT.
SB-127	1.031E+01	3.219E+01	2.791E+01	1.642E+01	NOT IDENT.
XE-127	1.132E+01	8.959E+00	8.184E+00	4.572E+00	NOT IDENT.
I-131	4.806E+00	1.011E+01	8.691E+00	5.157E+00	NOT IDENT.
TE-132	-2.463E+00	8.216E+00	6.903E+00	4.192E+00	NOT IDENT.
BA-133	-1.658E+00	1.261E+01	1.045E+01	6.431E+00	NOT IDENT.
I-133	2.188E+01	1.936E+01	1.795E+01	9.881E+00	NOT IDENT.
CS-134	1.065E+01	1.435E+01	1.275E+01	7.323E+00	NOT IDENT.
CS-135	6.102E+01	4.141E+01	3.788E+01	2.114E+01	NOT IDENT.
I-135	1.040E+02	2.180E+02	1.998E+02	1.112E+02	NOT IDENT.
CS-136	1.265E+01	1.818E+01	1.640E+01	9.275E+00	NOT IDENT.
CE-139	-2.517E+00	6.407E+00	5.034E+00	3.269E+00	NOT IDENT.
BA-140	-7.408E+00	3.525E+01	2.971E+01	1.798E+01	NOT IDENT.
LA-140	2.680E+00	6.391E+00	5.930E+00	3.261E+00	NOT IDENT.
CE-141	1.034E+00	1.024E+01	8.401E+00	5.225E+00	NOT IDENT.
CE-143	1.101E+01	2.578E+01	2.224E+01	1.315E+01	NOT IDENT.
CE-144	-3.911E+01	4.795E+01	3.688E+01	2.447E+01	NOT IDENT.
PM-144	-4.285E+00	8.840E+00	7.098E+00	4.510E+00	NOT IDENT.
PR-144	-2.882E+02	5.945E+02	4.774E+02	3.033E+02	NOT IDENT.
PM-146	3.039E+00	1.511E+01	1.258E+01	7.708E+00	NOT IDENT.
ND-147	3.092E+01	6.651E+01	5.904E+01	3.394E+01	NOT IDENT.
PM-149	-1.017E+02	2.702E+02	2.223E+02	1.379E+02	NOT IDENT.
EU-152	1.414E+01	2.540E+01	2.208E+01	1.296E+01	FAIL ABUN
GD-153	5.349E+00	1.543E+01	1.308E+01	7.874E+00	NOT IDENT.
EU-154	2.638E+00	2.101E+01	1.813E+01	1.072E+01	FAIL ABUN
EU-155	1.083E+01	2.209E+01	1.884E+01	1.127E+01	FAIL ABUN
TB-160	-3.073E+01	4.946E+01	3.893E+01	2.524E+01	FAIL ABUN
HO-166M	2.719E+00	1.922E+01	1.640E+01	9.807E+00	NOT IDENT.
TM-171	-1.184E+03	5.364E+03	4.465E+03	2.737E+03	FAIL ABUN
HF-175	6.229E-01	8.281E+00	6.961E+00	4.225E+00	FAIL ABUN
LU-176	5.341E+00	6.985E+00	6.157E+00	3.564E+00	FAIL ABUN
LU-177	-3.530E+01	5.870E+01	4.875E+01	2.995E+01	NOT IDENT.
LU-177M	-2.427E+01	5.434E+01	4.349E+01	2.772E+01	FAIL ABUN
HF-181	-8.115E+00	1.180E+01	9.143E+00	6.023E+00	NOT IDENT.
W-181	-2.624E+01	6.405E+01	5.284E+01	3.268E+01	NOT IDENT.
TA-182	8.596E+00	3.560E+01	3.112E+01	1.816E+01	NOT IDENT.
RE-183	-8.560E+00	2.244E+01	1.768E+01	1.145E+01	FAIL ABUN

RE-184	3.757E+01	5.622E+01	4.973E+01	2.869E+01 FAIL ABUN
OS-185	-1.422E+01	1.133E+01	8.472E+00	5.783E+00 FAIL ABUN
RE-188	1.312E+00	3.164E+01	2.575E+01	1.614E+01 NOT IDENT.
W-188	1.170E+03	1.740E+03	1.528E+03	8.879E+02 NOT IDENT.
IR-192	-2.237E+00	7.666E+00	6.300E+00	3.911E+00 NOT IDENT.
AU-195	1.033E+01	4.407E+01	3.707E+01	2.249E+01 NOT IDENT.
TL-200	4.020E+00	1.486E+01	1.261E+01	7.582E+00 NOT IDENT.
TL-201	-2.022E+01	6.489E+01	5.132E+01	3.311E+01 NOT IDENT.
TL-202	-5.879E+00	1.048E+01	8.271E+00	5.347E+00 NOT IDENT.
HG-203	9.408E-01	8.305E+00	7.079E+00	4.237E+00 NOT IDENT.
BI-207	-1.043E+01	1.856E+01	1.521E+01	9.472E+00 NOT IDENT.
TL-207	1.937E+02	1.838E+02	1.626E+02	9.380E+01 FAIL ABUN
TL-208	4.273E+00	1.168E+01	1.042E+01	5.959E+00 NOT IDENT.
PO-209	8.930E+01	2.852E+03	2.368E+03	1.455E+03 NOT IDENT.
BI-210	-1.046E+03	7.743E+02	6.334E+02	3.952E+02 NOT IDENT.
PB-210	-1.046E+03	7.743E+02	6.334E+02	3.952E+02 NOT IDENT.
PO-210	-1.046E+03	7.732E+02	6.334E+02	3.946E+02 NOT IDENT.
BI-211	4.341E+01	6.059E+01	5.332E+01	3.092E+01 NOT IDENT.
PB-211	4.393E+01	2.882E+02	2.400E+02	1.470E+02 NOT IDENT.
BI-212	-3.287E+01	8.422E+01	6.829E+01	4.297E+01 NOT IDENT.
PB-212	-4.036E-01	1.553E+01	1.342E+01	7.923E+00 FAIL ABUN
PO-212	-4.036E-01	1.553E+01	1.342E+01	7.923E+00 FAIL ABUN
BI-214	-5.048E+00	1.979E+01	1.644E+01	1.010E+01 NOT IDENT.
PB-214	3.488E+00	2.129E+01	1.812E+01	1.086E+01 FAIL ABUN
PO-214	3.488E+00	2.129E+01	1.812E+01	1.086E+01 FAIL ABUN
PO-215	1.937E+02	1.838E+02	1.626E+02	9.380E+01 FAIL ABUN
PO-216	-4.036E-01	1.553E+01	1.342E+01	7.923E+00 FAIL ABUN
PO-218	3.488E+00	2.129E+01	1.812E+01	1.086E+01 FAIL ABUN
RN-219	-3.111E+01	1.270E+02	1.032E+02	6.480E+01 NOT IDENT.
RN-220	-6.103E+03	7.285E+03	5.795E+03	3.717E+03 NOT IDENT.
RA-223	1.937E+02	1.838E+02	1.626E+02	9.380E+01 FAIL ABUN
RA-224	-2.286E+01	1.751E+02	1.484E+02	8.935E+01 NOT IDENT.
RA-226	8.367E+01	1.858E+02	1.582E+02	9.480E+01 NOT IDENT.
AC-227	5.676E-01	9.849E+01	8.377E+01	5.025E+01 NOT IDENT.
PA-227	-3.193E+11	6.253E+11	0.000E+00	3.190E+11 SHORT HLIF
TH-227	5.676E-01	9.849E+01	8.377E+01	5.025E+01 NOT IDENT.
AC-228	3.613E+01	5.469E+01	4.744E+01	2.791E+01 NOT IDENT.
RA-228	3.613E+01	5.469E+01	4.744E+01	2.791E+01 NOT IDENT.
TH-228	-4.036E-01	1.553E+01	1.342E+01	7.923E+00 FAIL ABUN
TH-229	-7.028E+01	1.175E+02	9.787E+01	5.996E+01 FAIL ABUN
TH-230	1.795E+02	2.506E+03	1.884E+03	1.278E+03 NOT IDENT.
PA-231	-1.511E+02	3.981E+02	3.276E+02	2.031E+02 NOT IDENT.
TH-231	4.955E+01	1.285E+02	9.814E+01	6.555E+01 NOT IDENT.
U-231	-1.338E+01	2.177E+01	1.738E+01	1.111E+01 NOT IDENT.
PA-233	4.334E+00	1.812E+01	1.547E+01	9.244E+00 FAIL ABUN
PA-234	-6.427E+01	1.335E+02	1.056E+02	6.810E+01 NOT IDENT.
PA-234M	-2.639E+02	1.607E+03	1.312E+03	8.202E+02 NOT IDENT.
TH-234	6.192E+01	2.647E+02	2.079E+02	1.350E+02 NOT IDENT.
U-234	-1.086E+04	1.083E+05	1.663E+04	5.524E+04 NOT IDENT.
U-235	-1.669E+01	4.532E+01	3.592E+01	2.312E+01 NOT IDENT.
NP-236	1.294E+01	1.857E+01	1.574E+01	9.477E+00 NOT IDENT.
U-238	6.192E+01	2.647E+02	2.079E+02	1.350E+02 NOT IDENT.
NP-239	-2.443E+01	5.272E+01	3.717E+01	2.690E+01 NOT IDENT.
AM-243	2.293E-01	1.146E+01	9.614E+00	5.847E+00 FAIL ABUN
CM-243	-5.792E-01	1.960E+01	1.617E+01	9.998E+00 NOT IDENT.
AM-246	2.165E+01	4.925E+01	4.360E+01	2.513E+01 NOT IDENT.
CM-247	2.447E+00	1.127E+01	9.474E+00	5.750E+00 NOT IDENT.
CF-249	-1.562E+01	1.303E+01	9.894E+00	6.649E+00 NOT IDENT.
CF-251	1.937E+01	2.908E+01	2.608E+01	1.484E+01 NOT IDENT.
ANH-511	-9.662E+00	1.086E+01	9.625E+00	5.544E+00 NOT IDENT.

GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417

GAMMA SPECTROSCOPY BACKGROUND REPORT

ENERGY	MDA COUNTS
46.50	498.0375
46.50	498.0375
46.50	498.0375
48.70	514.2686
49.72	535.6018
51.35	571.2601
52.39	594.7767
52.97	612.8906
53.15	637.1208
53.20	637.2004
53.44	628.9570
54.07	625.1481
56.28	643.0399
56.28	643.0433
57.37	650.5488
57.53	684.2098
57.53	684.2134
57.60	684.3248
57.98	456.6310
57.98	456.6310
59.00	457.7378
59.32	458.0840
59.32	458.0840
59.40	458.1690
59.54	458.3199
59.54	458.3199
59.72	458.5140
60.01	458.8242
61.10	196.3003
61.14	196.3182
61.30	196.3908
63.00	170.6708
63.29	170.7828
63.29	170.7828
63.58	175.3142
64.28	181.4914
64.62	0.0000
65.12	205.9765
65.20	206.0129
65.20	206.0129
66.05	207.3863
66.72	201.7557
66.83	201.8055
66.91	193.9254
67.20	201.9673
67.20	201.9673
67.67	194.2455
67.75	194.2784
67.85	194.3202
68.90	219.6005
68.90	219.6005
69.30	219.7883
69.67	212.0000
70.82	196.5501
70.82	196.5501
70.83	196.5541
72.80	212.3882
72.80	212.3882
72.87	212.4194
72.87	212.4194
74.67	211.1909
74.81	211.2508
74.81	211.2508
74.81	211.2508
74.81	211.2508
74.81	211.2508
74.81	211.2508

74.81	211.2508
74.97	197.2312
74.97	197.2312
75.28	197.3548
75.70	185.4281
77.11	222.3331
77.11	222.3331
77.11	222.3331
77.11	222.3331
77.11	222.3331
77.11	222.3331
77.11	222.3331
78.38	237.0754
79.62	220.3851
79.80	220.4624
79.80	220.4624
80.11	223.6445
80.18	223.6747
80.30	223.7262
80.30	223.7262
80.57	217.7378
81.00	236.2481
81.07	236.2799
81.07	236.2799
81.07	236.2799
82.60	242.0785
83.37	259.3073
83.78	247.2253
83.78	247.2253
83.78	247.2253
84.21	233.5942
84.21	233.5942
84.90	240.0497
85.43	243.3672
86.29	262.2684
86.50	204.7511
86.54	204.7663
86.59	204.7856
86.72	204.8341
86.79	204.8594
86.94	204.9171
87.30	205.0518
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87.30	205.0518
87.30	205.0518
87.30	205.0518
87.57	205.1530
87.88	205.2694
88.03	205.3250
88.36	205.4485
88.47	205.4900
89.36	148.9351
89.95	173.9421
91.11	144.7342
92.29	141.9174
92.38	141.9403
92.38	141.9403
93.35	132.4948
94.00	137.6511
94.67	152.4264
94.67	152.4279
94.90	150.3999
94.90	150.3999
94.90	150.3999
95.87	157.9752
95.87	157.9752
96.73	146.6836
97.43	118.5354
98.44	112.4341
98.44	112.4341
98.88	119.8784
99.55	109.4860
99.55	109.4860
99.86	115.8629
100.00	115.8897
100.10	113.8024

103.18	112.2648
103.76	112.3716
105.00	101.9756
105.31	108.4035
108.00	116.3431
109.28	118.7177
110.05	0.0000
111.00	124.4005
111.00	124.4005
111.76	132.0632
112.95	114.0203
115.19	120.8884
115.19	120.8884
115.19	120.8884
116.30	141.6342
117.00	159.1012
117.00	159.1012
117.66	151.1335
121.11	140.4750
121.62	140.5807
121.78	140.6135
122.06	130.8569
122.32	142.3607
122.32	142.3607
122.32	142.3607
123.07	145.7929
127.23	134.0329
129.76	144.4356
131.20	119.3170
133.02	134.0165
133.54	155.1715
135.34	141.1102
136.00	118.9948
136.25	109.0228
136.48	100.1541
140.51	132.0250
140.51	132.0250
142.18	111.0114
142.65	109.9589
143.76	114.6130
144.24	115.8100
144.24	115.8100
144.24	115.8100
145.22	122.7126
145.44	112.6119
147.16	108.3477
152.43	105.6675
152.70	121.6159
153.22	113.7339
154.21	105.9031
154.21	105.9031
154.21	105.9031
155.03	107.1509
156.02	124.4024
158.56	120.2121
159.00	119.1307
159.00	119.1307
160.31	113.5845
161.27	120.6084
162.32	132.2622
162.64	132.3125
163.35	109.3944
163.89	112.9227
165.85	125.8904
167.43	134.2253
171.28	137.1541
171.86	137.2465
172.10	137.2849
176.55	120.1520
176.60	120.1593
181.06	122.5254
184.41	134.4832
185.71	128.4724
186.00	127.6271
186.21	127.6567
190.27	128.2192
192.34	139.2124
193.63	139.4041

197.04	130.0422
198.01	126.5829
198.60	149.1178
200.40	163.7975
201.83	153.2246
202.84	129.0232
205.31	170.0537
208.36	152.4346
208.81	137.0719
209.75	127.2061
209.75	127.2061
210.97	131.9107
215.65	135.2666
216.55	125.3238
218.09	151.1652
222.10	135.1994
223.80	151.0811
226.40	124.6746
227.00	132.1380
227.08	132.1489
227.20	134.0115
228.16	135.9833
228.18	135.9867
228.18	135.9867
231.56	115.0750
235.69	158.3711
236.00	151.8935
236.00	151.8935
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238.63	141.0510
238.63	141.0510
238.63	141.0510
239.00	142.9682
240.98	161.9486
241.98	177.0873
241.98	177.0873
241.98	177.0873
244.69	142.7679
245.39	153.1968
247.94	132.8222
248.90	124.4499
249.79	133.9841
252.40	110.6498
252.85	105.9630
252.85	105.9630
254.15	125.0280
256.20	117.6606
256.20	117.6606
260.50	120.0034
260.90	117.1875
262.80	114.5142
264.65	128.0766
268.24	100.6629
268.79	103.5868
269.46	109.4042
269.46	109.4042
269.46	109.4042
271.23	108.6049
273.65	118.4543
276.40	100.3850
277.35	103.3607
277.60	98.5510
277.60	98.5510
278.00	101.4832
278.60	110.2357
279.20	106.4198
279.53	106.4484
280.46	105.5605
281.68	100.8182
283.67	111.6624
284.30	100.0610
285.00	104.9777
285.90	111.8625
286.10	121.6087
286.10	121.6087
287.40	111.0237
288.45	115.0147
290.67	109.3596

290.80	109.3716
291.72	114.3382
293.26	116.4343
293.70	113.5379
295.21	121.5119
295.21	121.5119
295.21	121.5119
295.96	119.6228
296.50	109.8638
297.23	108.9455
298.57	118.8841
299.80	96.3790
299.80	96.3790
300.09	84.5959
300.09	84.5959
300.09	84.5959
300.09	84.5959
300.12	84.5985
301.29	92.5513
302.84	110.4055
303.76	111.4706
303.91	111.4827
304.40	106.5910
304.40	106.5910
304.84	115.5129
306.84	101.8464
308.46	123.7526
311.98	107.2073
316.51	91.6350
318.01	83.7603
319.02	101.7852
319.41	101.8148
320.08	92.8765
323.87	90.1318
323.87	90.1318
323.87	90.1318
325.23	109.2678
328.77	113.5707
329.70	109.6237
329.70	109.6237
330.00	114.6784
333.44	95.8016
334.20	85.7639
334.20	85.7639
334.30	85.7704
338.28	107.2648
338.28	107.2648
338.28	107.2648
338.32	107.2681
338.32	107.2681
340.50	108.4466
340.57	108.4515
343.40	91.4035
344.27	80.2814
345.85	98.6814
350.59	88.8001
351.07	98.0186
351.92	108.2935
351.92	108.2935
351.92	108.2935
355.39	98.3101
356.01	101.4261
364.48	95.8268
366.43	109.3659
367.43	104.2765
367.94	95.0168
369.80	105.4754
374.96	96.4966
383.85	102.2752
387.95	134.9839
388.63	137.1366
391.69	104.8889
391.69	104.8889
392.90	113.3674
398.62	106.4032
400.65	117.0872
401.10	108.6784
401.81	105.5603

402.60	97.1632
404.84	100.4722
410.95	102.9752
411.60	96.6445
413.65	119.0957
414.70	112.7884
415.30	118.1509
415.76	107.5375
417.63	111.9230
418.52	108.7843
423.70	96.2856
427.08	113.6327
427.89	121.1953
432.53	97.8692
433.00	95.7440
433.93	121.6298
439.47	115.5471
439.56	115.5520
439.89	112.3345
443.98	94.1951
444.90	100.7453
445.03	100.7538
445.03	100.7538
445.03	100.7538
453.90	106.7120
463.38	111.6637
468.07	130.6156
473.00	108.9610
475.06	124.5110
475.35	112.4092
476.78	102.5702
477.59	100.4088
477.96	99.3260
482.03	111.7140
484.57	79.7476
487.03	98.7086
490.36	86.6634
492.35	80.0826
497.08	69.1341
507.63	148.0085
510.53	77.4855
510.84	84.2377
511.00	84.2445
511.85	92.1480
511.85	92.1480
513.99	118.8000
513.99	118.8000
520.41	82.1711
520.65	82.1822
527.90	73.4221
528.96	59.8576
529.64	58.9713
529.87	60.7924
531.02	65.3678
537.32	74.6829
543.00	73.0664
546.56	60.3877
549.76	72.3961
552.65	65.1567
555.20	53.2932
563.23	65.4930
563.90	69.2047
568.70	82.3120
569.32	82.3380
569.50	82.3446
569.67	82.3511
573.80	61.1902
574.00	55.6318
574.64	60.2869
578.91	85.5021
579.30	84.5882
583.14	74.4980
585.48	70.8511
591.81	71.0607
592.07	69.1980
593.00	60.8090
595.88	65.5737
600.56	65.7156

602.52	60.1375
602.71	59.2025
602.71	59.2025
603.60	59.2271
604.41	53.6059
604.70	54.5534
609.31	66.9213
610.33	58.4656
612.46	57.5777
614.37	66.1309
618.01	64.3460
621.84	54.0303
621.84	54.0303
631.29	52.3534
633.02	55.2515
633.10	55.2529
634.78	80.0810
635.90	68.6742
636.97	62.0277
645.85	69.9328
646.12	73.7722
656.30	70.5690
657.75	67.4023
657.90	67.4075
661.65	58.8346
661.65	58.8346
664.57	43.4564
666.33	61.2073
666.33	61.2073
675.00	54.3184
677.61	67.9714
685.20	61.3681
692.80	52.7660
695.00	47.9245
696.49	54.8037
696.49	54.8037
697.00	56.7723
697.49	53.8466
698.33	57.7828
698.50	57.7872
699.00	53.8801
702.63	67.6961
706.10	63.8606
706.58	63.8733
706.67	63.8749
709.31	66.8943
711.68	64.0050
713.82	50.2629
717.42	65.1395
720.50	55.3383
721.93	45.4823
722.20	42.5202
722.78	39.5625
722.78	39.5625
722.89	39.5645
722.95	39.5654
723.30	47.4855
724.18	55.4189
727.18	63.4109
733.00	71.5008
735.90	54.6818
739.58	73.6766
742.81	53.8326
744.21	58.8488
747.13	62.9093
751.79	59.0216
752.31	59.0331
753.82	59.0677
755.35	53.0919
756.15	50.1025
756.87	55.1276
763.13	52.2450
763.93	48.2414
765.79	54.3098
766.42	60.3589
766.84	60.3677
776.49	62.6085
778.00	67.6952

778.57	62.6569
778.89	62.6645
783.80	67.8424
785.46	74.9774
792.07	59.9262
795.84	53.9071
796.30	56.9680
798.80	69.2385
801.93	66.2600
805.60	65.3281
810.29	66.4615
810.76	53.1781
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817.79	69.7183
818.51	64.6088
819.60	64.6350
826.30	64.7903
828.27	64.8349
831.60	68.0029
831.96	65.9516
834.83	54.6718
836.80	69.1608
846.75	67.3328
848.13	57.0007
856.28	71.7138
856.80	72.7668
860.37	72.8574
867.32	66.7719
867.82	68.8698
871.10	94.0199
873.19	75.2695
874.81	64.8518
875.33	62.7700
876.40	68.0262
879.36	91.1418
880.27	77.5482
880.51	74.4096
881.50	69.1936
883.24	69.2339
884.67	65.0697
889.25	67.2719
896.60	73.7615
898.02	75.9041
899.00	83.3126
903.28	80.2620
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911.07	79.4110
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920.93	80.7314
925.00	102.1125
925.24	95.7393
926.50	87.2651
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937.48	95.0514
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946.00	101.7400
949.00	90.0457
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964.01	81.8596
966.15	71.1369
968.20	63.6324
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969.11	71.2030
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989.30	69.4813
996.32	73.9849
1001.03	61.0162
1001.68	53.4000
1004.76	61.0859
1021.30	61.3936
1024.50	62.5504
1034.80	55.9564
1036.00	51.3880
1037.82	56.0060
1038.57	56.9368
1038.76	56.9393

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1046.59	59.8346
1048.07	57.0982
1050.47	68.1977
1050.47	68.1977
1062.04	66.5801
1063.62	67.5345
1076.63	78.9335
1077.35	70.5913
1078.86	55.7544
1085.78	60.5223
1093.90	57.8626
1099.22	59.8203
1112.02	59.0984
1112.84	53.4816
1115.52	58.2183
1120.29	66.7589
1120.51	63.9409
1121.28	57.3712
1124.00	55.5334
1129.67	54.6771
1131.51	50.9326
1147.95	38.8462
1167.94	40.8290
1173.22	27.6666
1175.09	34.3623
1177.93	24.5633
1189.05	21.0780
1204.90	25.9772
1205.75	25.0203
1213.00	22.1755
1221.42	22.2251
1230.97	16.4681
1235.34	14.5471
1236.41	13.5807
1238.25	10.6755
1246.25	11.6704
1260.41	10.7364
1271.85	10.7677
1274.45	12.7339
1274.54	11.7544
1291.56	17.7070
1298.22	12.8096
1312.09	16.8084
1325.50	20.4065
1325.50	20.4065
1332.49	8.9432
1333.61	8.9454
1360.21	5.0016
1362.66	5.0047
1365.15	6.0090
1368.21	5.0112
1368.53	5.0116
1376.25	5.0208
1384.27	5.0303
1394.10	3.0251
1395.20	7.0604
1407.95	5.0582
1434.06	10.1774
1436.60	4.0732
1457.56	15.3479
1460.81	7.1675
1489.15	8.2435
1509.49	6.2104
1596.49	4.2179
1620.62	4.2393
1678.03	4.2891
1691.02	7.5252
1691.02	7.5252
1706.46	5.3916
1750.46	3.7291
1764.49	5.6089
1770.23	7.4866
1771.40	7.4886
1791.20	10.3355
1808.65	6.5989
1836.01	2.8426

TOTAL URANIUM BY GAMMA SPEC REPORT
Sample:G1202005630

Total Uranium Activity	1.7648E+02	ug/g
Total Uranium Counting Unc.	7.8767E+02	ug/g
Total Uranium Tpu	4.0187E-04	ug/g
Total Uranium Mda	6.1876E+02	ug/g

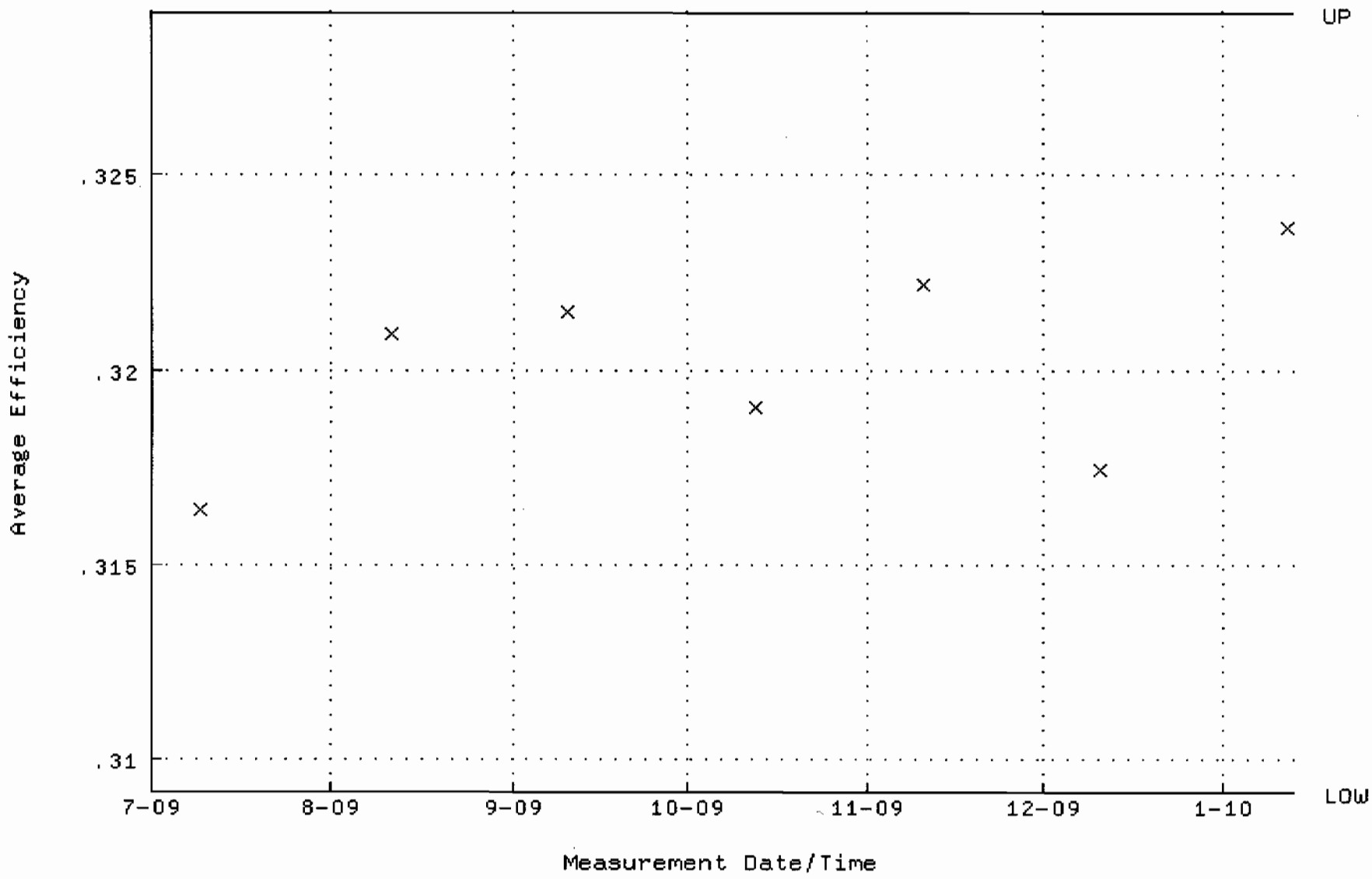
GEL Laboratories LLC
2040 SAVAGE ROAD
CHARLESTON ,SC 29417
GROSS GAMMA REPORT

BATCH ID	: 937282	SAMPLE ID	: G1202005630
ANALYST	: MXR1	DETECTOR	: GAM07
SAMPLE DATE	: 4-JAN-2010 00:00:00.00	COUNT TIME	: 0 01:00:00.00
ANALYSIS DATE:	4-JAN-2010 19:55:27.19	SAMPLE ALQT:	1.000 FILTER

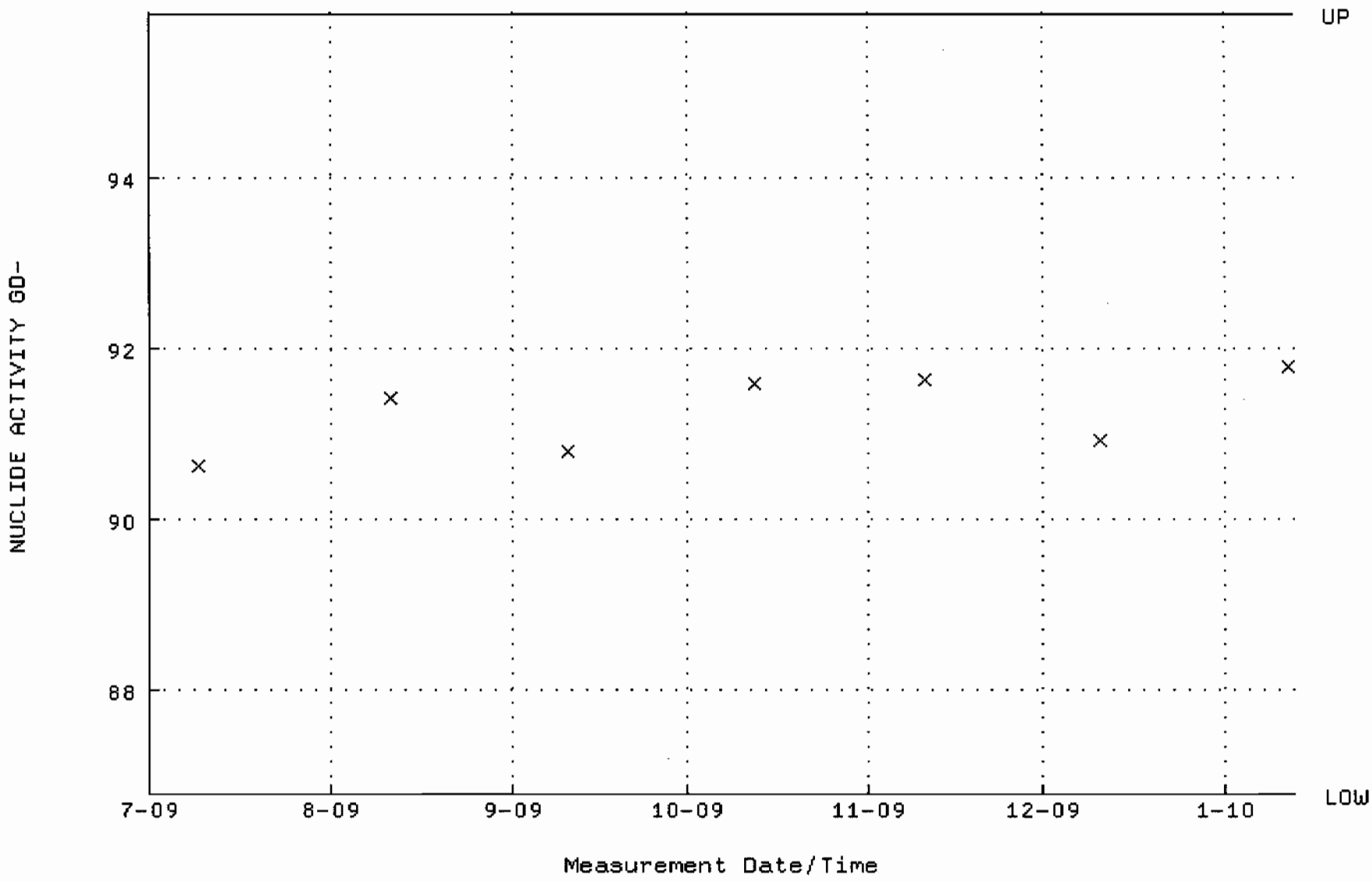
GROSS GAMMA ACTIVITY (pCi/FILTER)	: 3.813E+03
GROSS GAMMA ERROR (pCi/FILTER)	: 1.303E+02
GROSS GAMMA MDA (pCi/FILTER)	: 2.721E+02
GROSS GAMMA DLC (pCi/FILTER)	: 1.328E+02

BACKGROUND AND EFFICIENCY DATA

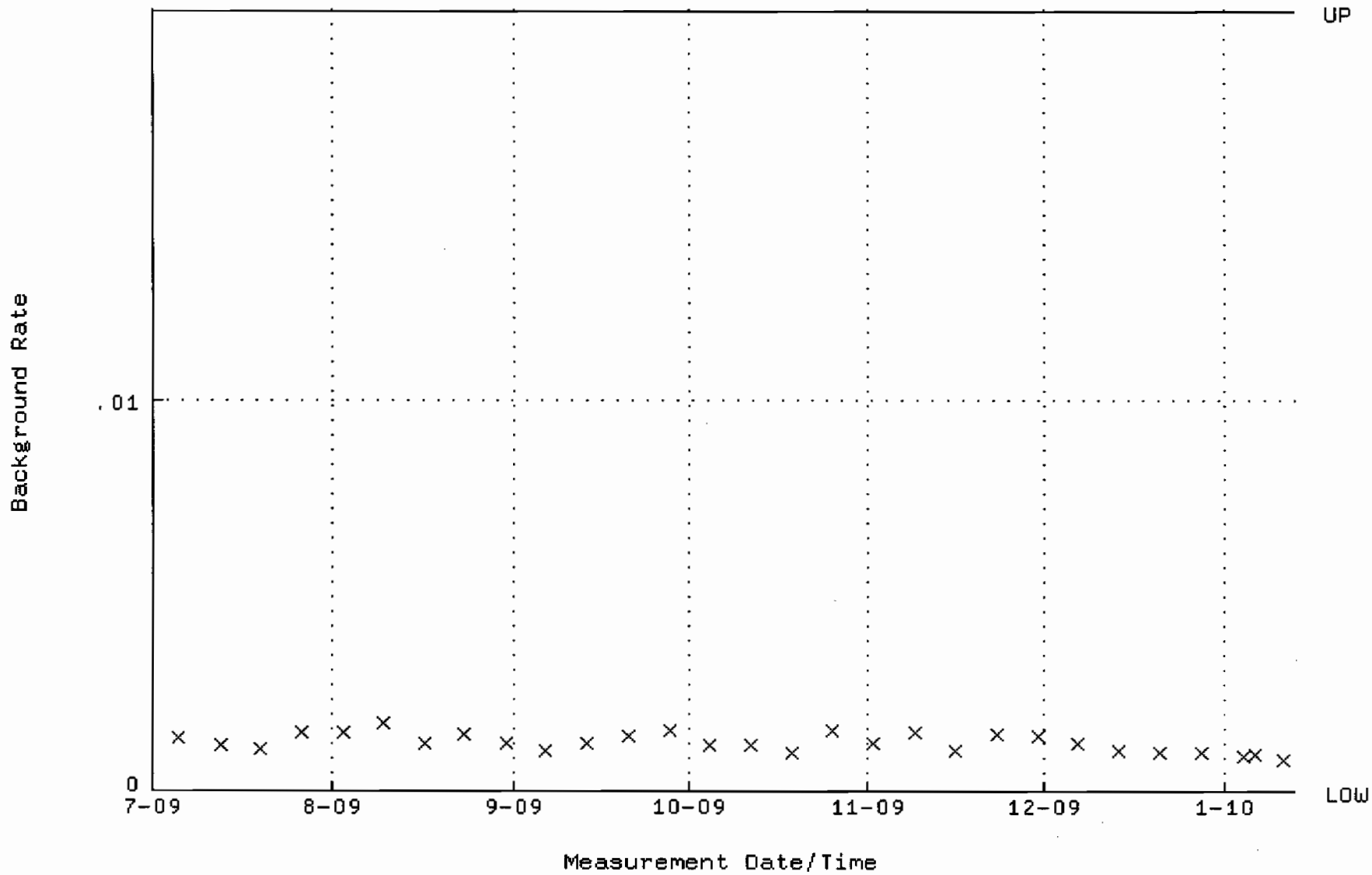
QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.309161 through 0.329161



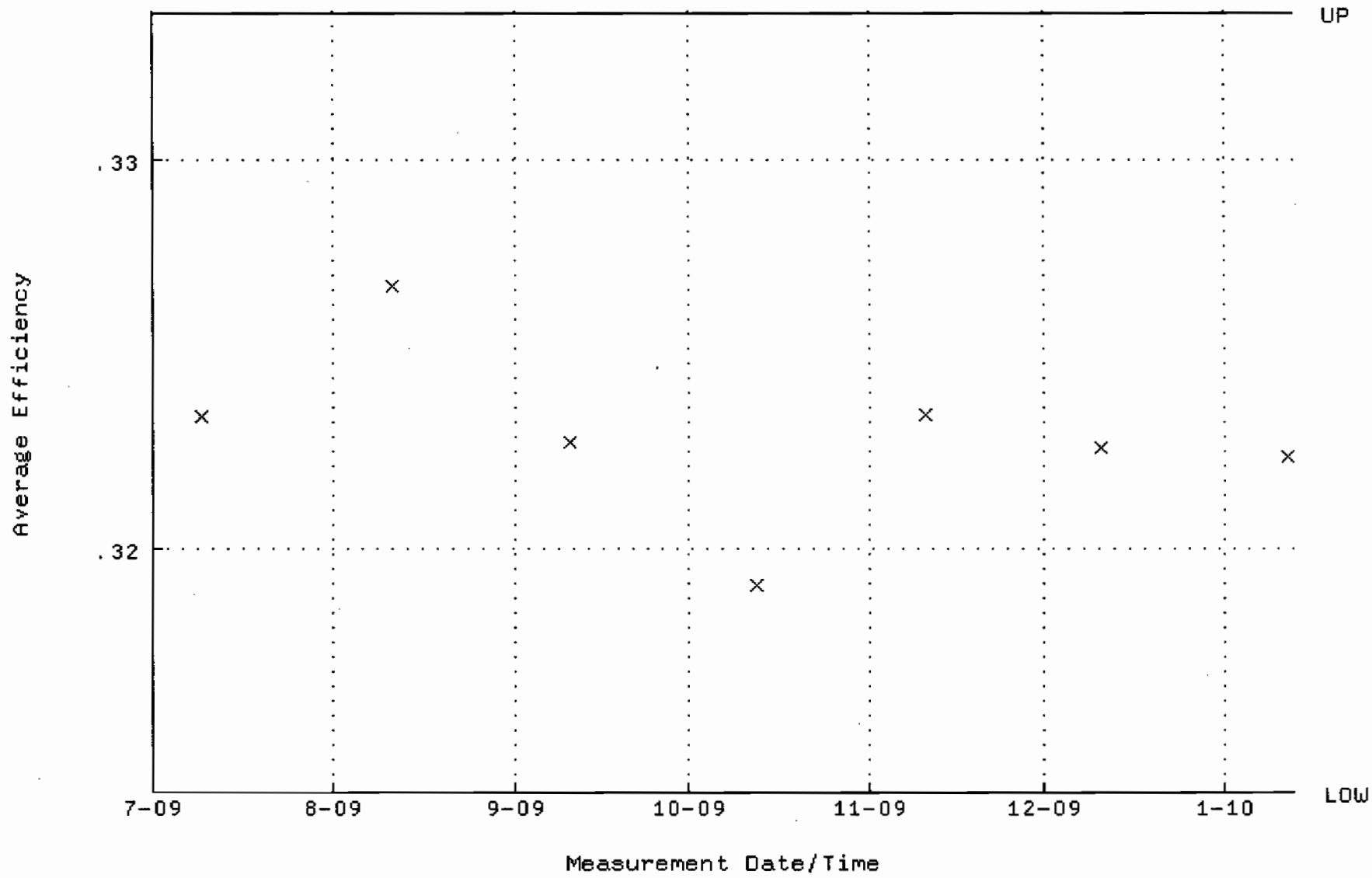
QA filename : DKA100:[ENV_ALPHA.QA.W]W071.QAF;3
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.7769 through 95.9113



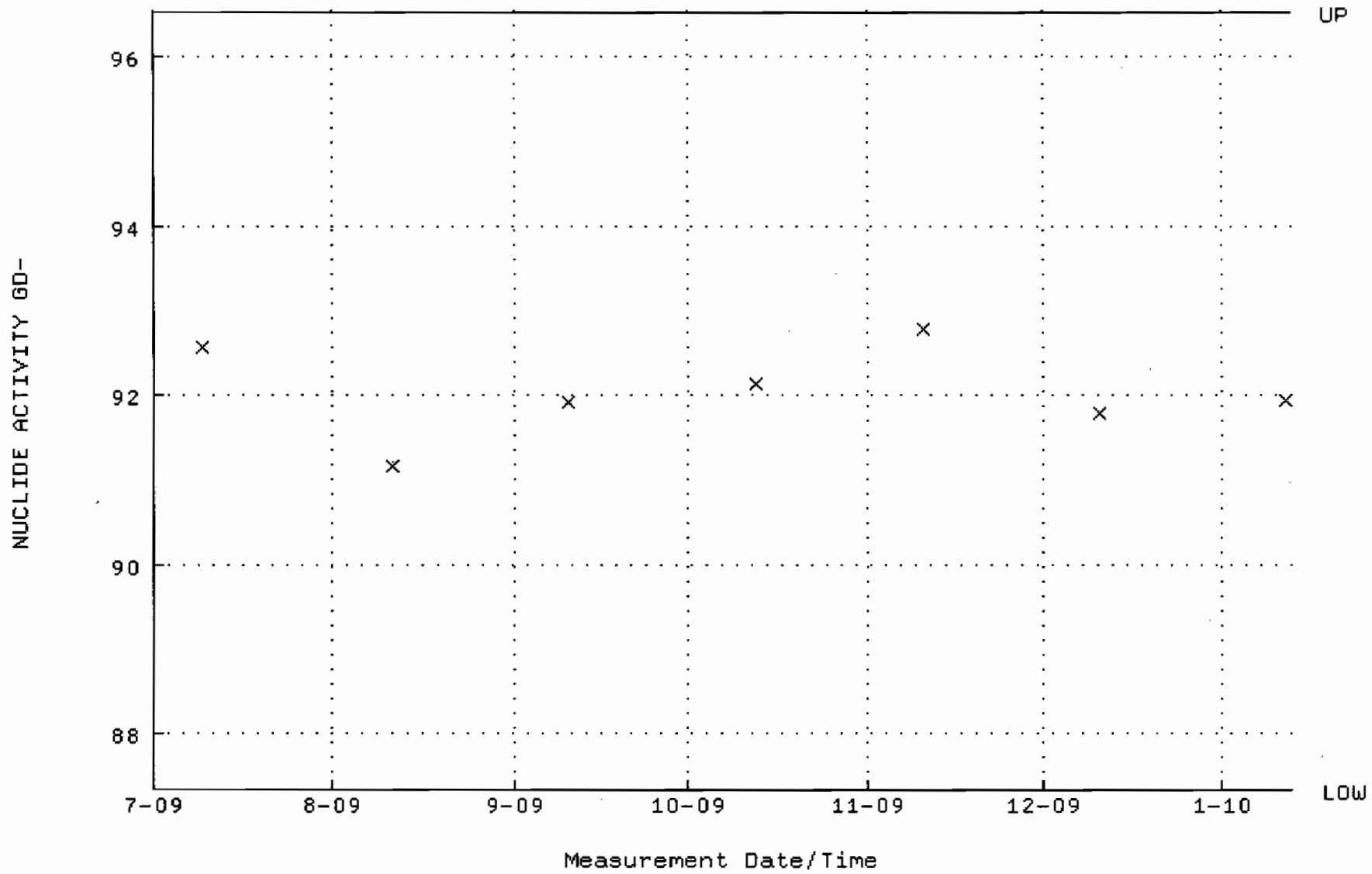
QA filename : DKA100:[ENV_ALPHA.QA.B]B071.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



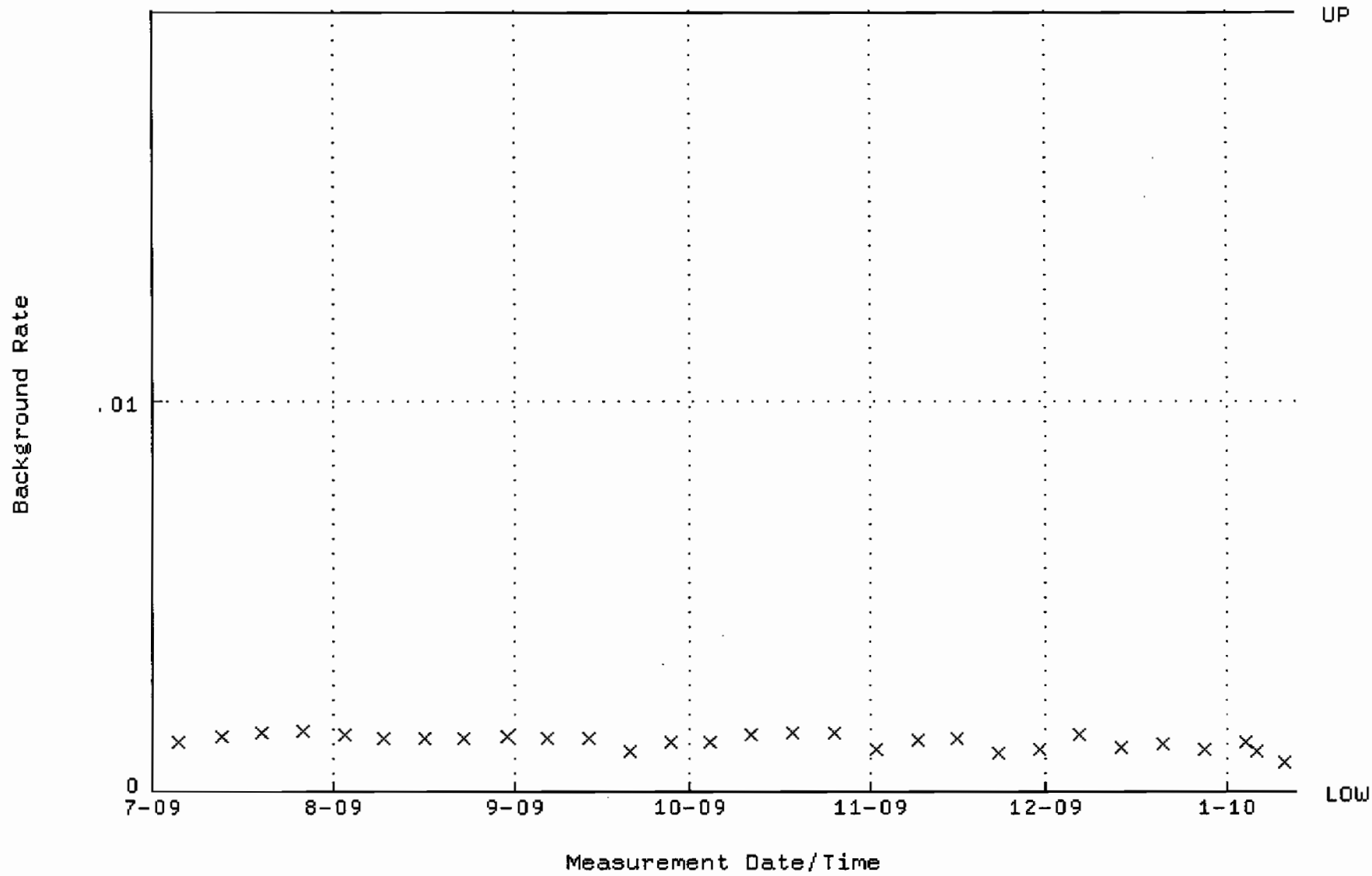
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.313761 through 0.333761



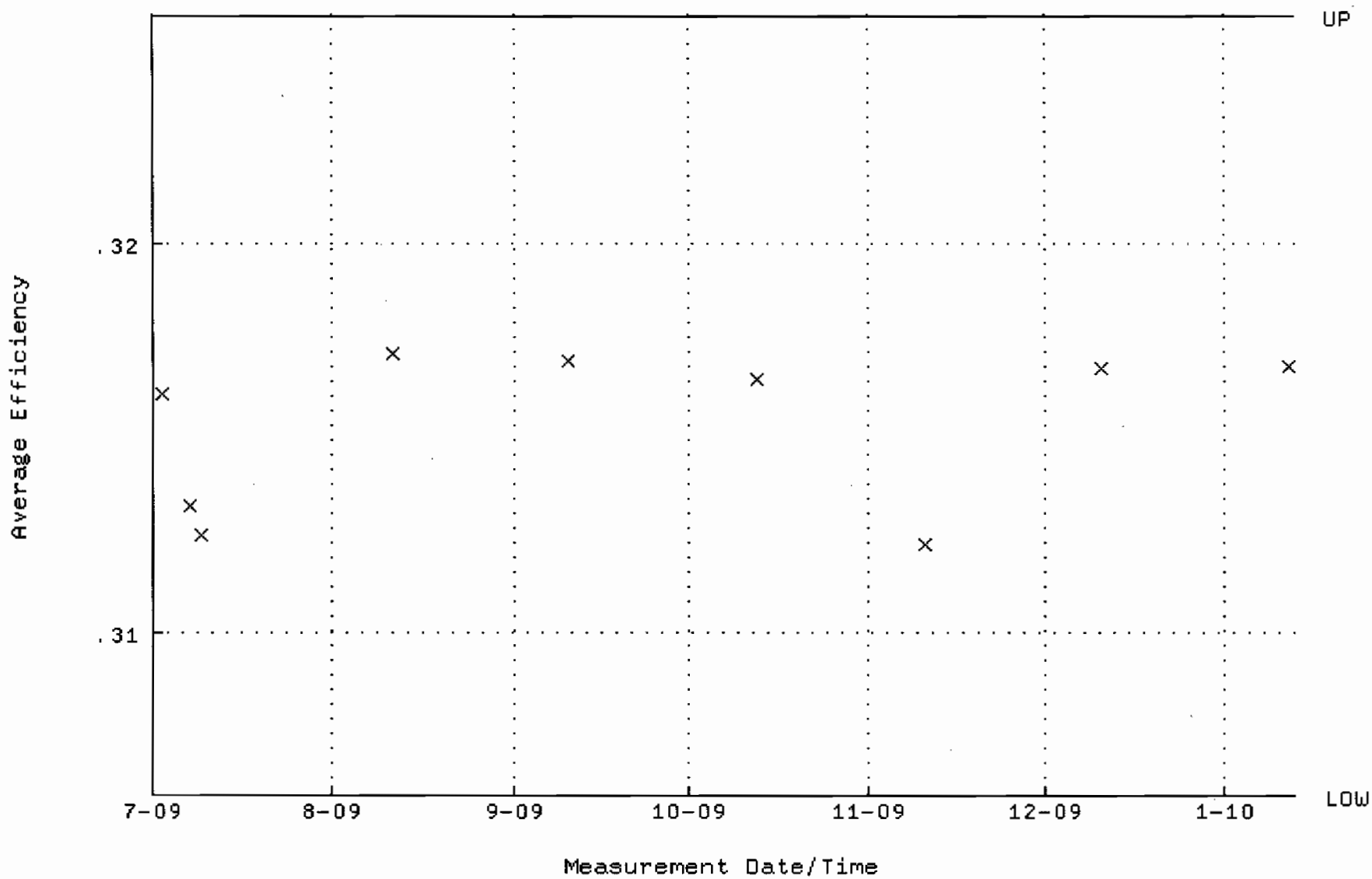
QA filename : DKA100:[ENV_ALPHA.QA.W]W072.QAF;2
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 87.3348 through 96.5280



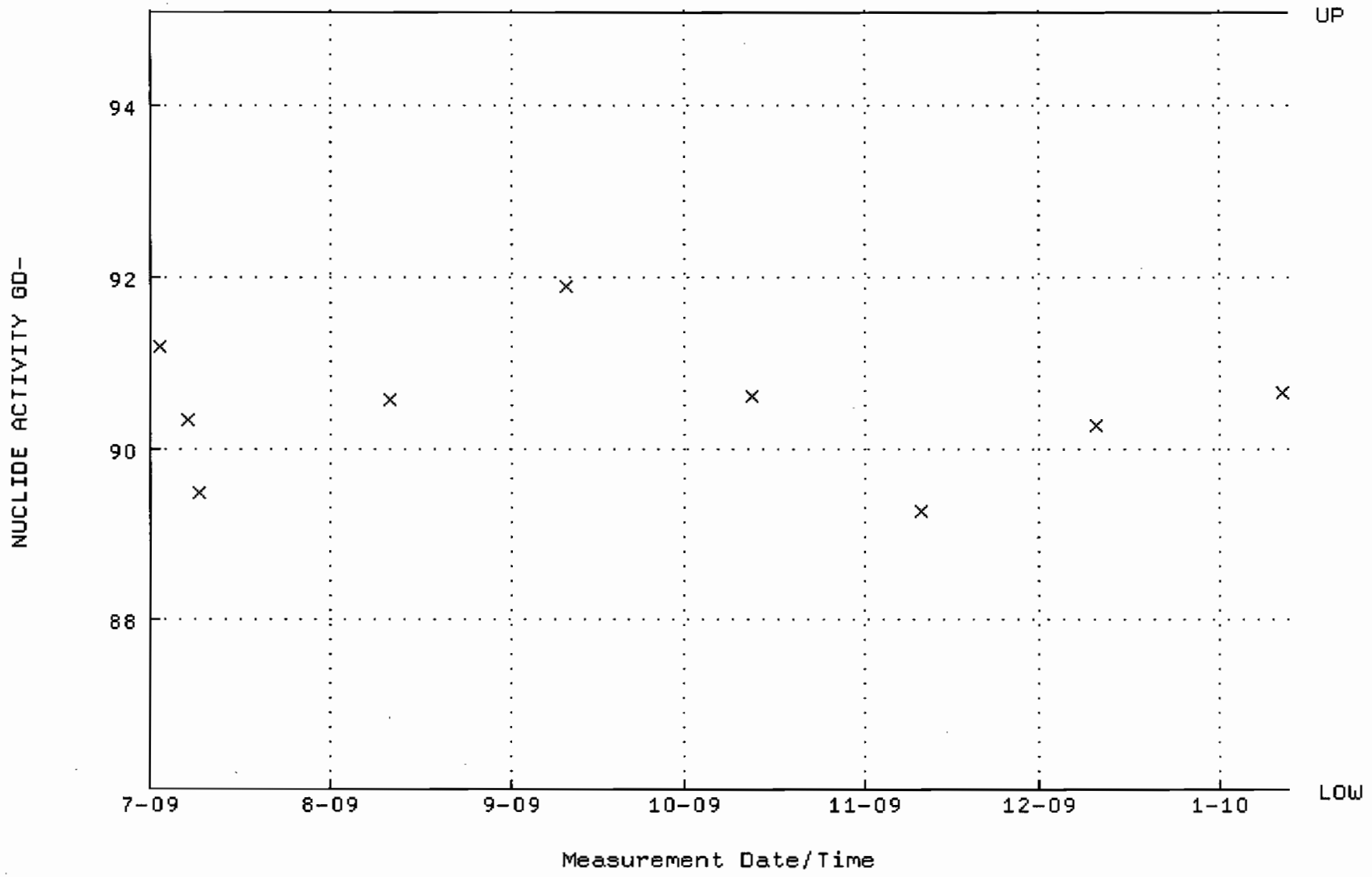
QA filename : DKA100:[ENV_ALPHA.QA.B]B072.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:02 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



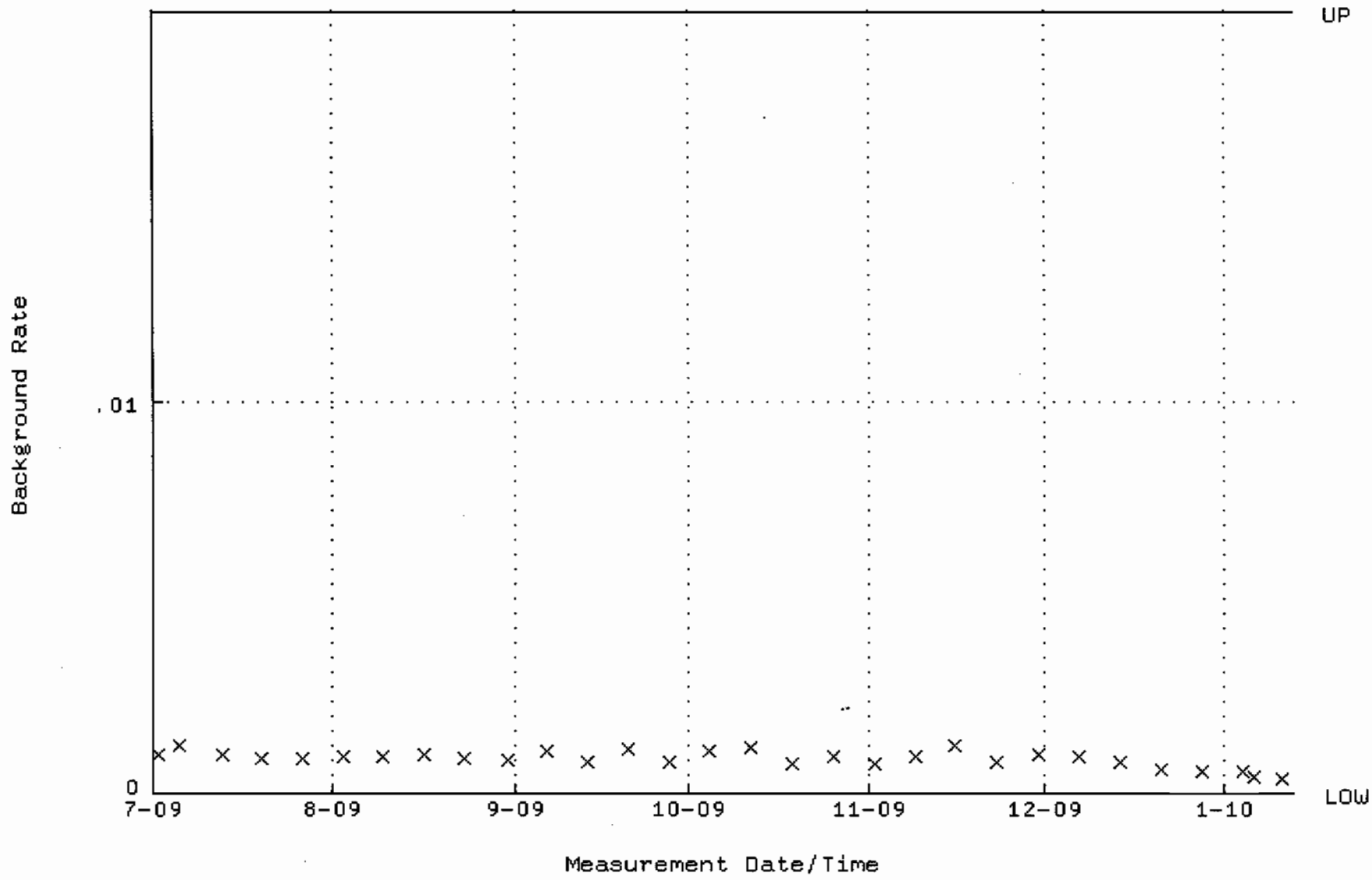
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 2-JUL-2009 15:04:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.305830 through 0.325830



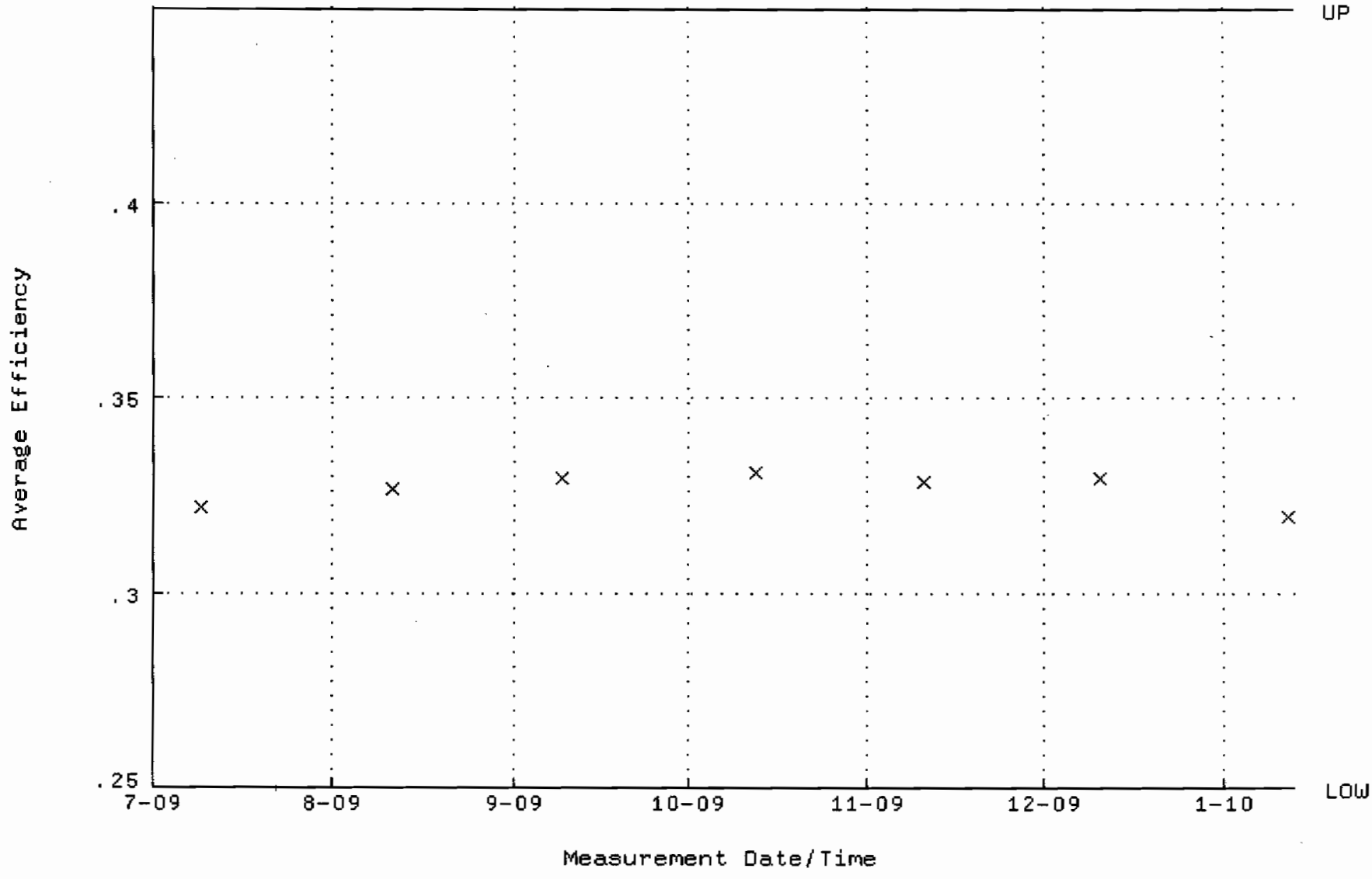
QA filename : DKA100:[ENV_ALPHA.QA.W]W074.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 2-JUL-2009 15:04:13 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.0289 through 95.0845



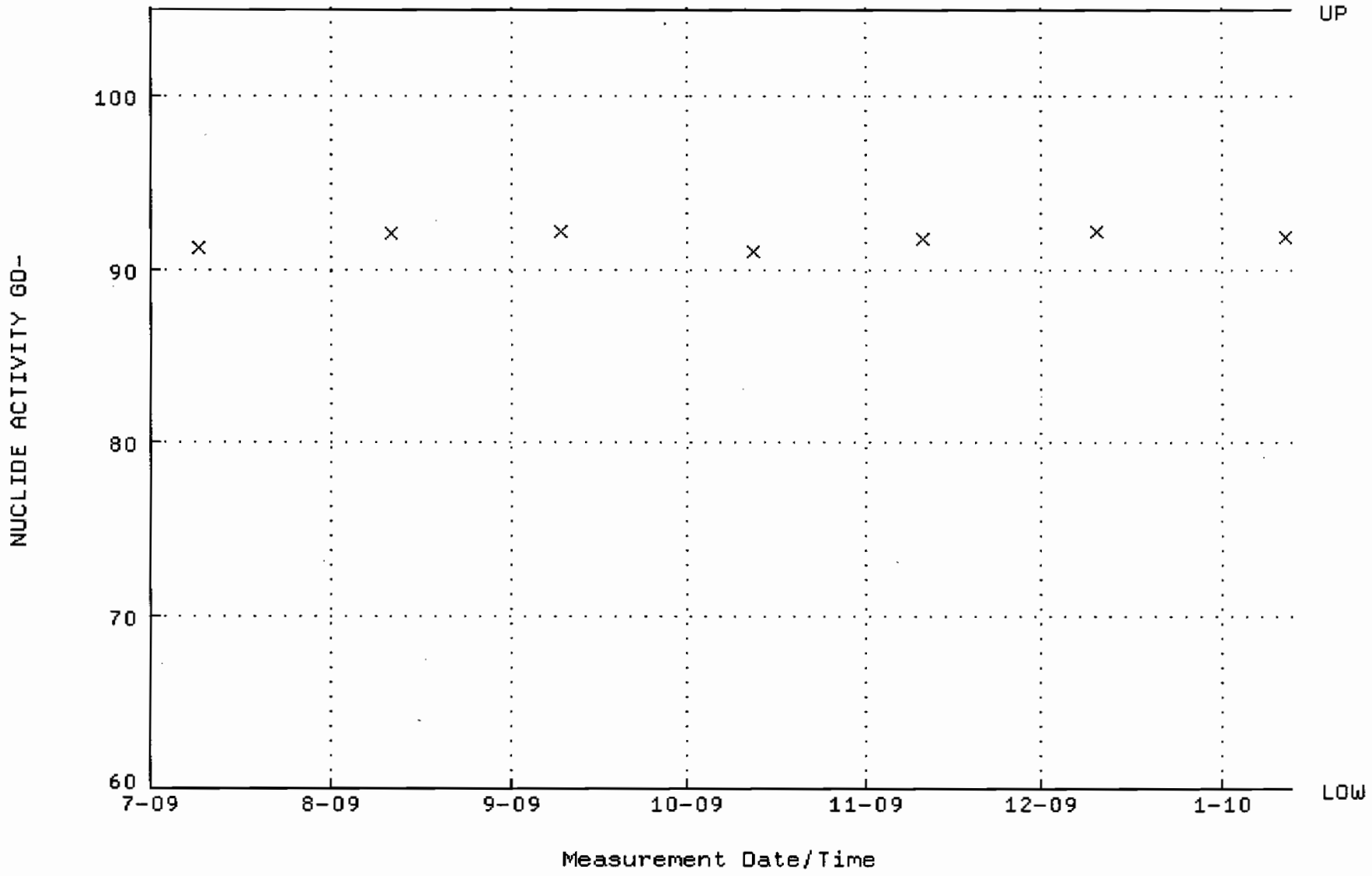
QA filename : DKA100:[ENV_ALPHA.QA.B]B074.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 1-JUL-2009 21:39:57 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



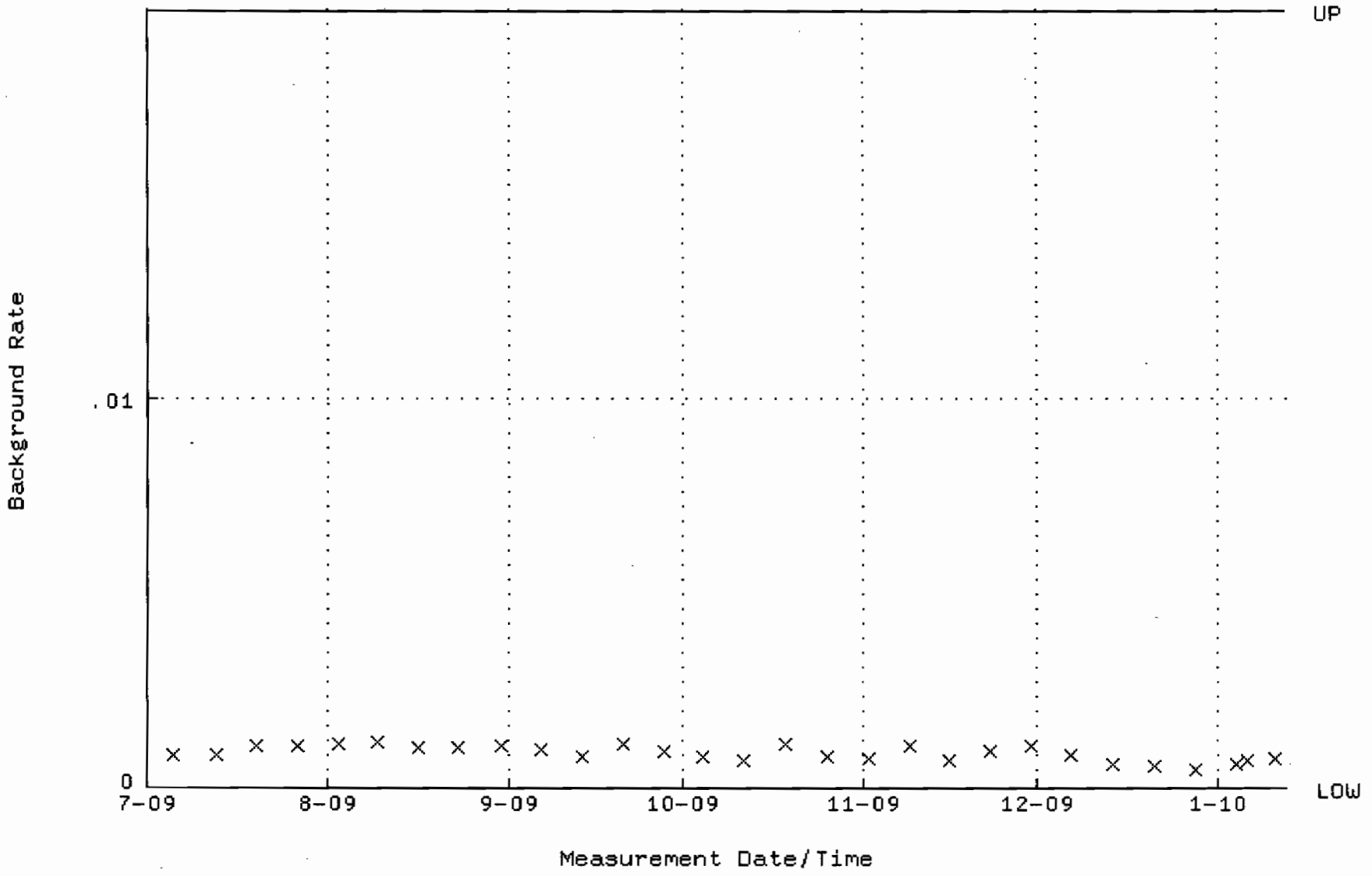
QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



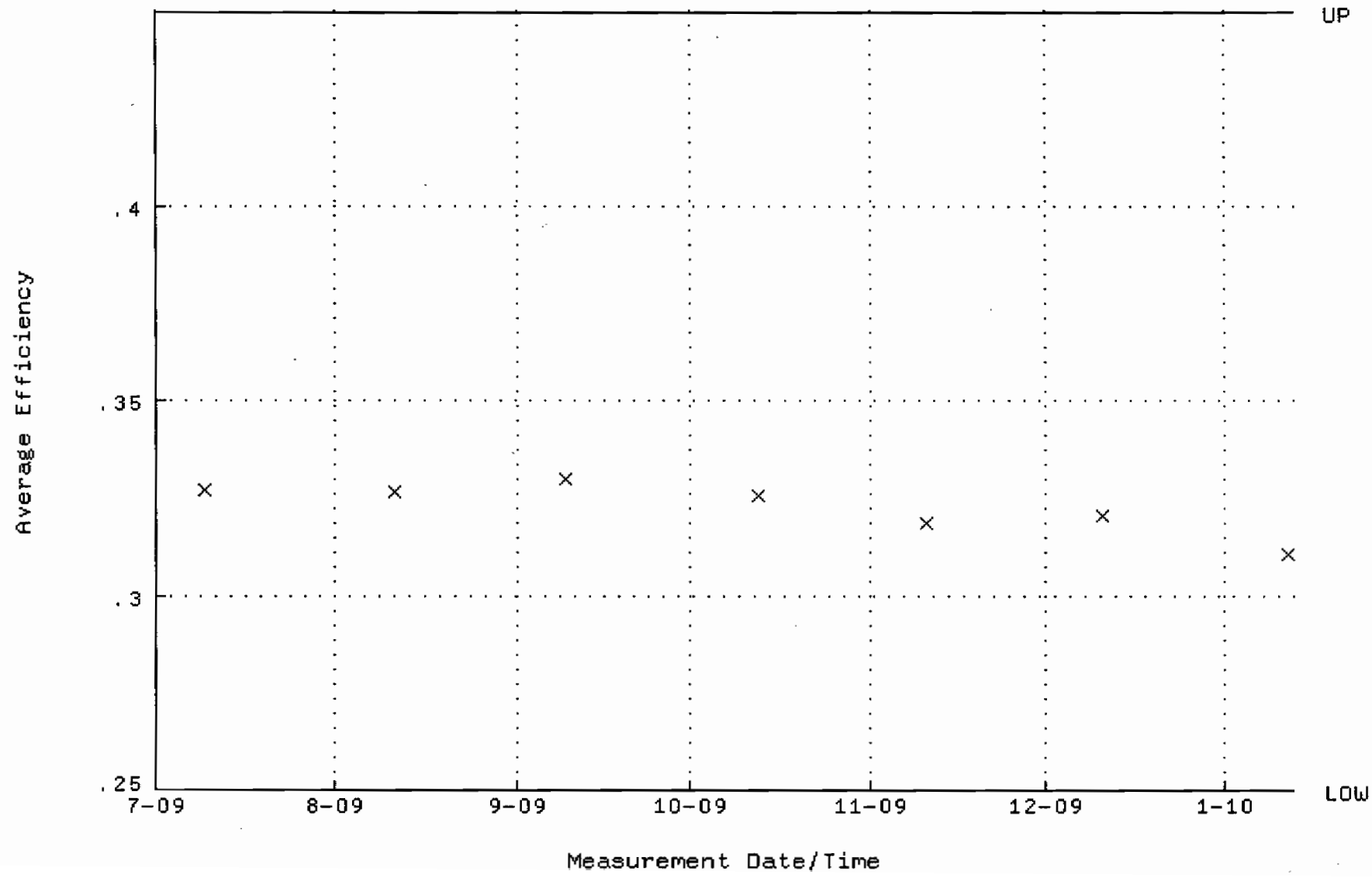
QA filename : DKA100:[ENV_ALPHA.QA.W]W077.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



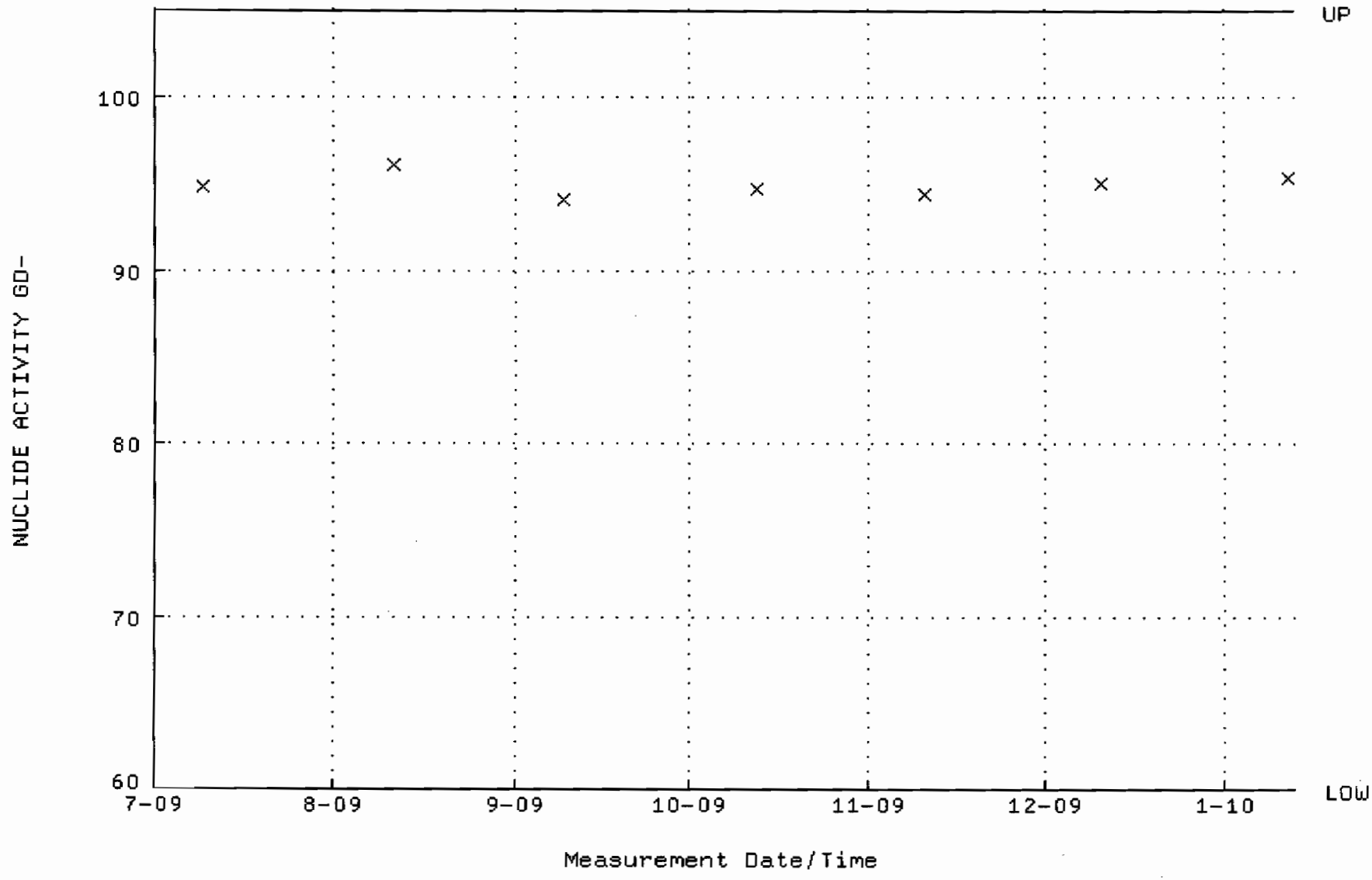
QA filename : DKA100:[ENV_ALPHA.QA.B]B077.QAF;3
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



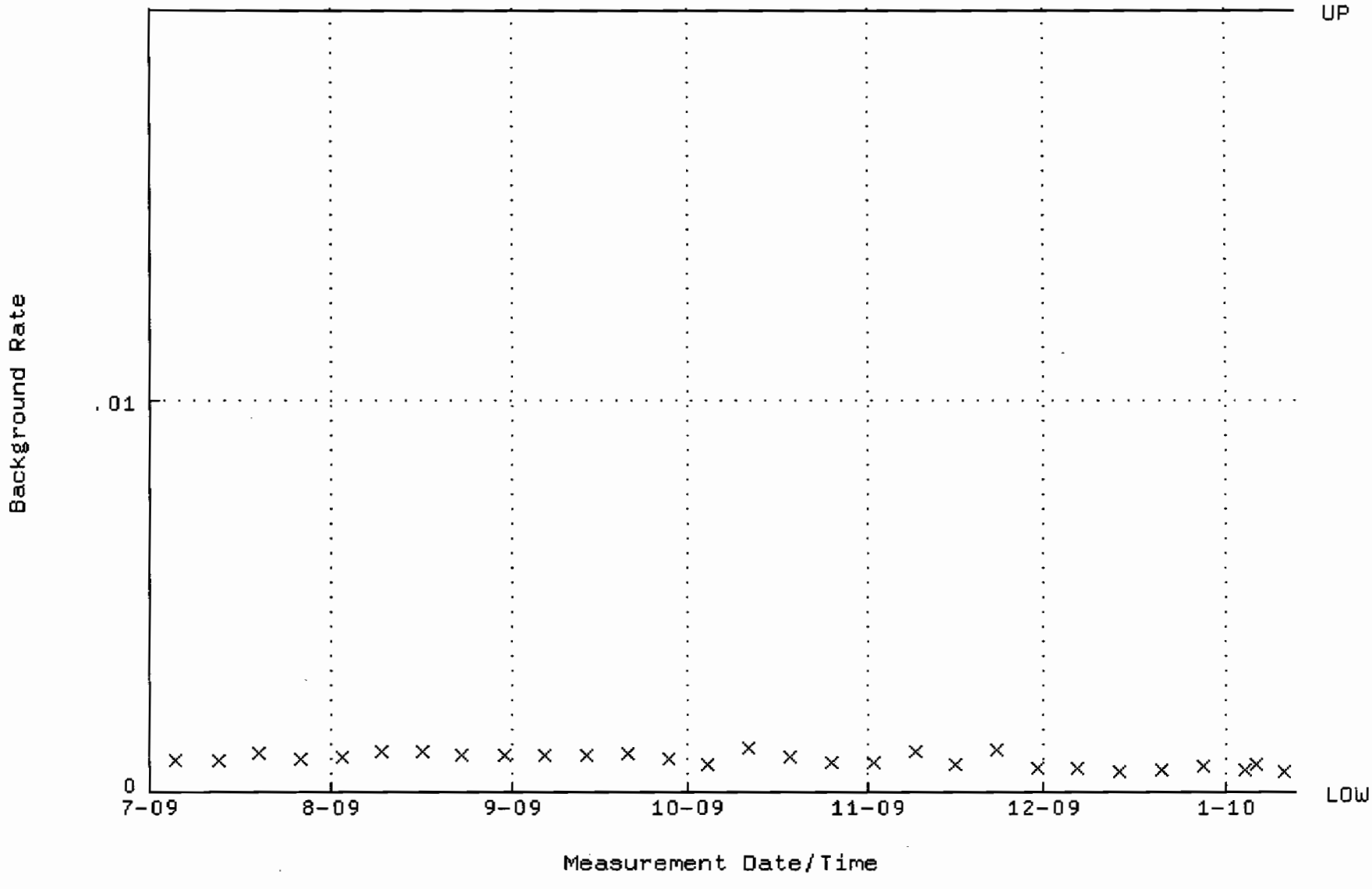
QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



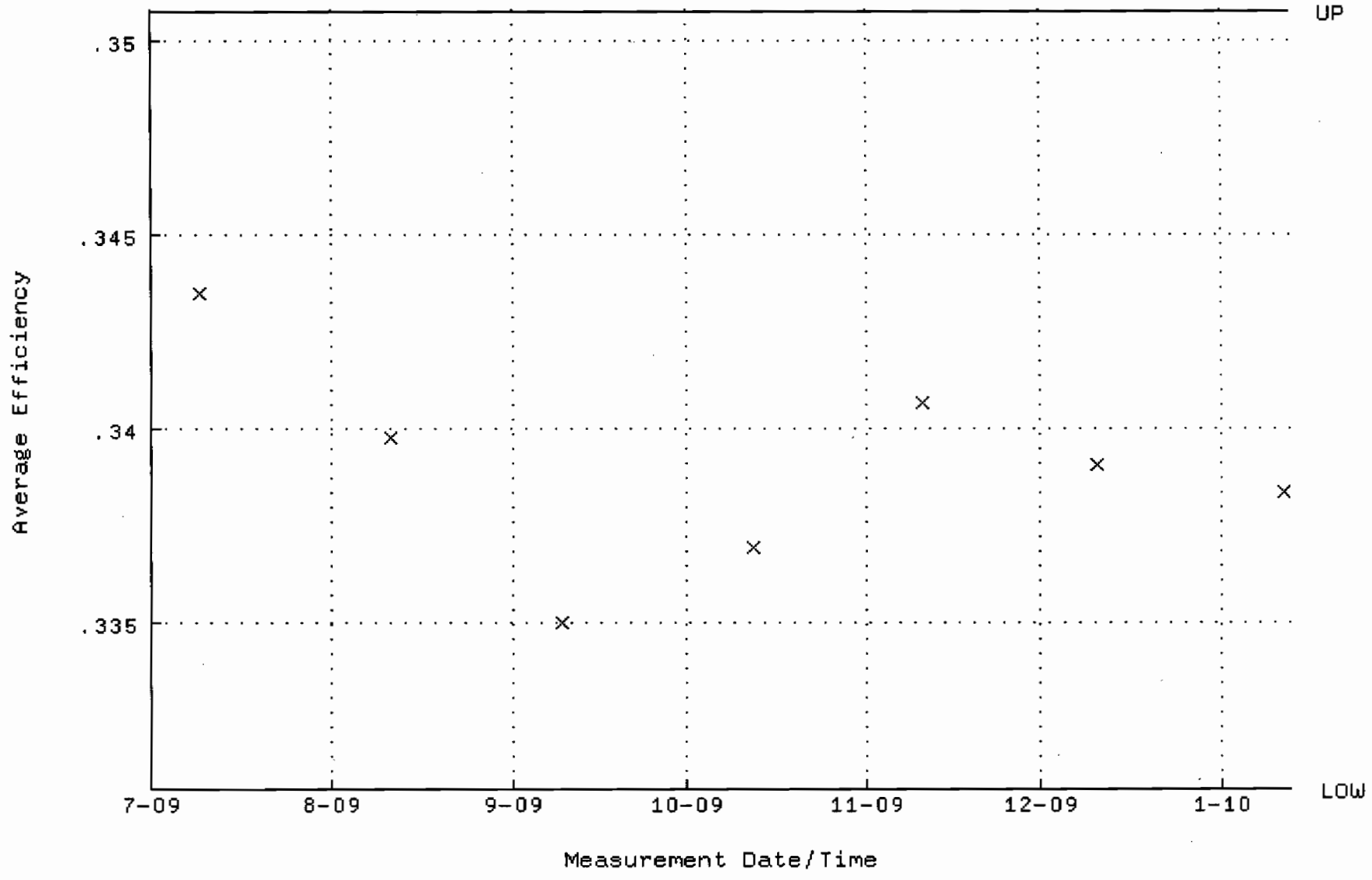
QA filename : DKA100:[ENV_ALPHA.QA.W]W078.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:11 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



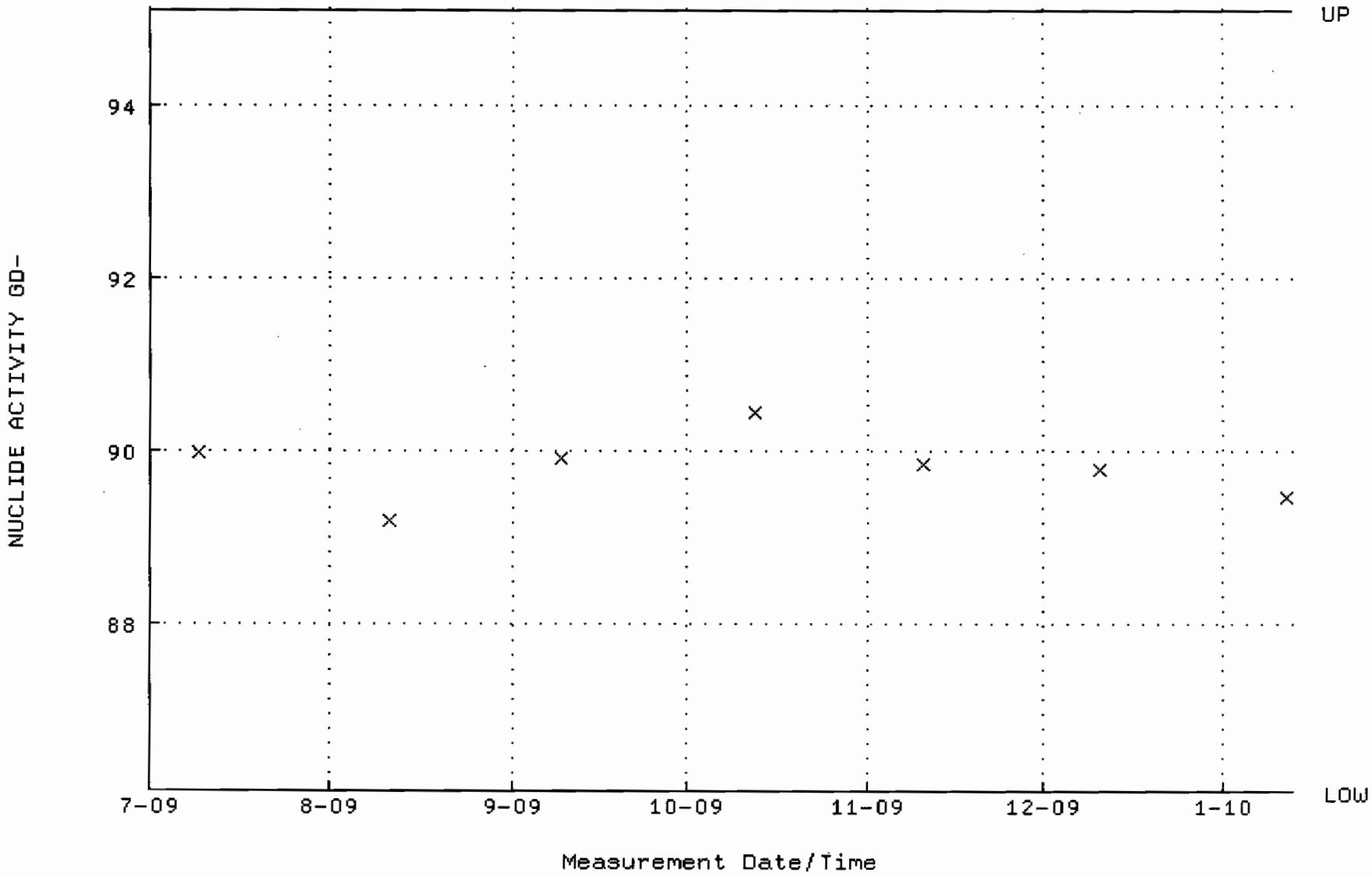
QA filename : DKA100:[ENV_ALPHA.QA.B]B078.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:03 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



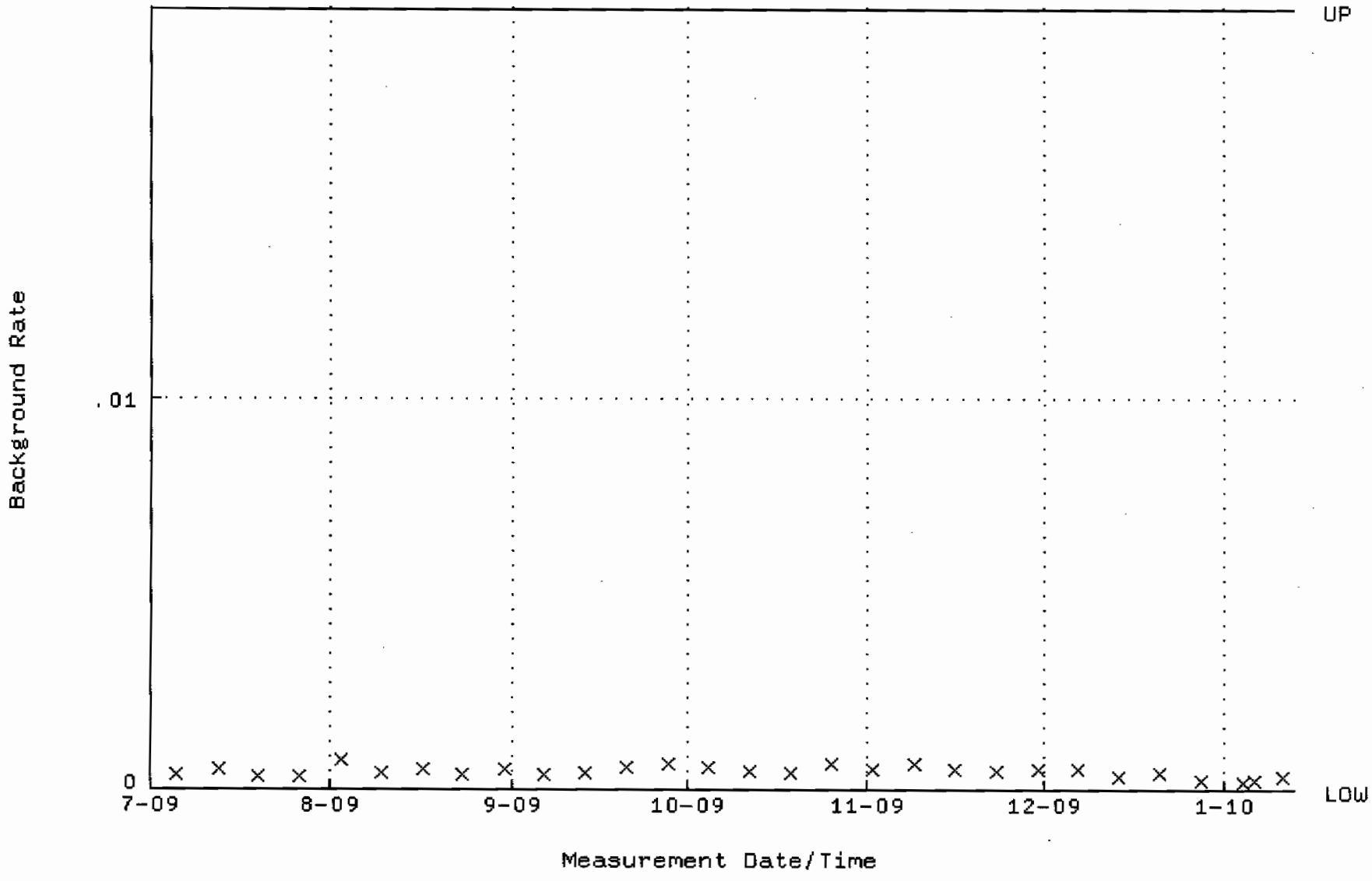
QA filename : DKA100:[ENV_ALPHA.QA.W]W084.QAF;5
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.330740 through 0.350740



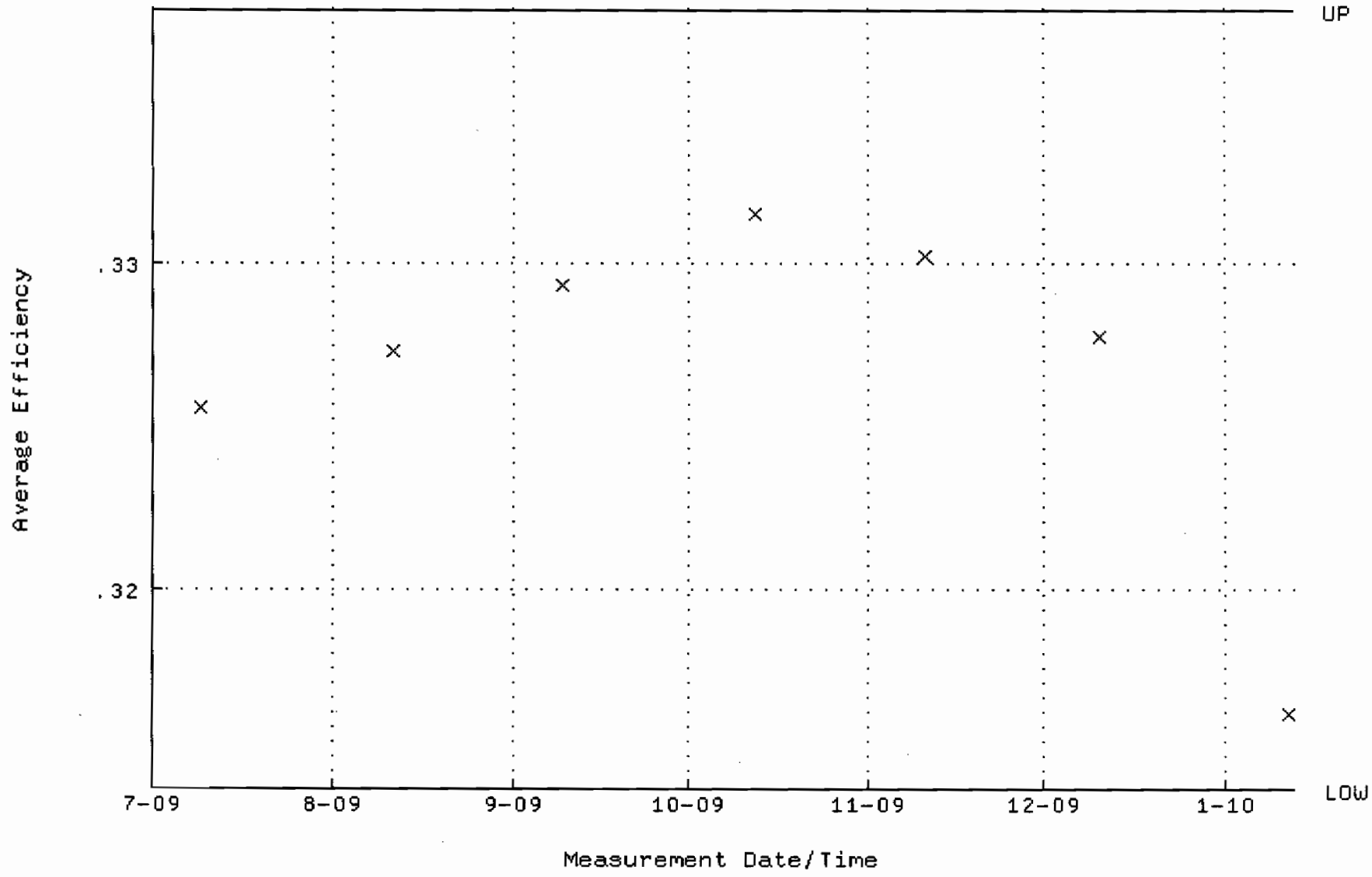
QA filename : DKA100:[ENV_ALPHA.QA.W]W084.QAF;5
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 86.0569 through 95.1155



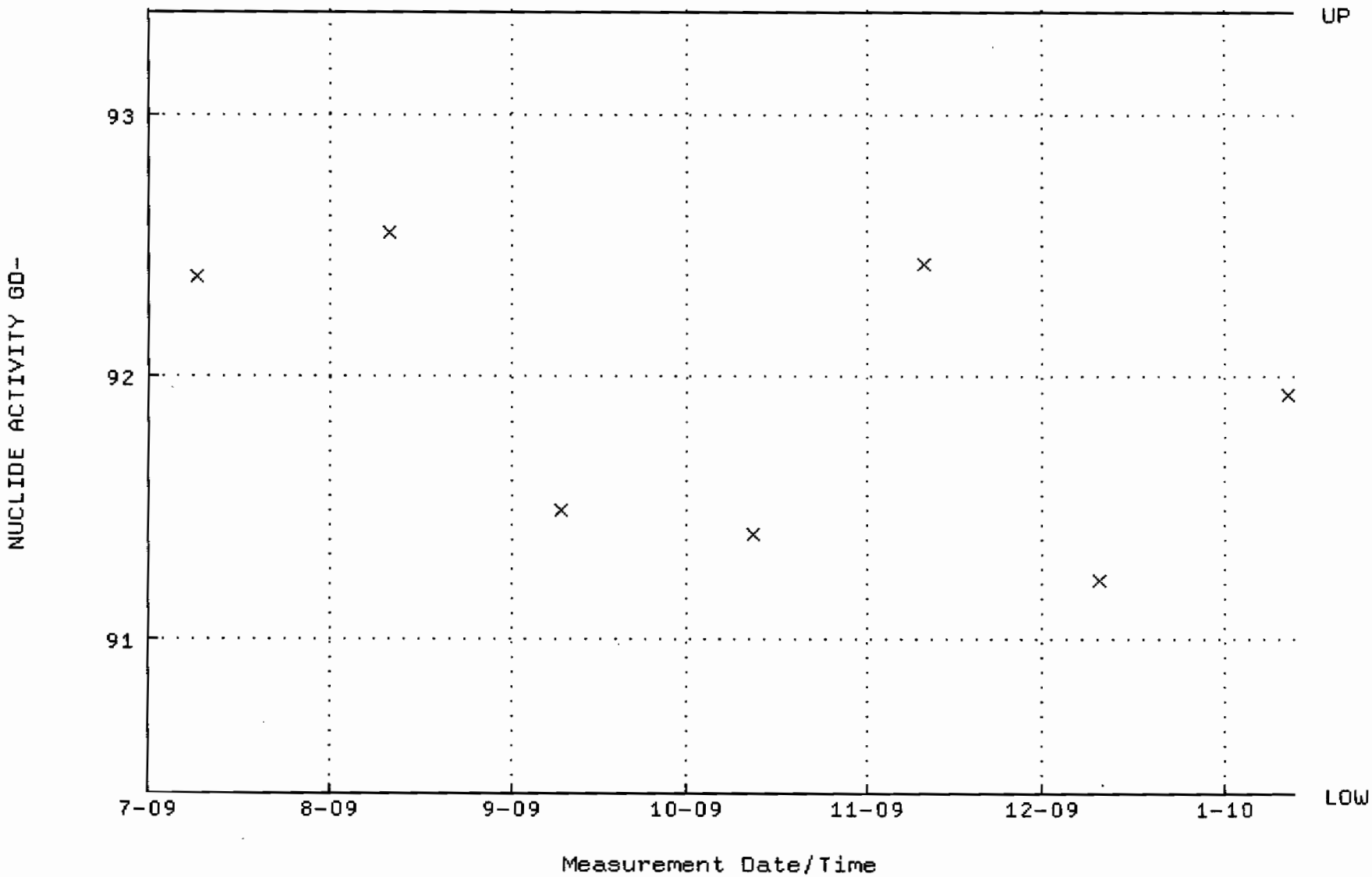
QA filename : DKA100:[ENV_ALPHA.QA.B]B084.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



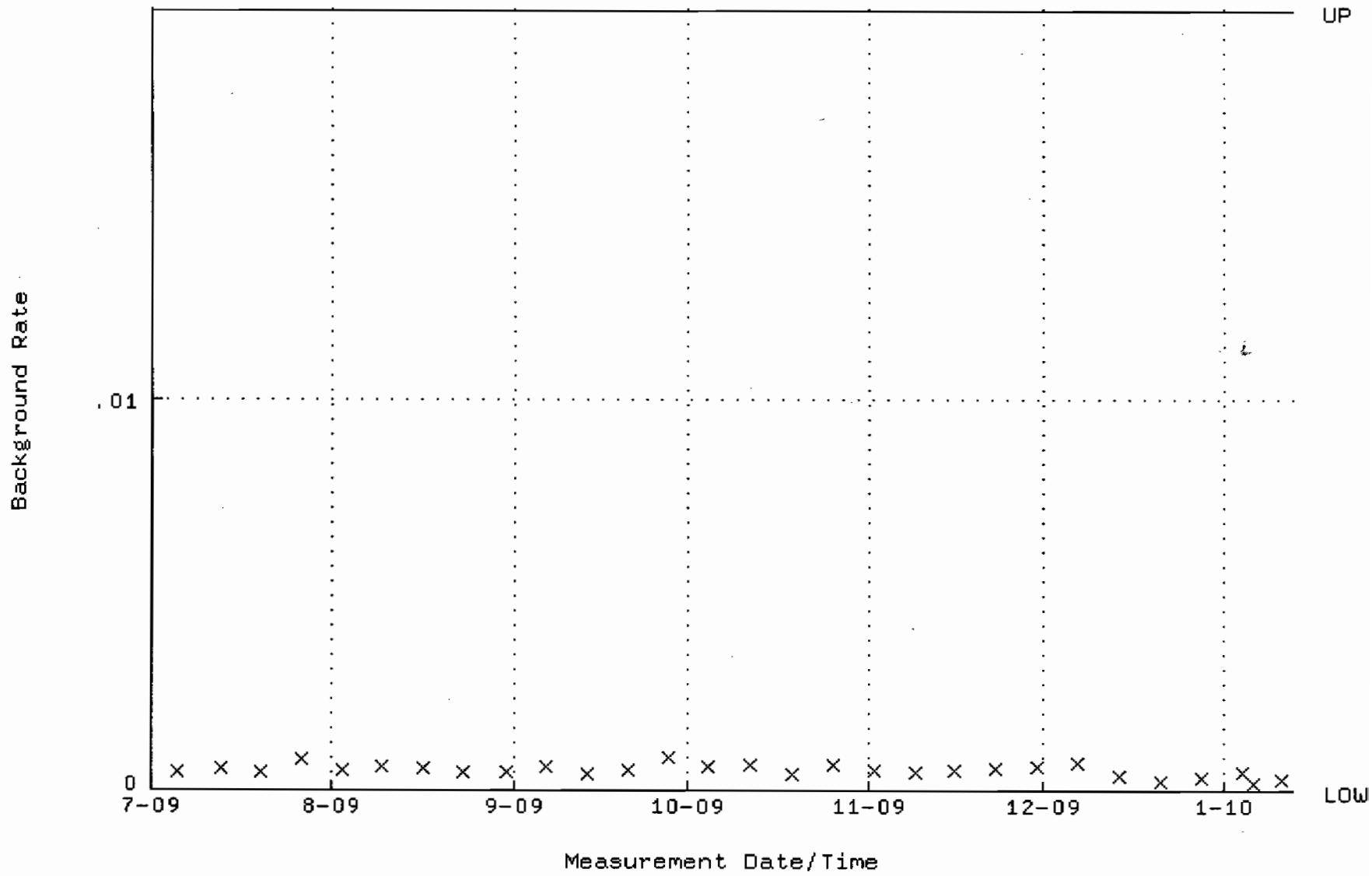
QA filename : DKA100:[ENV_ALPHA.QA.W]W085.QAF;6
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.313884 through 0.337714



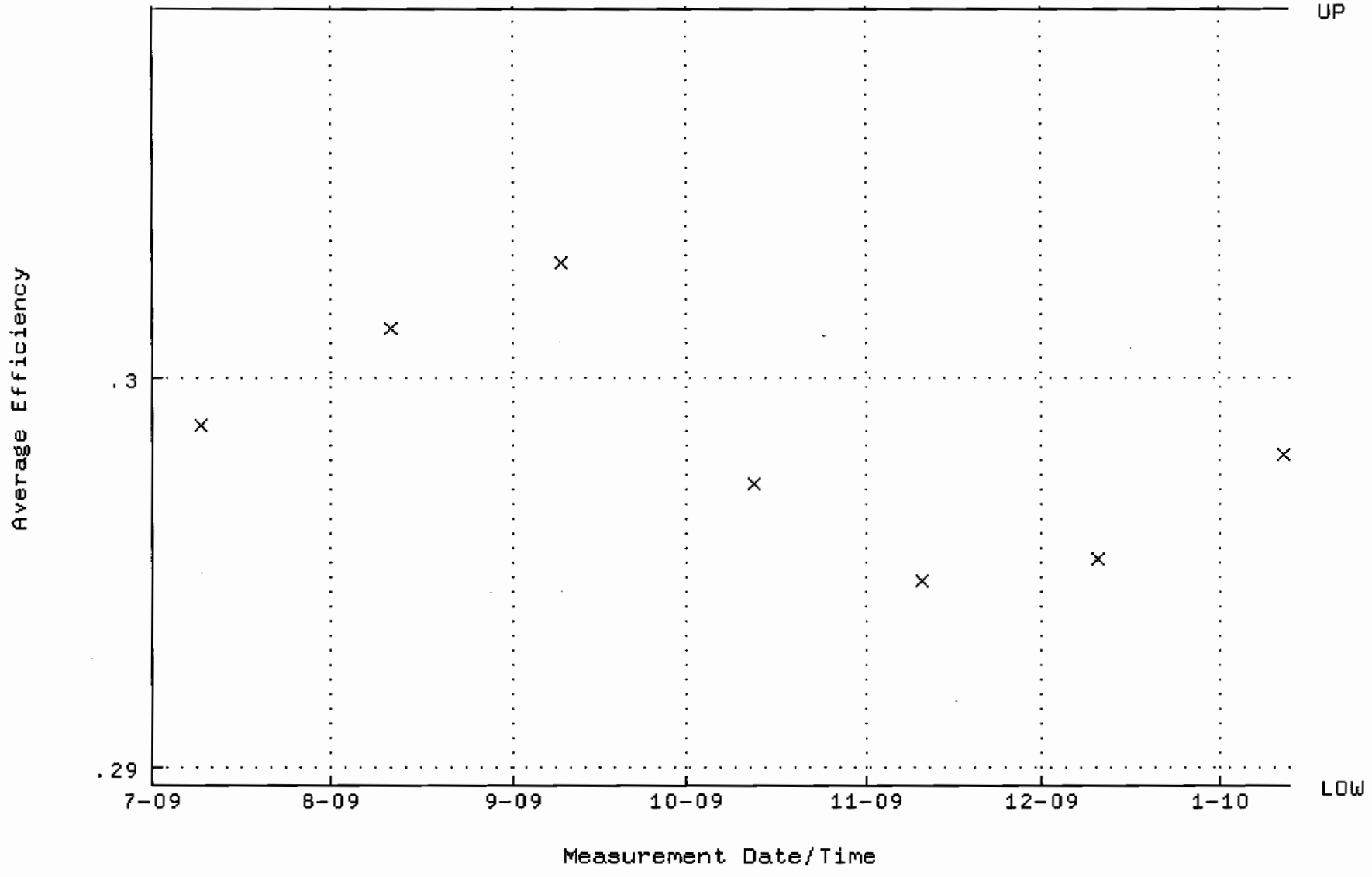
QA filename : DKA100:[ENV_ALPHA.QA.W]W085.QAF;6
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 90.4059 through 93.3969



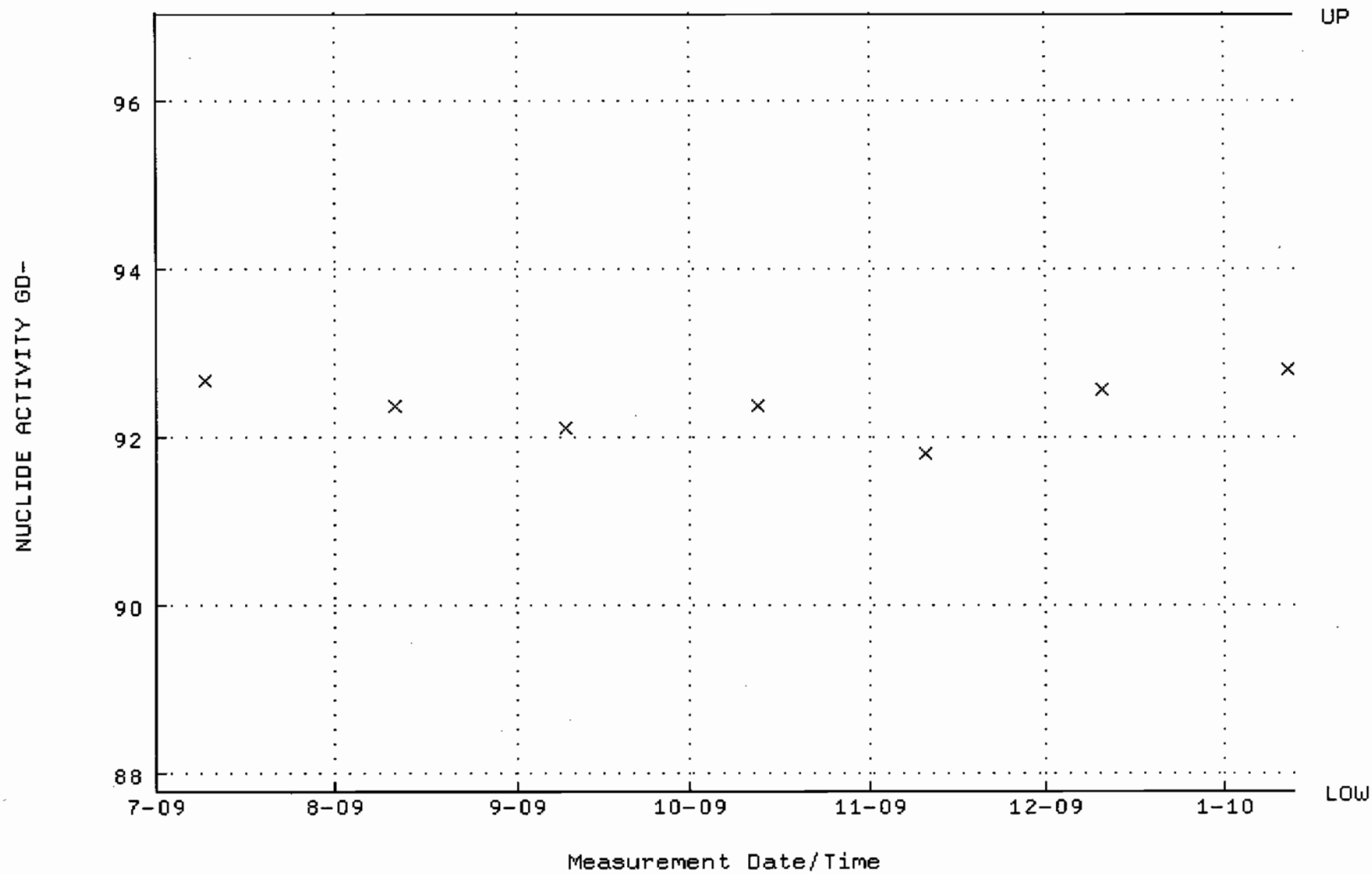
QA filename : DKA100:[ENV_ALPHA.QA.B]B085.QAF;2
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



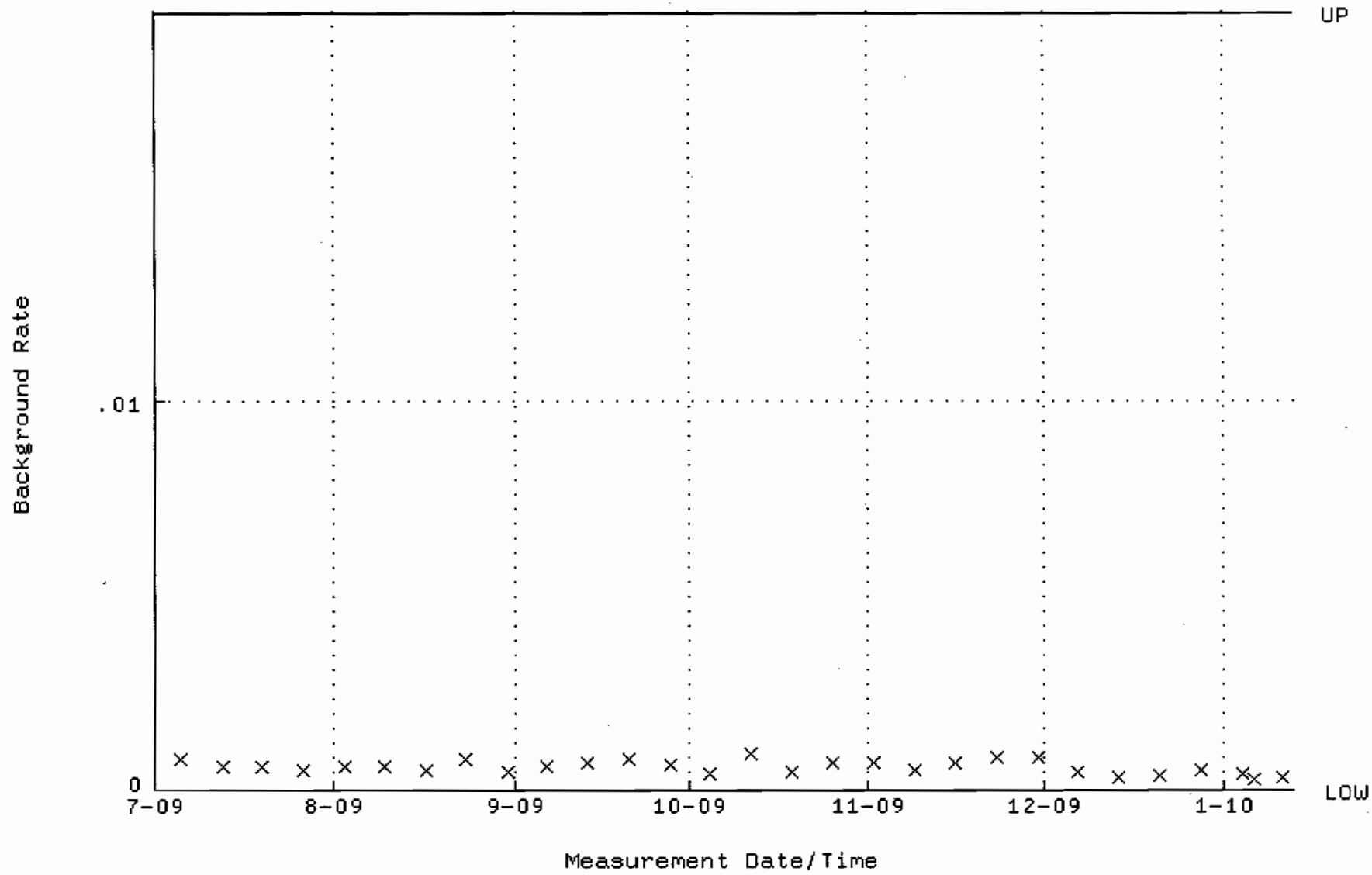
QA filename : DKA100:[ENV_ALPHA.QA.W]W086.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.289508 through 0.309508



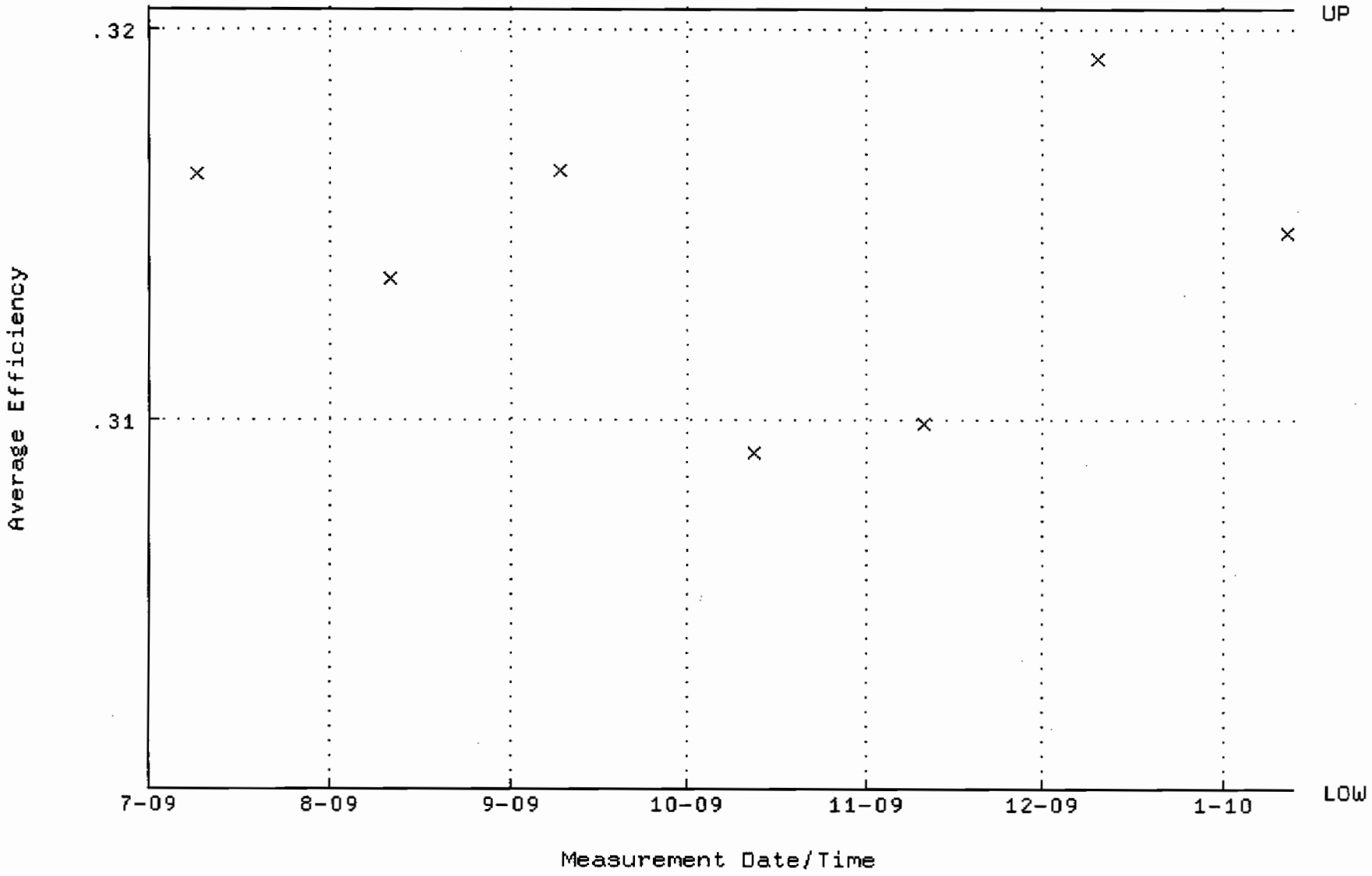
QA filename : DKA100:[ENV_ALPHA.QA.W]W086.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 87.7898 through 97.0308



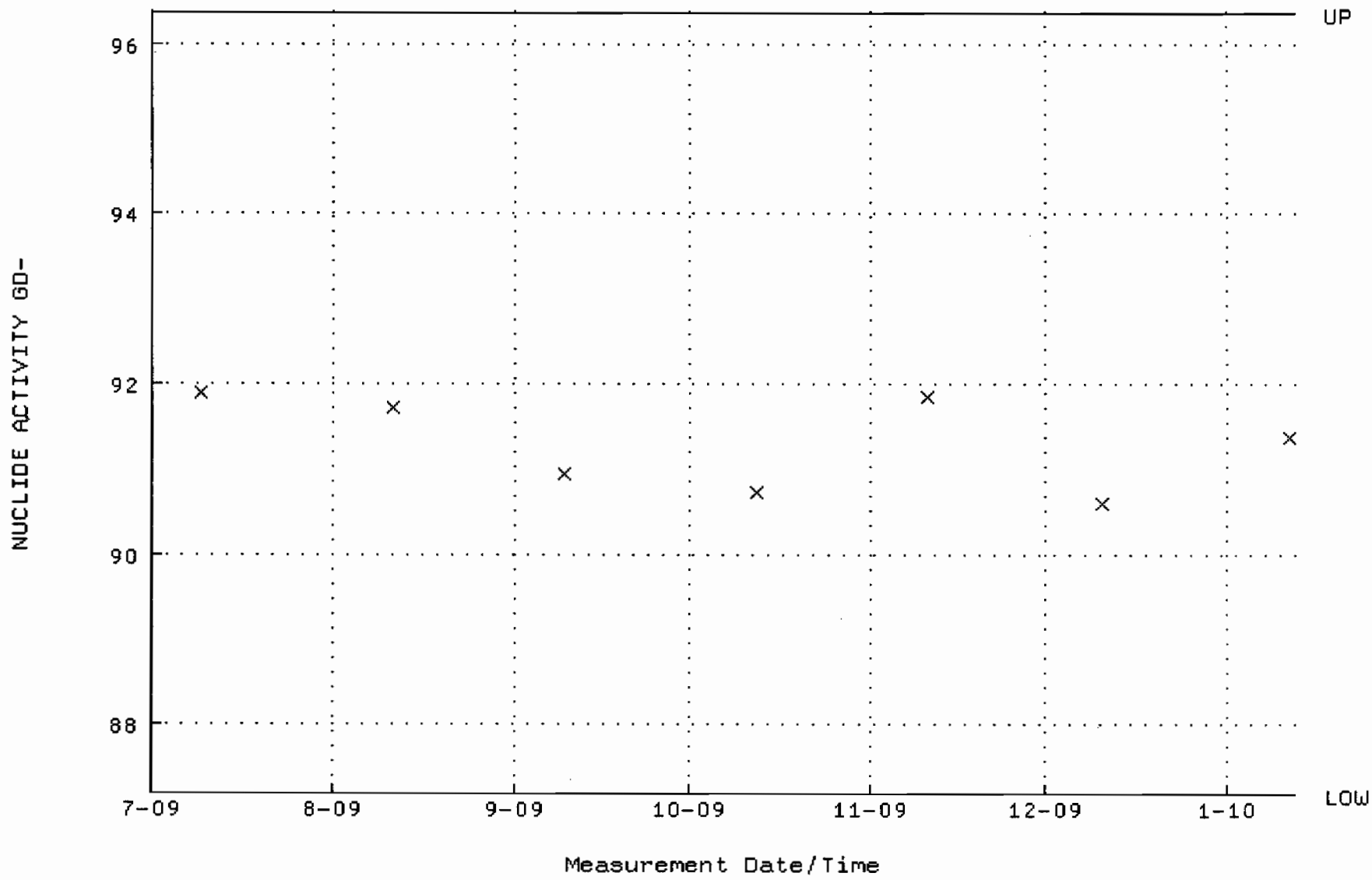
QA filename : DKA100:[ENV_ALPHA.QA.B]B086.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



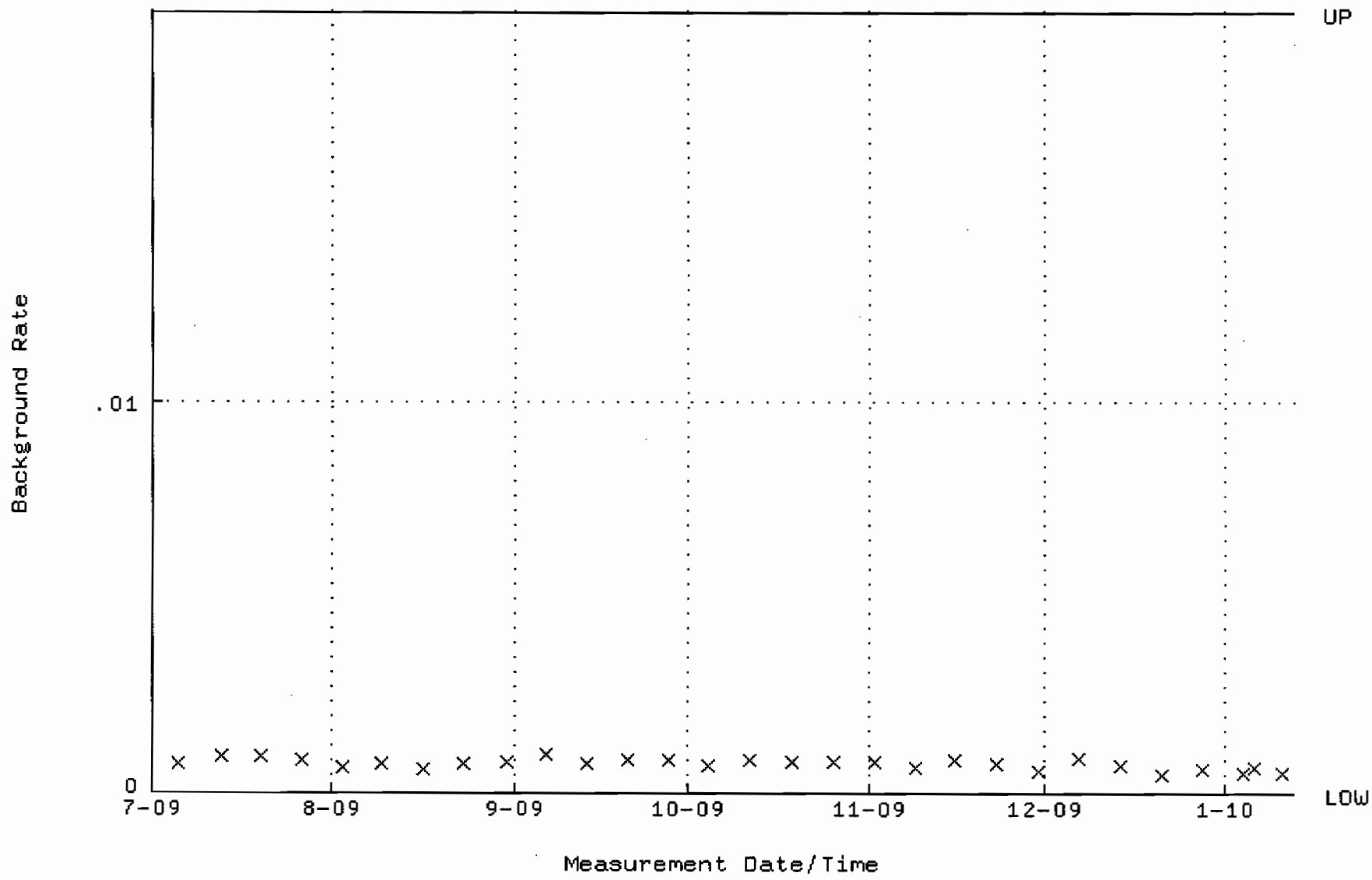
QA filename : DKA100:[ENV_ALPHA.QA.W]W087.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.300530 through 0.320530



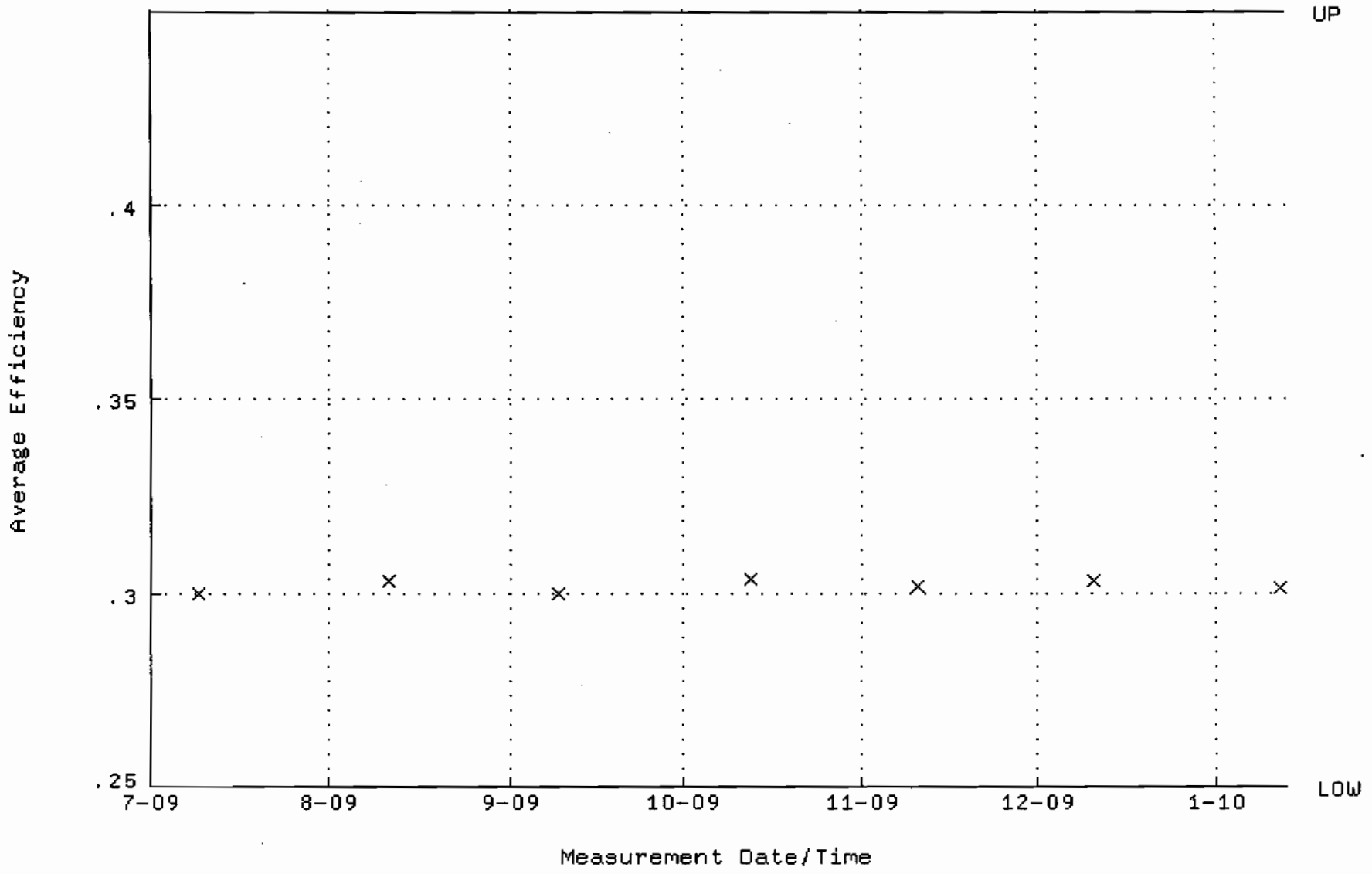
QA filename : DKA100:[ENV_ALPHA.QA.W]W087.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 87.1845 through 96.3619



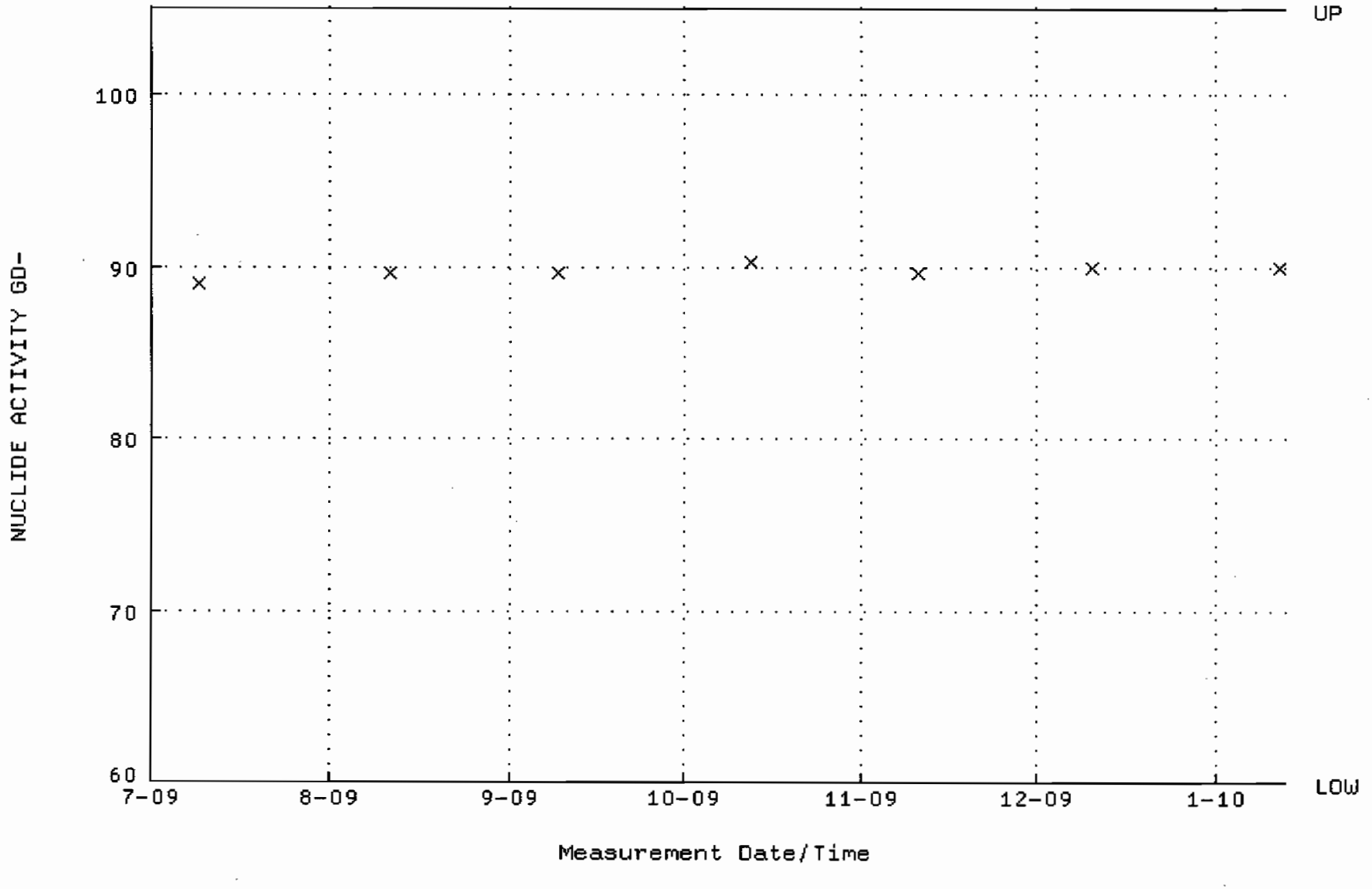
QA filename : DKA100:[ENV_ALPHA.QA.B]B087.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



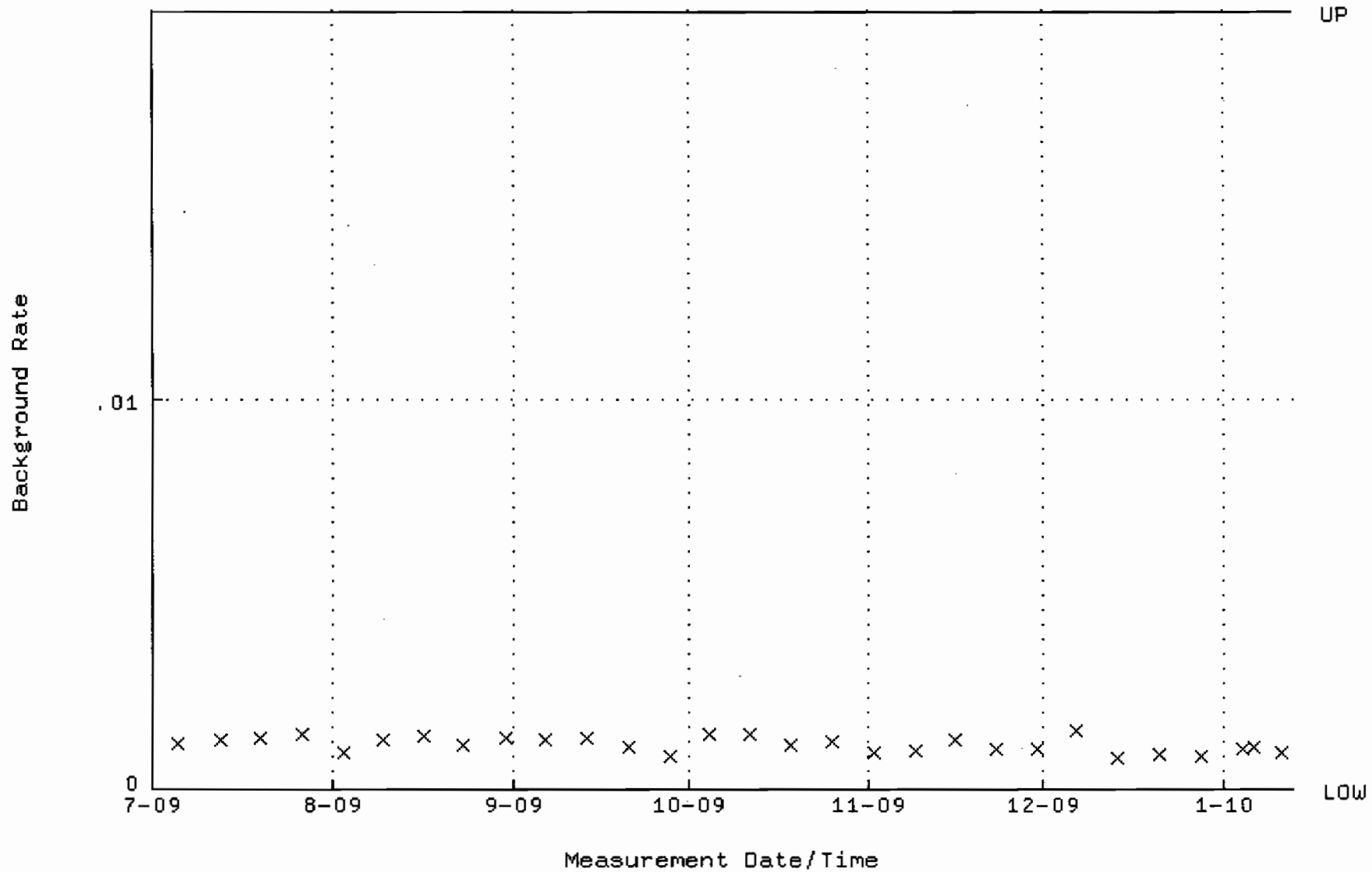
QA filename : DKA100:[ENV_ALPHA.QA.W]W088.QAF;4
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.250000 through 0.450000



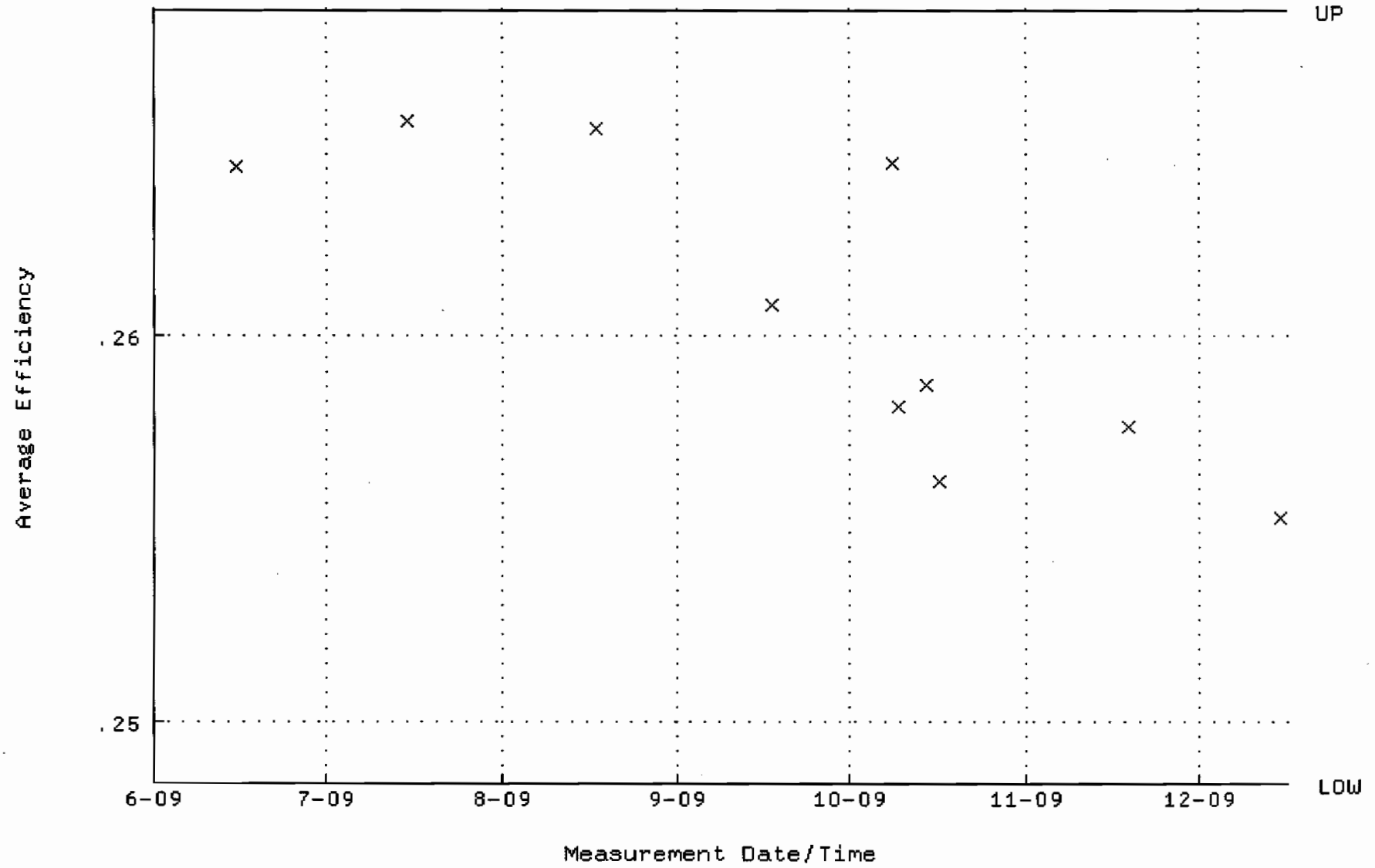
QA filename : DKA100:[ENV_ALPHA.QA.W]W088.QAF;4
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 9-JUL-2009 08:08:12 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 60.0000 through 105.000



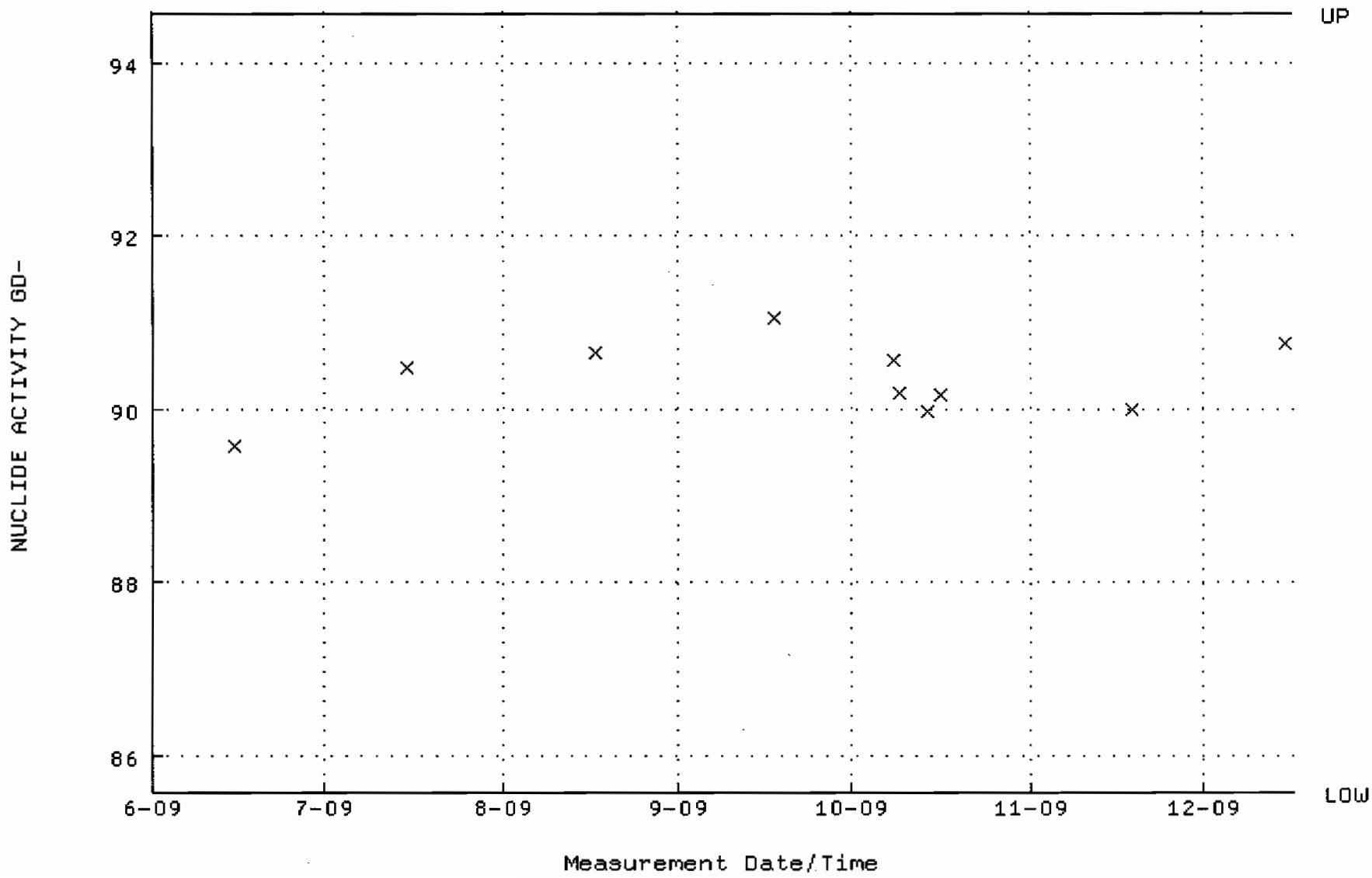
QA filename : DKA100:[ENV_ALPHA.QA.B]B088.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 5-JUL-2009 15:12:04 through 12-JAN-2010 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 2.000000E-02



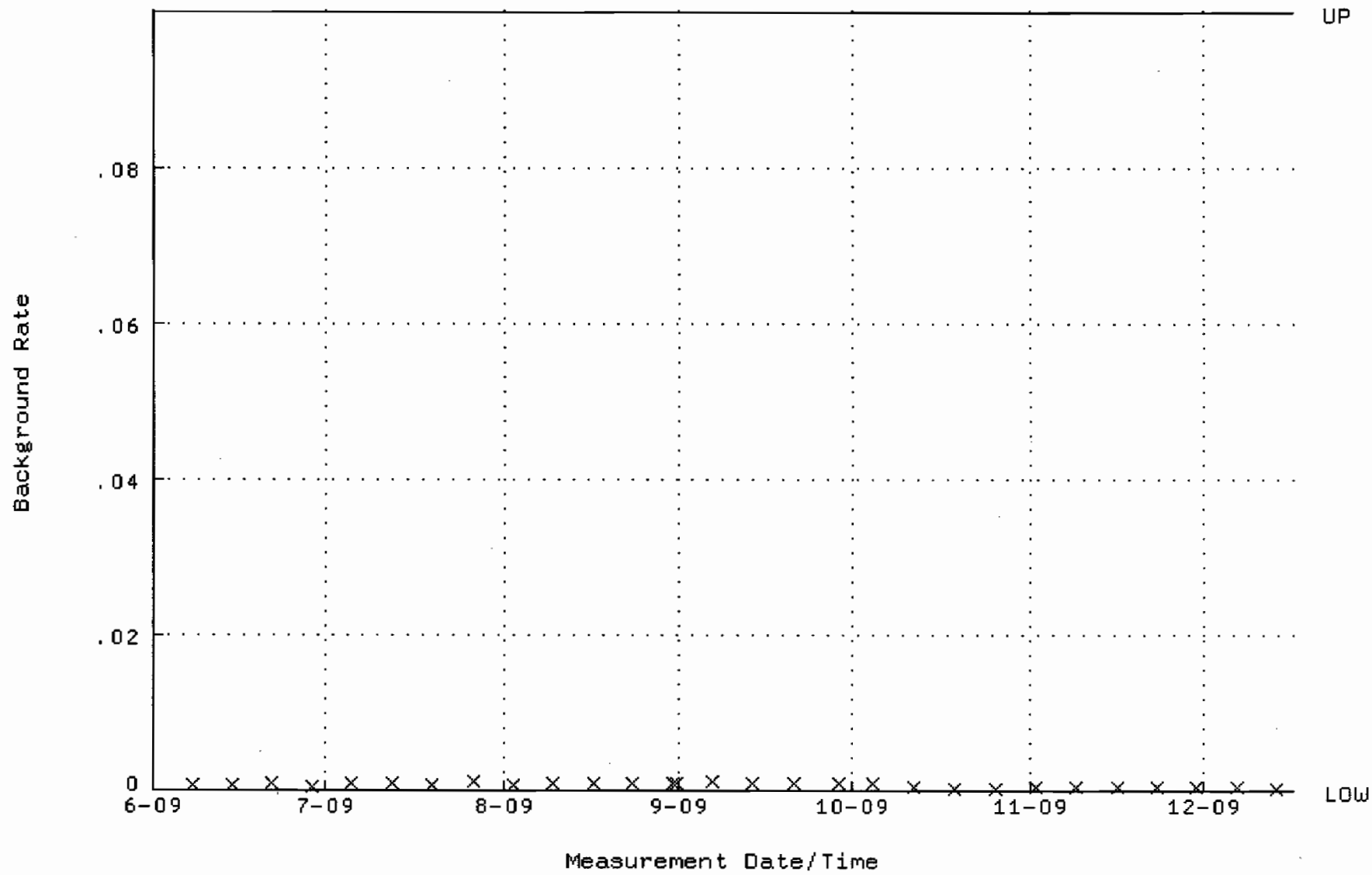
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 15-JUN-2009 10:34:29 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.248404 through 0.268404



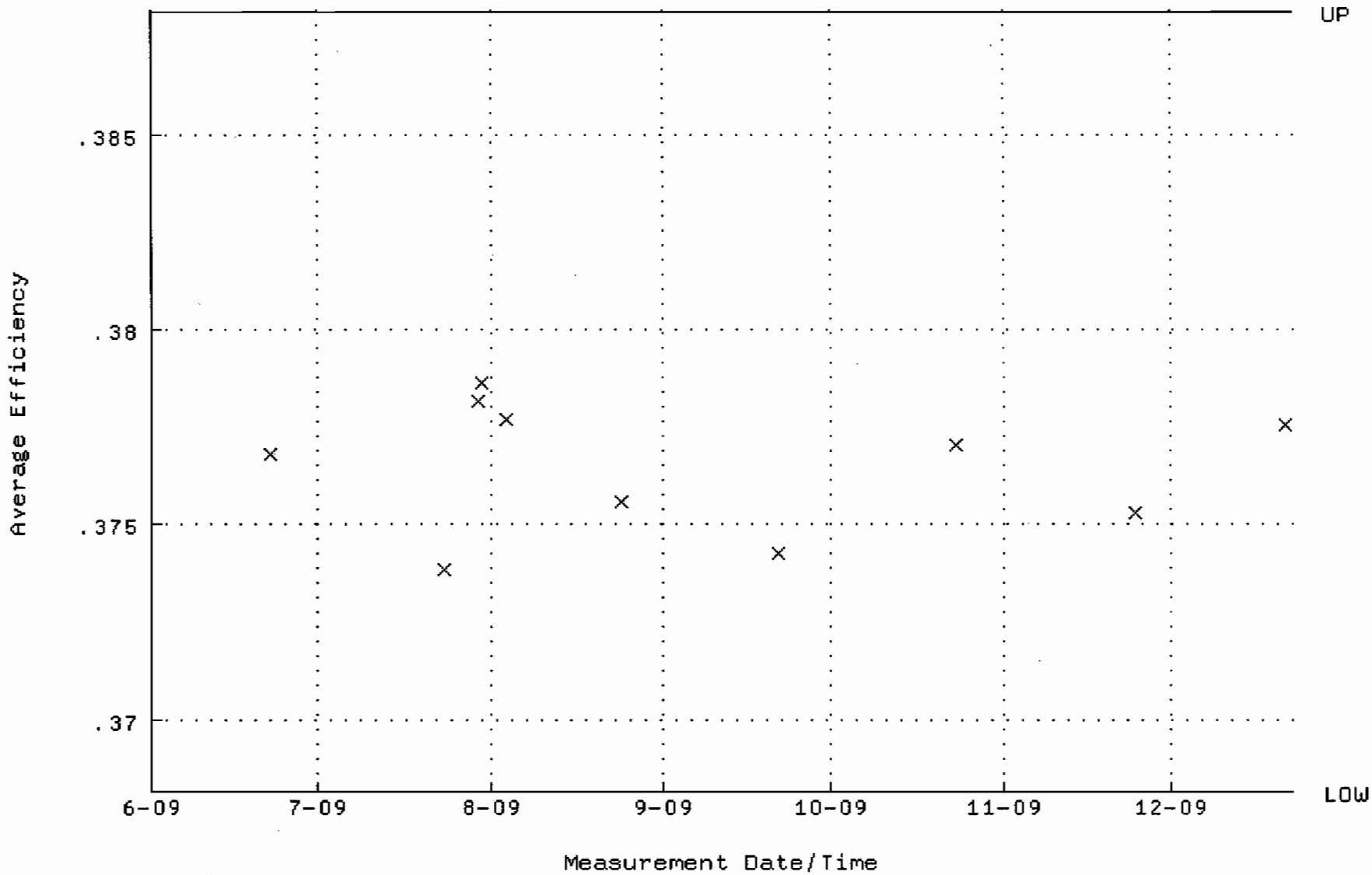
QA filename : DKA100:[ENV_ALPHA.QA.W]W115.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 15-JUN-2009 10:34:29 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 85.5661 through 94.5731



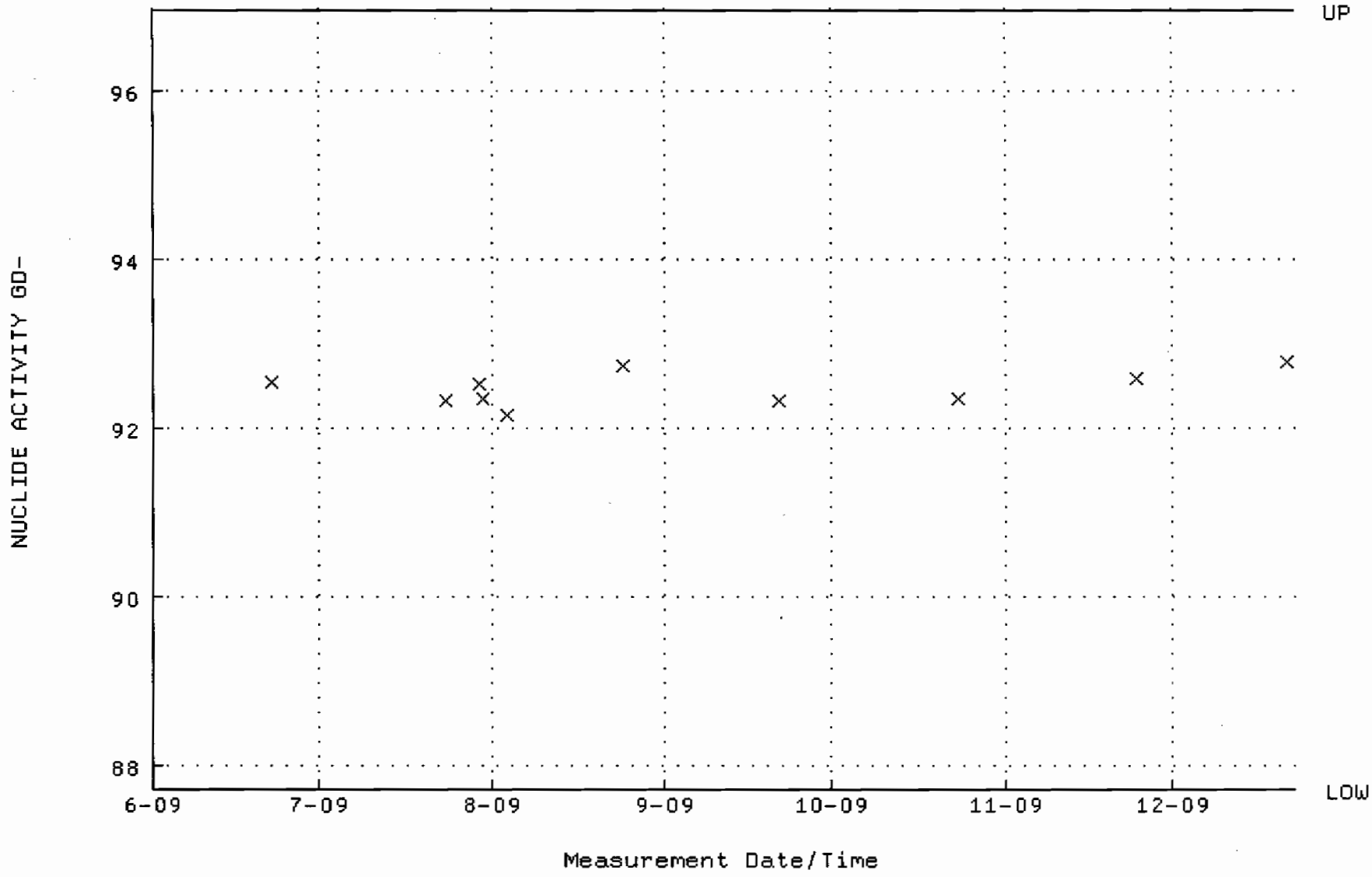
QA filename : DKA100:[ENV_ALPHA.QA.B]B115.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:08:48 through 16-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



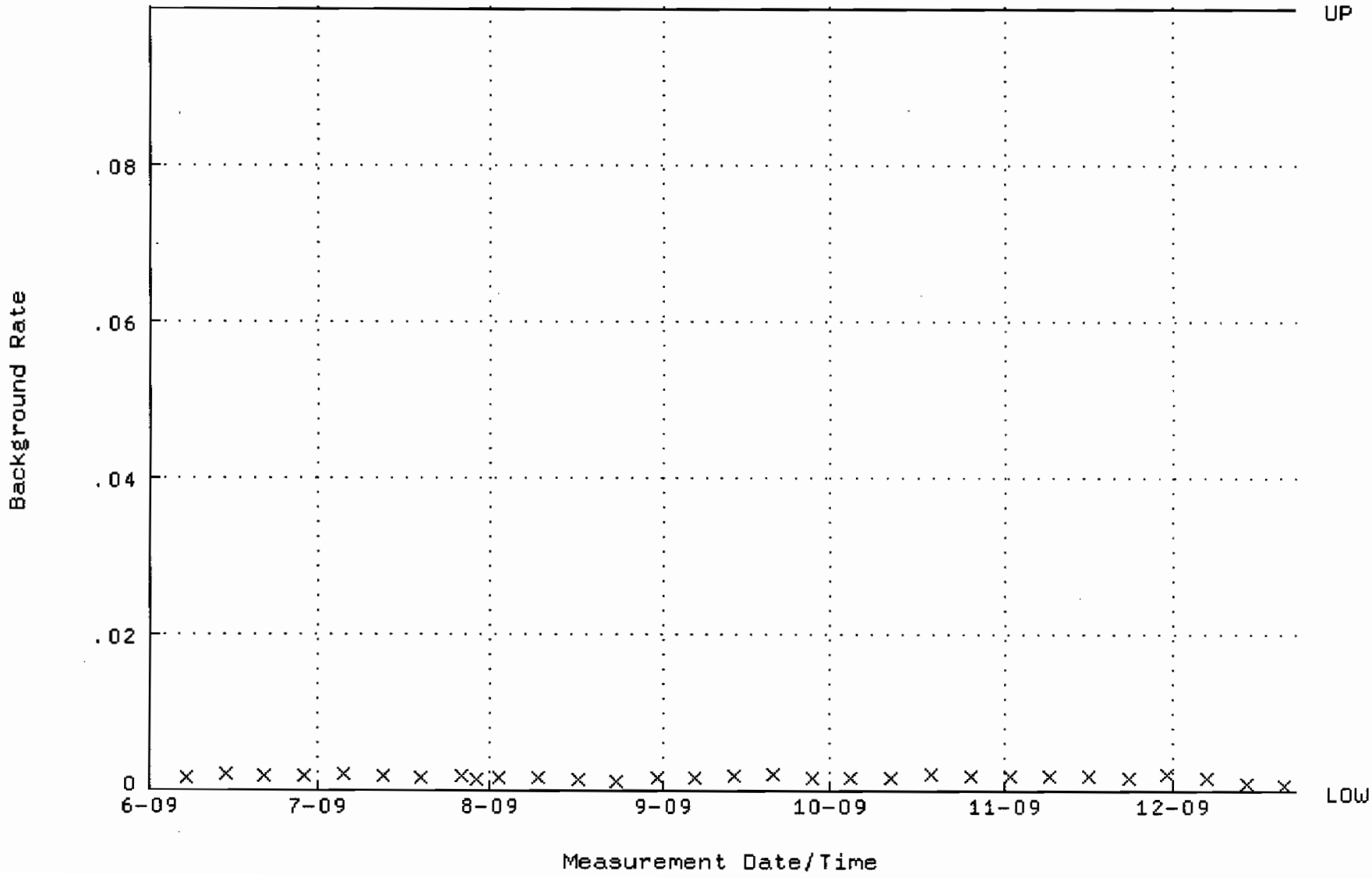
QA filename : DKA100:[ENV_ALPHA.QA.W]W169.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:39 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.368144 through 0.388144



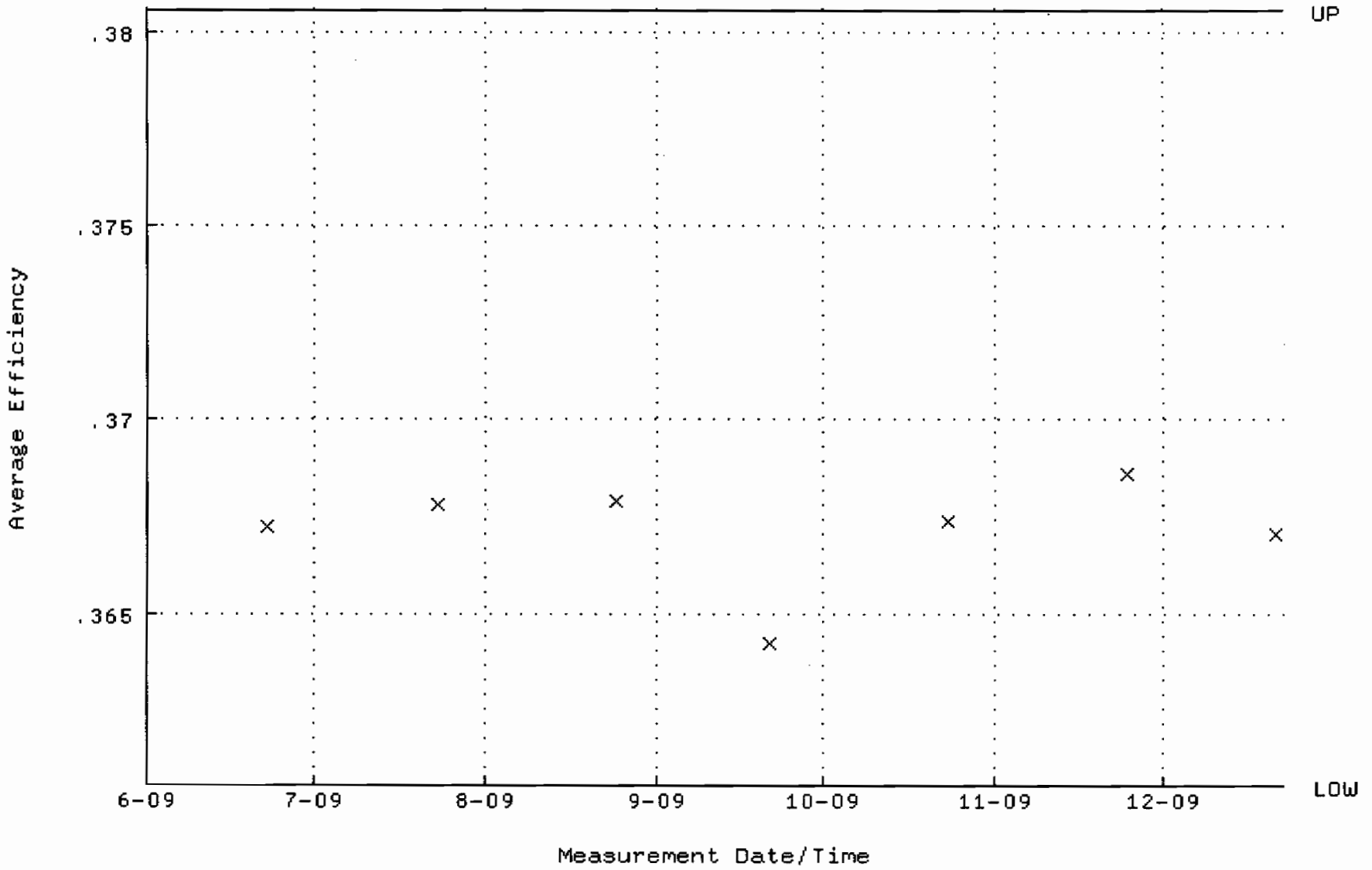
QA filename : DKA100:[ENV_ALPHA.QA.W]W169.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:39 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 87.7141 through 96.9471



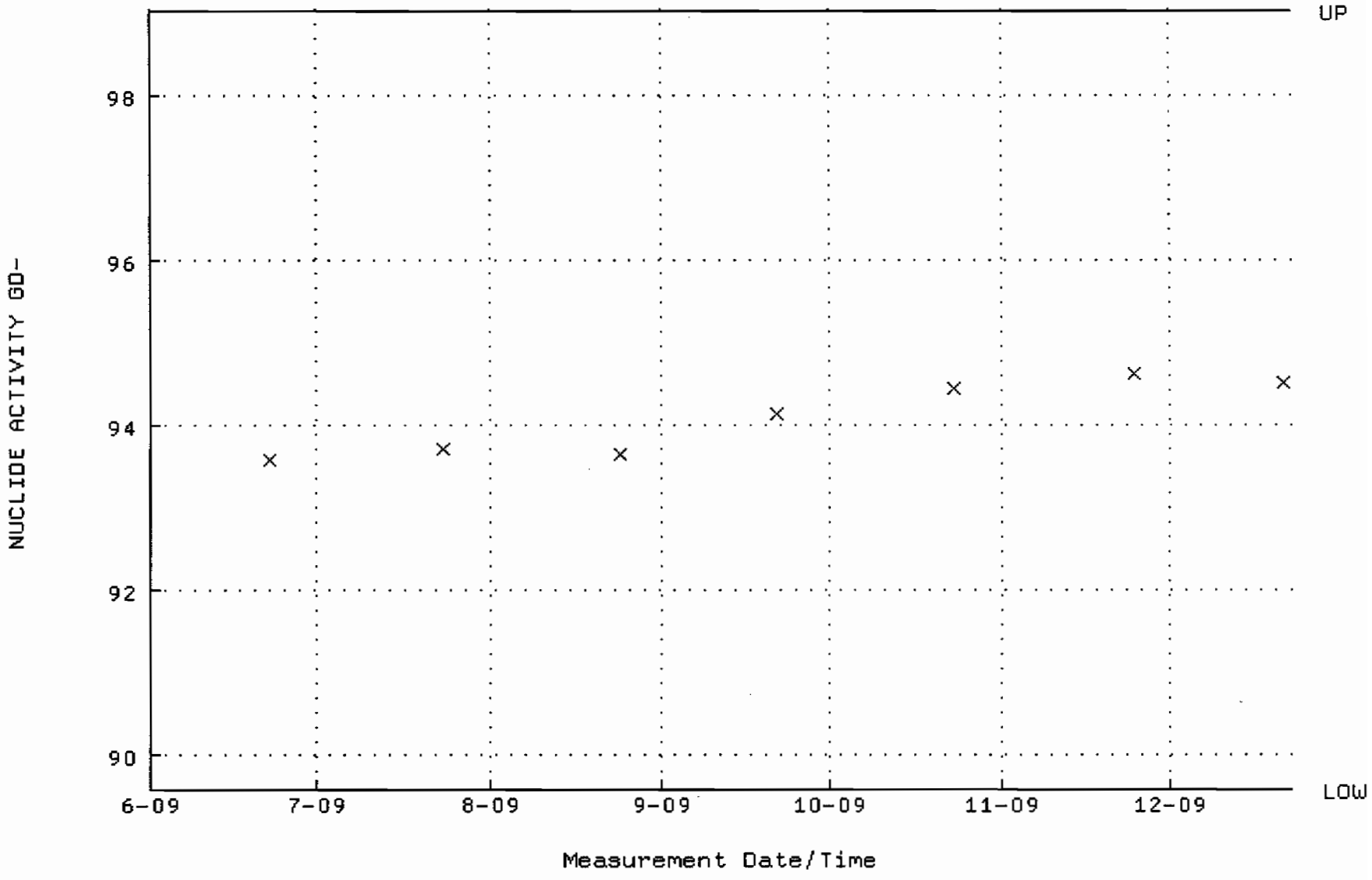
QA filename : DKA100:[ENV_ALPHA.QA.B]B169.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:32 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



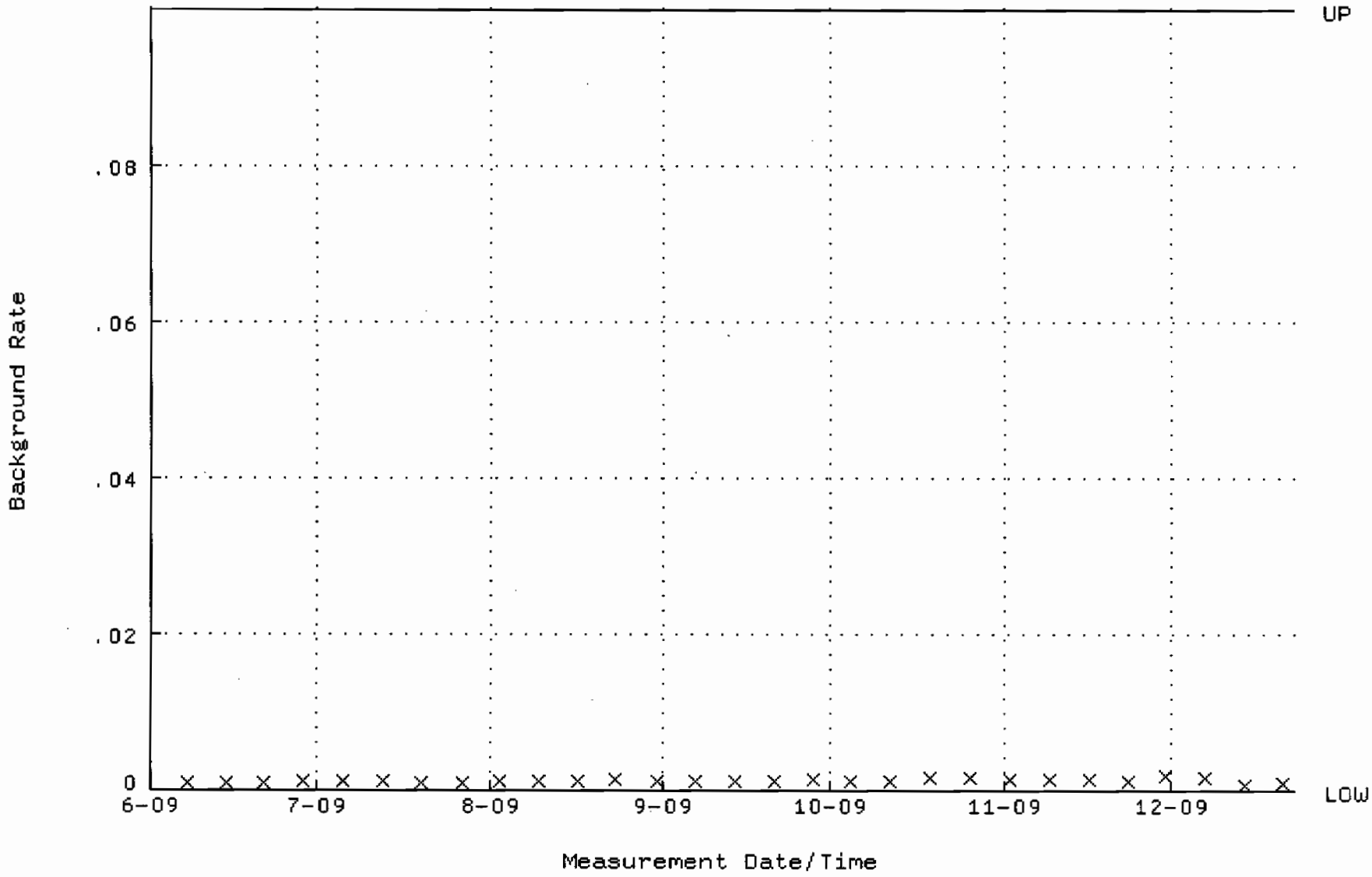
QA filename : DKA100:[ENV_ALPHA.QA.W]W170.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:44 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.360563 through 0.380563



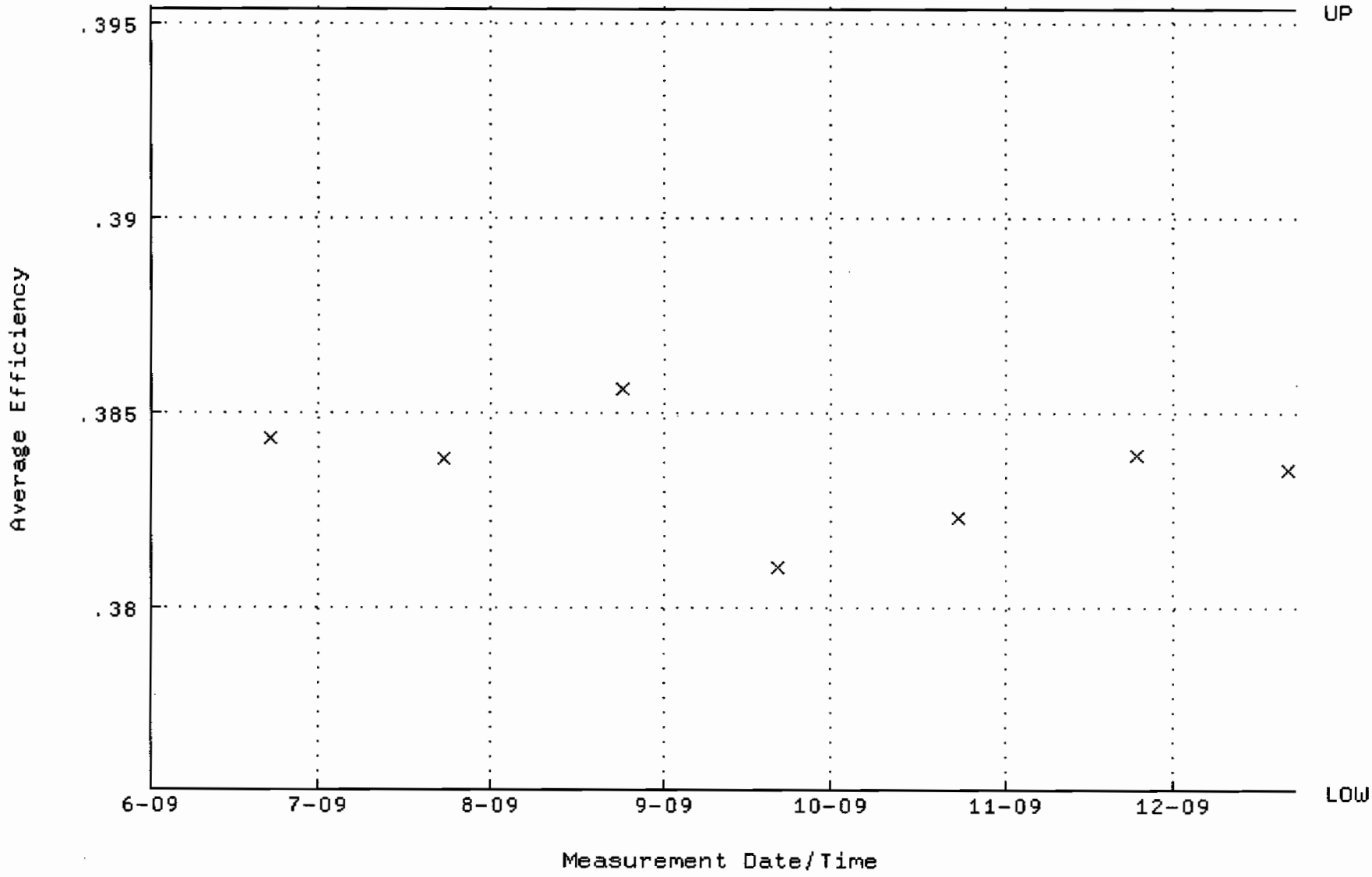
QA filename : DKA100:[ENV_ALPHA.QA.W]W170.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:44 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 89.5841 through 99.0139



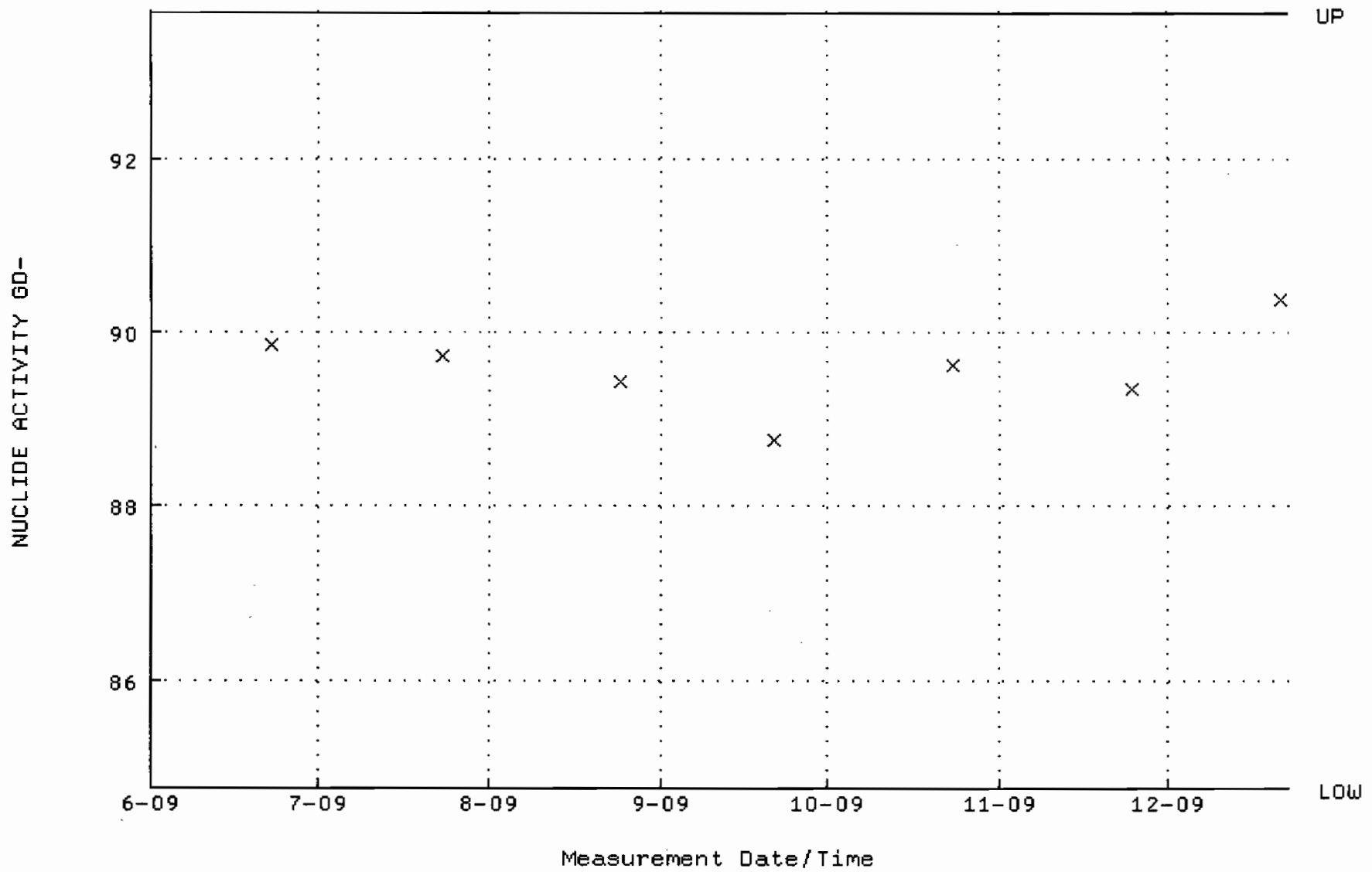
QA filename : DKA100:[ENV_ALPHA.QA.B]B170.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:36 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



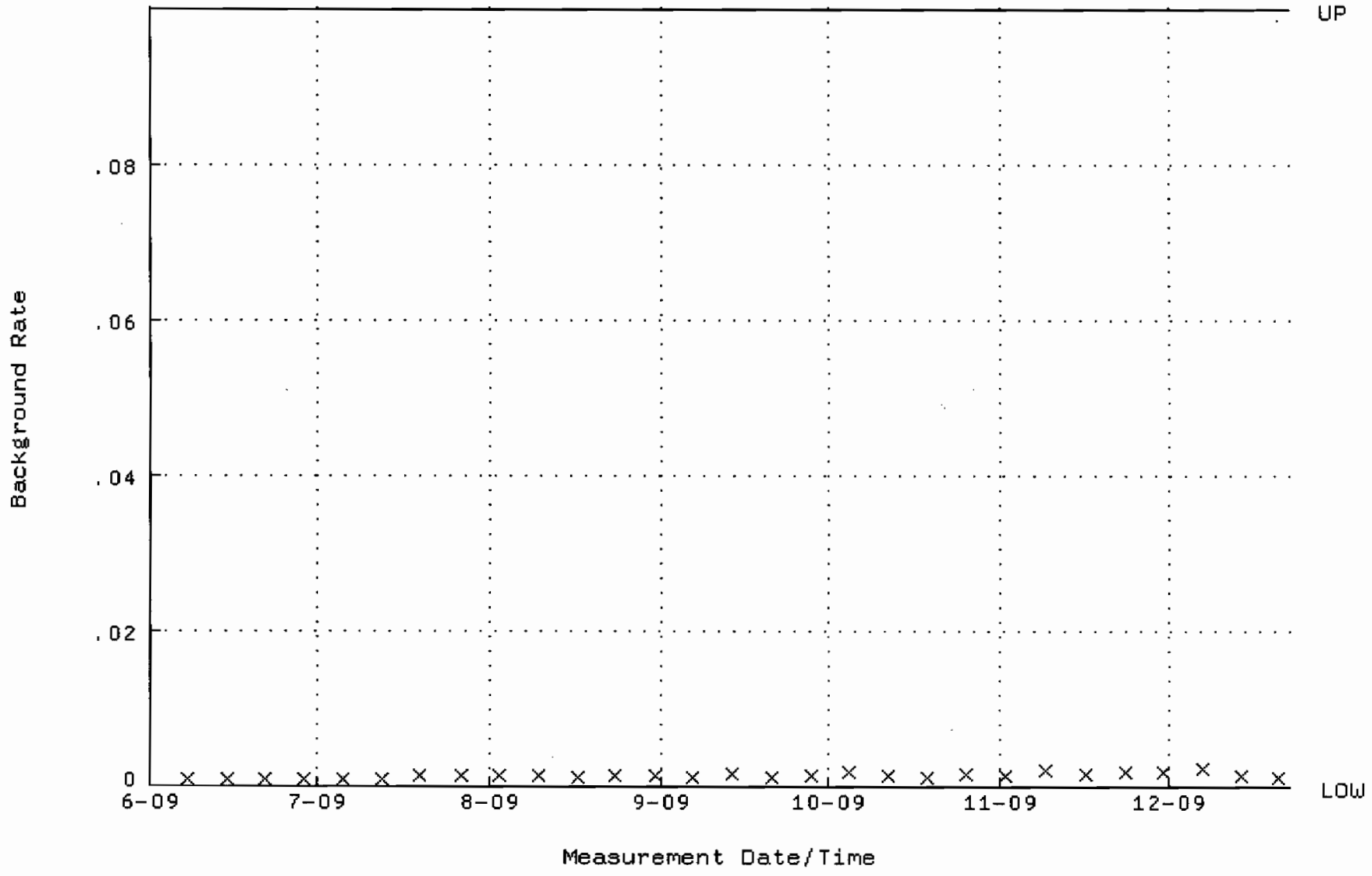
QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:50 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.375364 through 0.395364



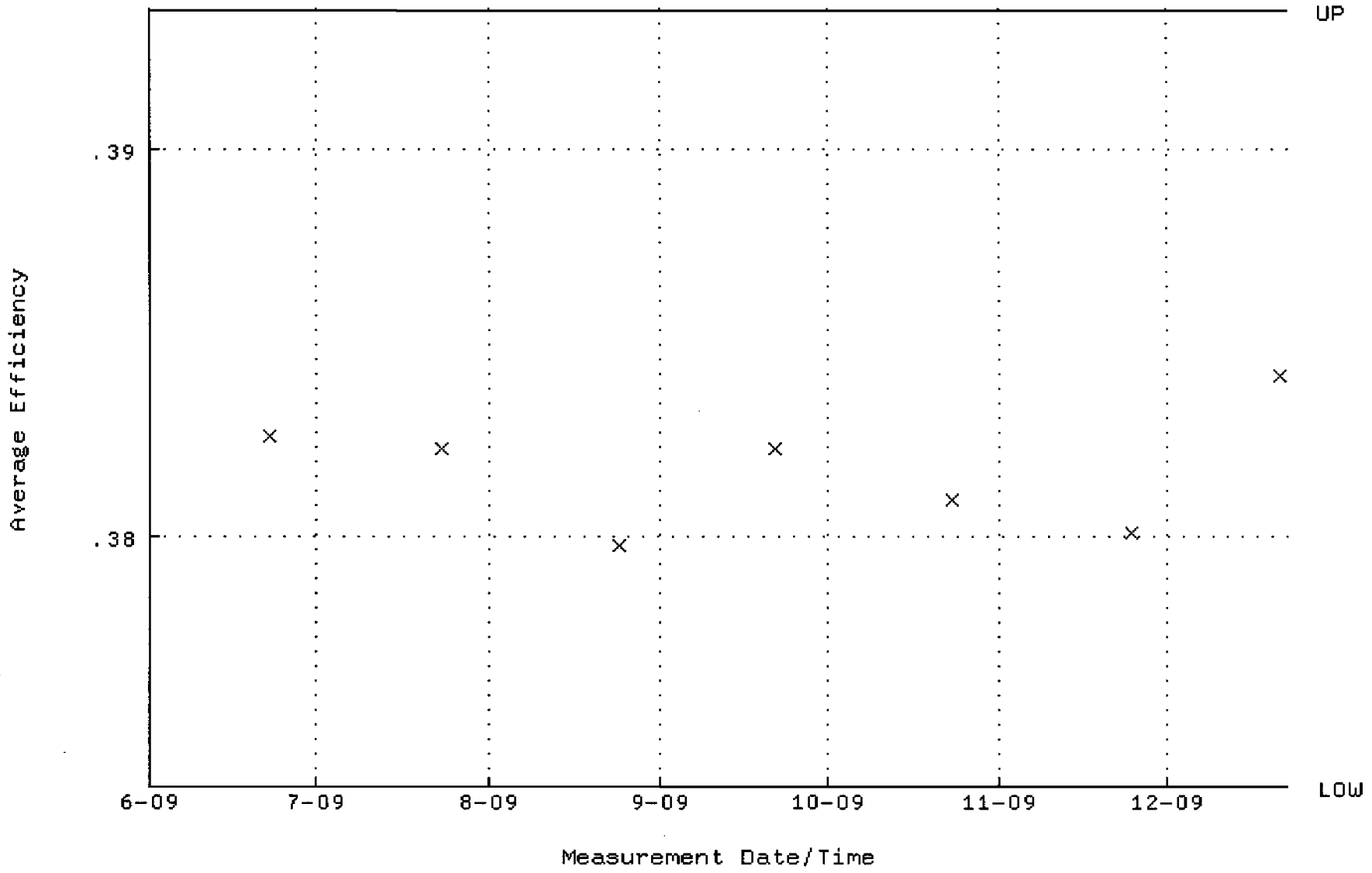
QA filename : DKA100:[ENV_ALPHA.QA.W]W171.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:50 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 84.7539 through 93.6753



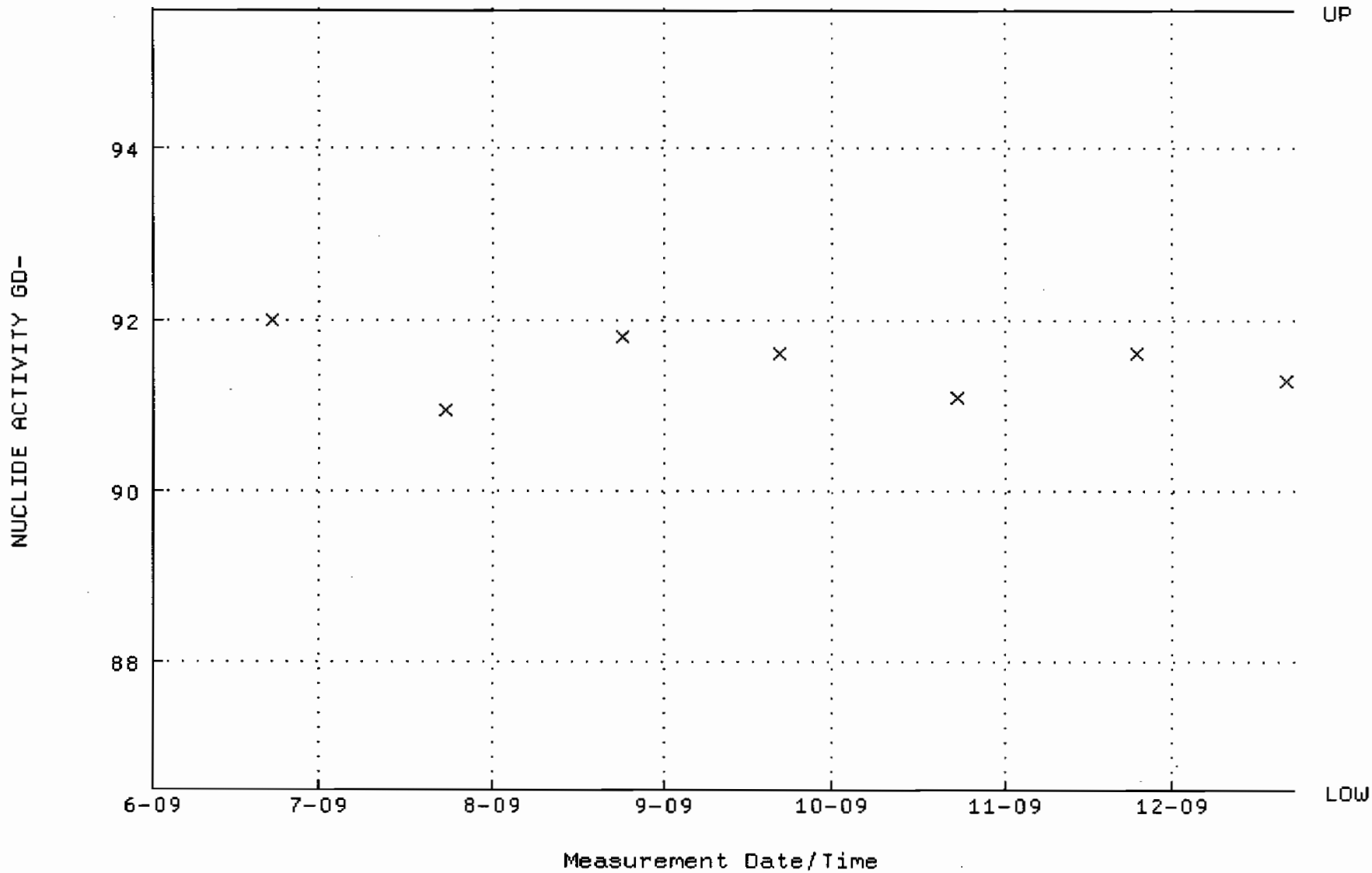
QA filename : DKA100:[ENV_ALPHA.QA.B]B171.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:40 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



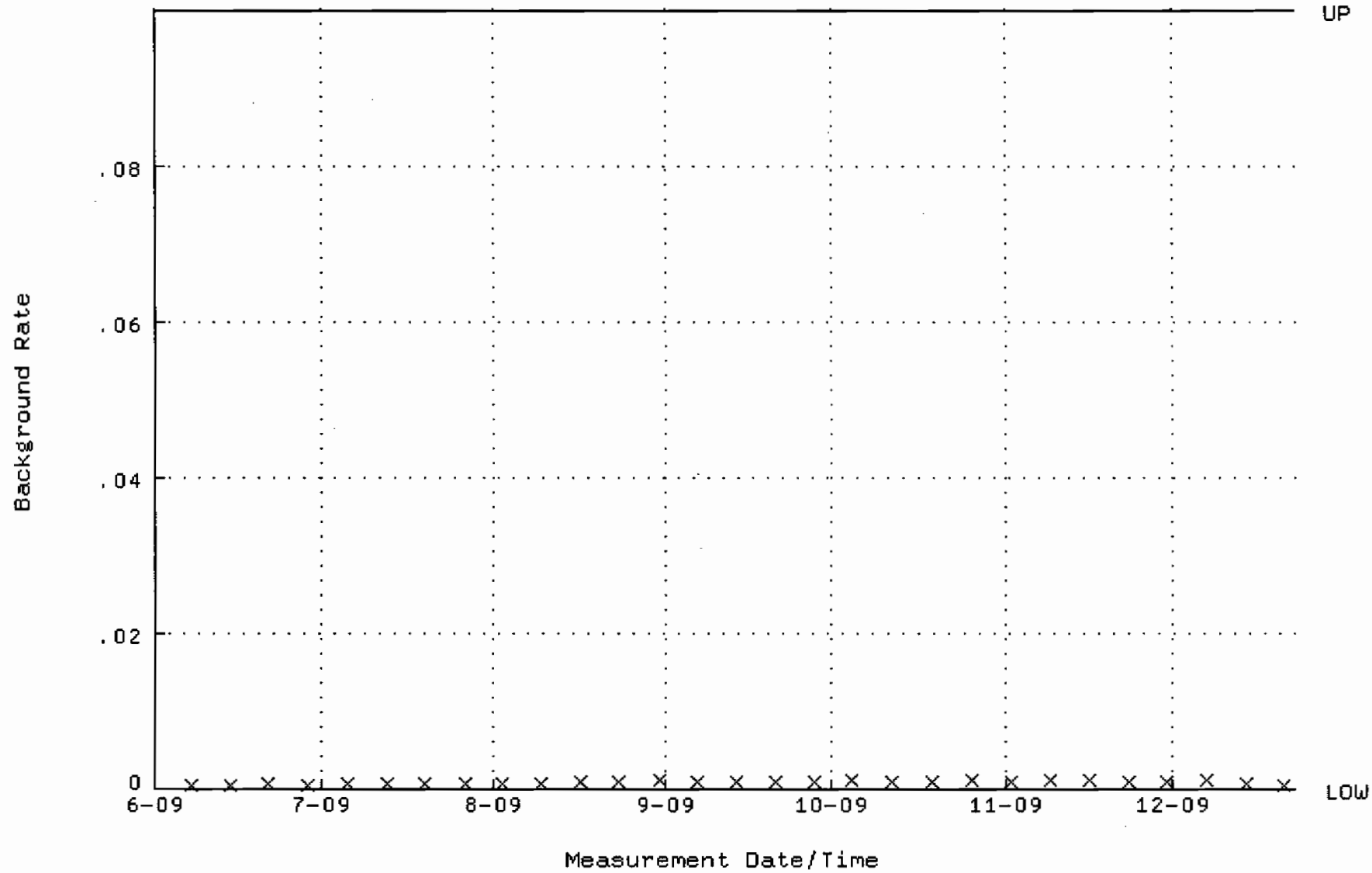
QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : AVRGEFF (Average Efficiency)
Start/End Dates : 22-JUN-2009 09:49:55 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.373575 through 0.393575



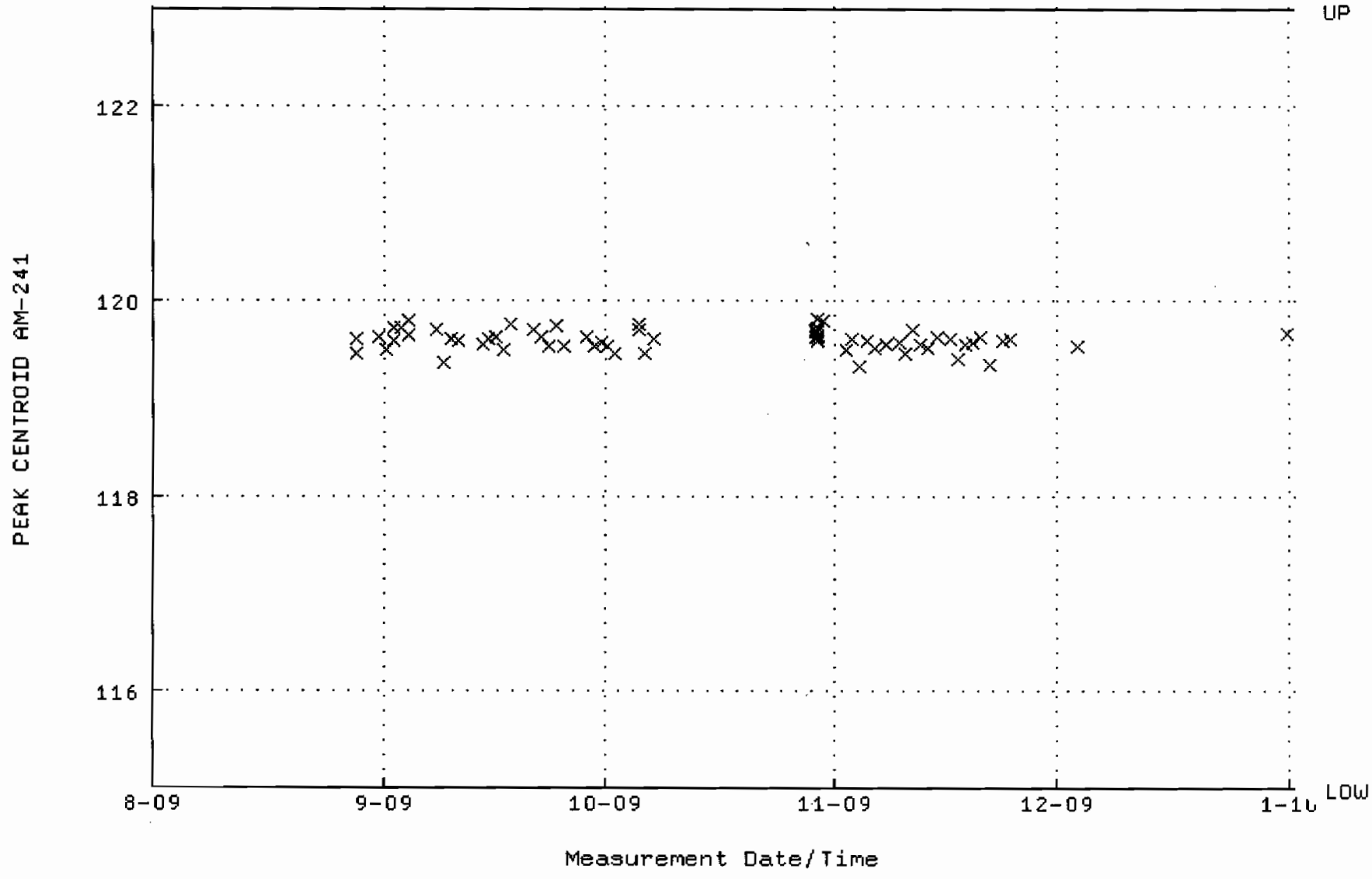
QA filename : DKA100:[ENV_ALPHA.QA.W]W172.QAF;1
Parameter Name : NLACTVTY-GD148 (NUCLIDE ACTIVITY GD-148)
Start/End Dates : 22-JUN-2009 09:49:55 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 86.5089 through 95.6151



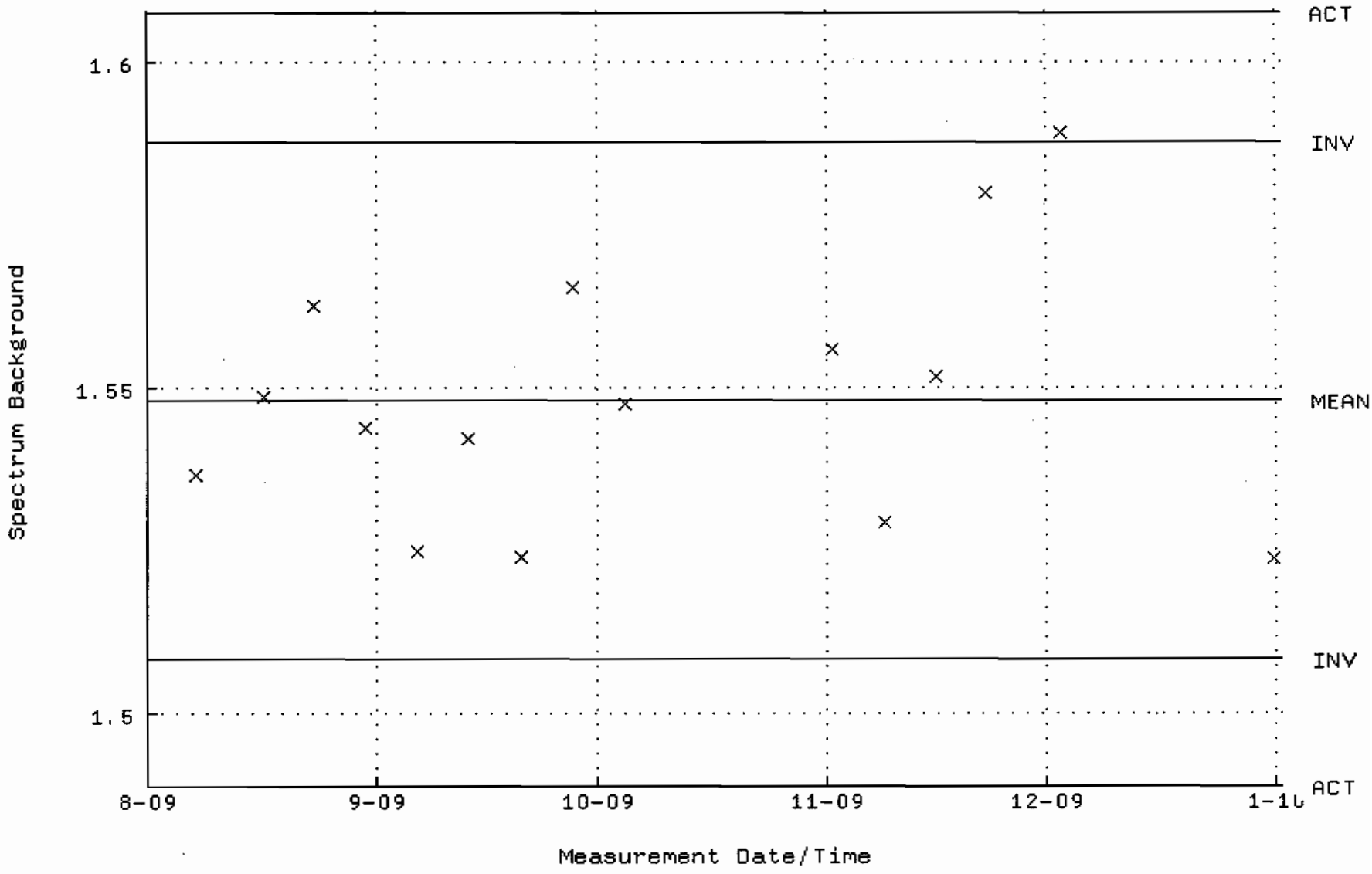
QA filename : DKA100:[ENV_ALPHA.QA.B]B172.QAF;1
Parameter Name : BACKRATE (Background Rate)
Start/End Dates : 7-JUN-2009 17:12:44 through 22-DEC-2009 12:00:00
Lower/Upper Lmts: 0.000000E+00 through 0.100000



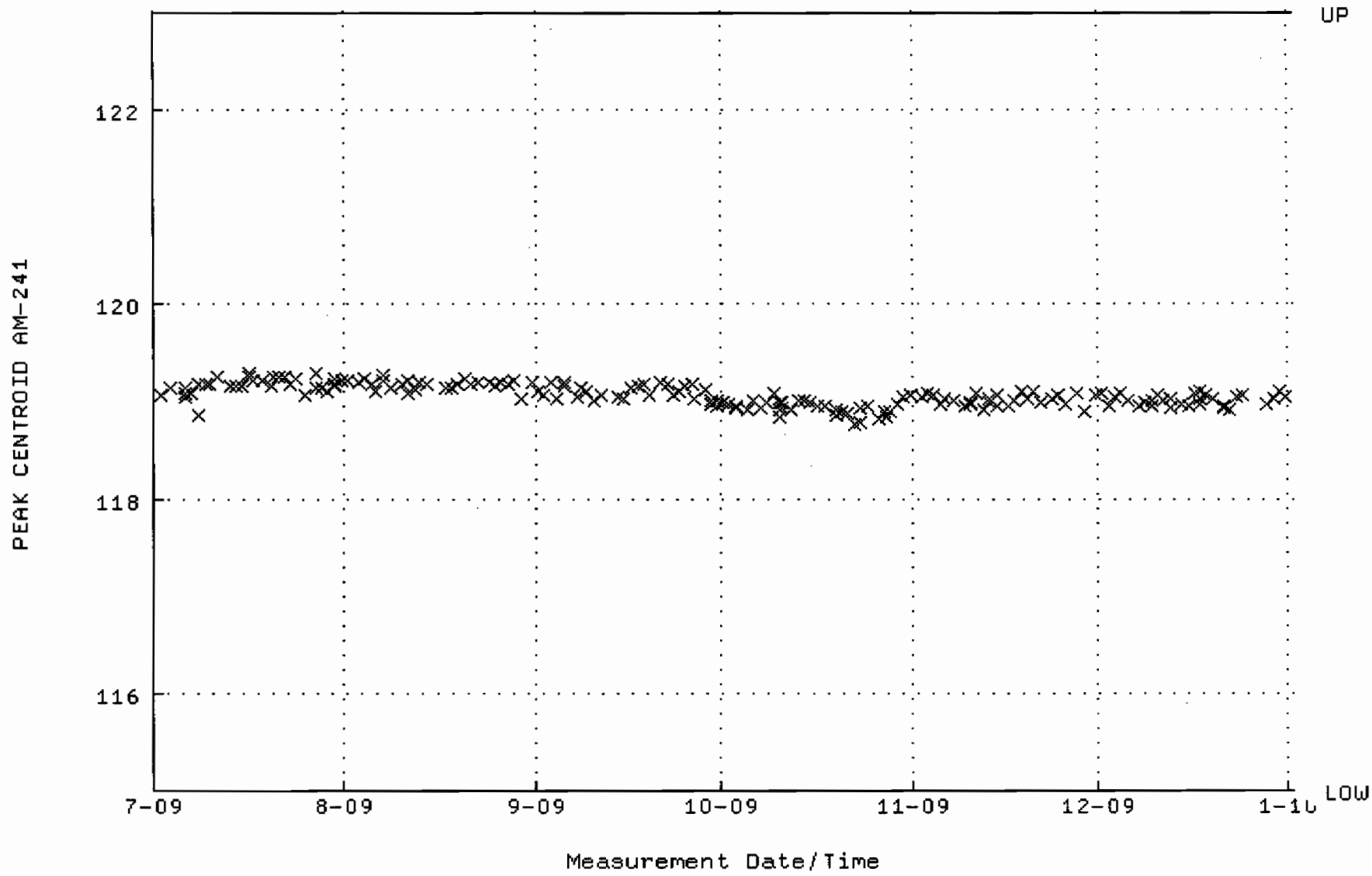
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM03_500MLMB.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 28-AUG-2009 08:41:21 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



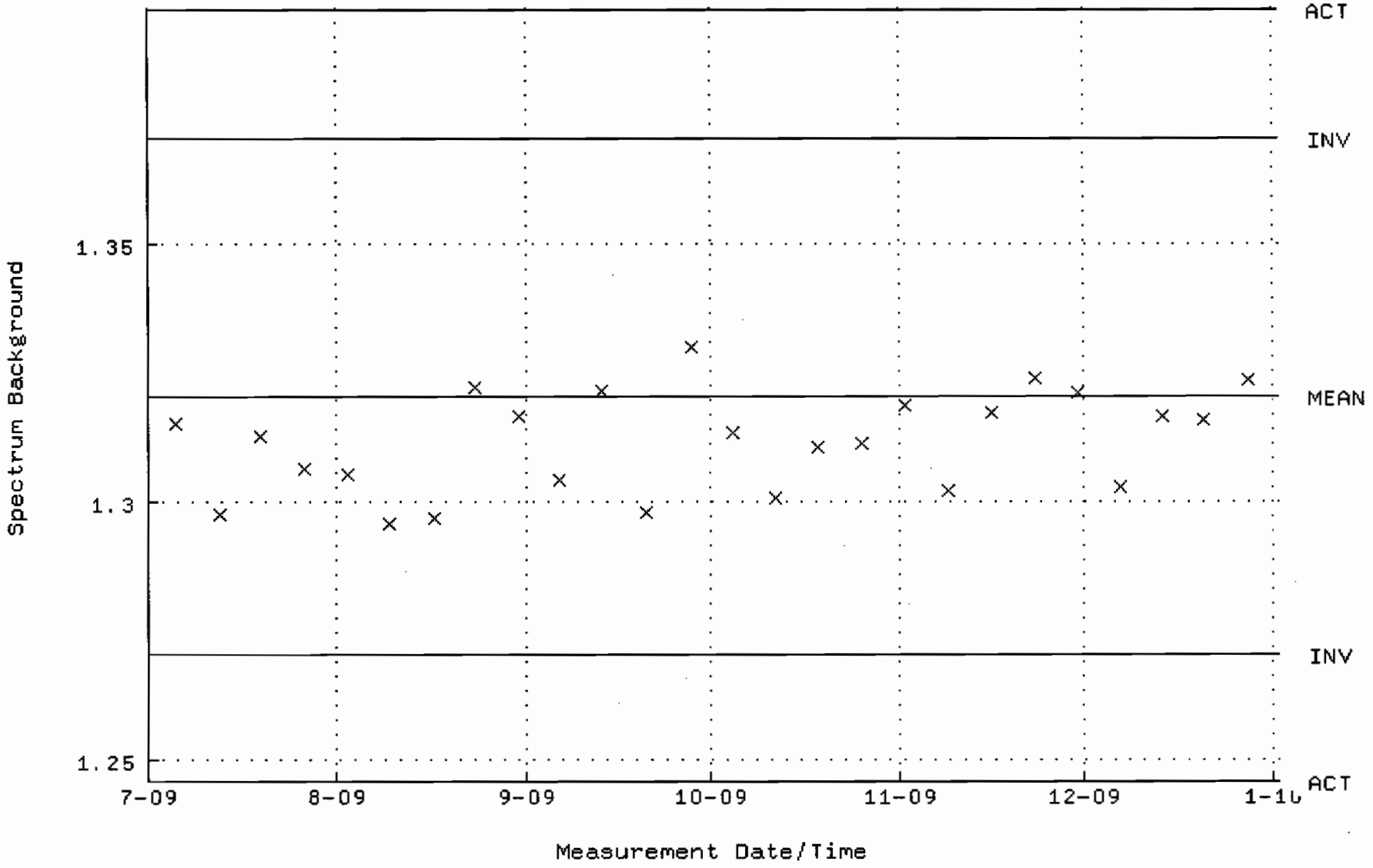
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM03.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 7-AUG-2009 12:27:25 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.54812 +- 1.978897E-02 (1.28 %)



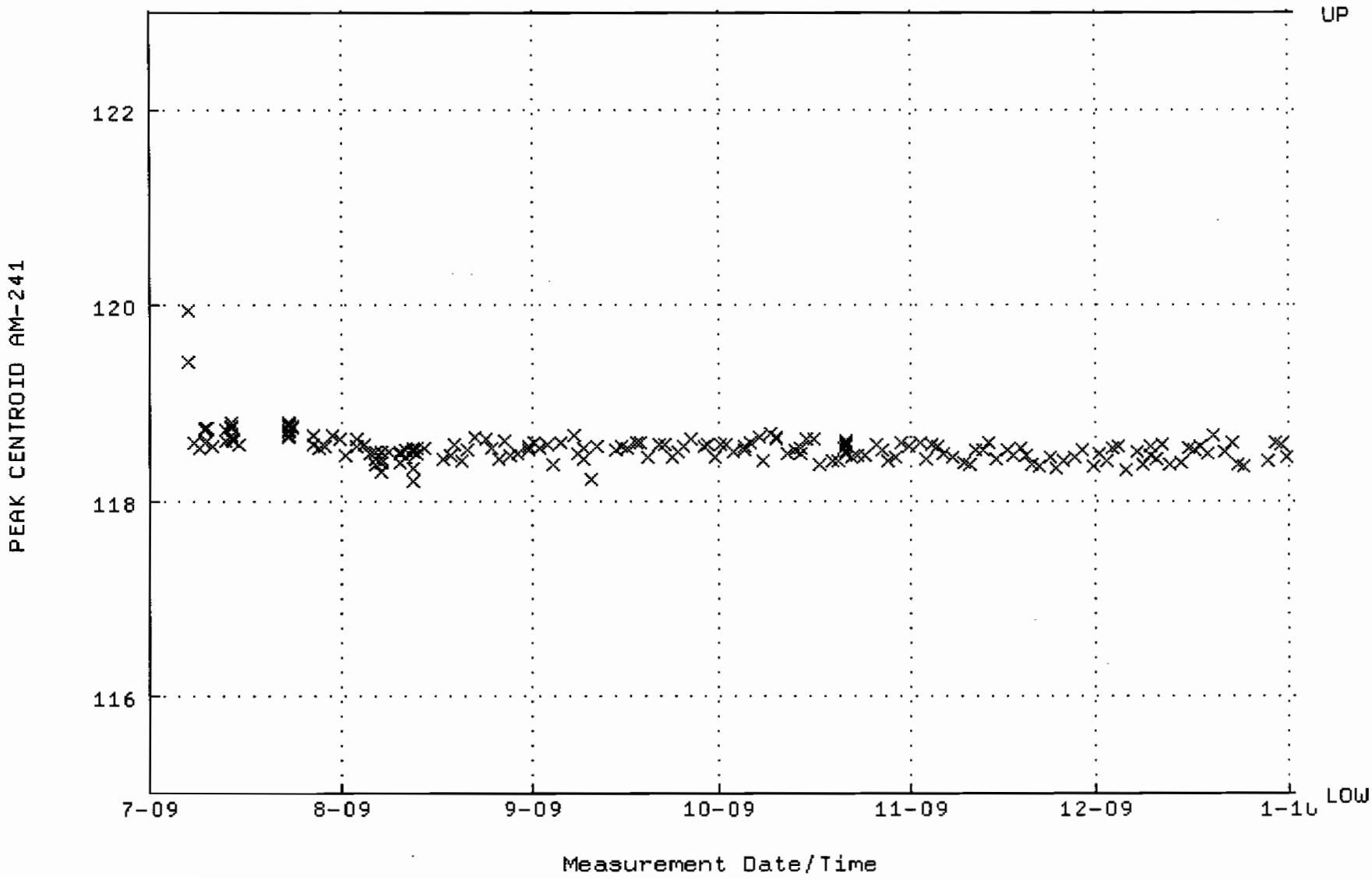
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM04_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 04:59:00 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



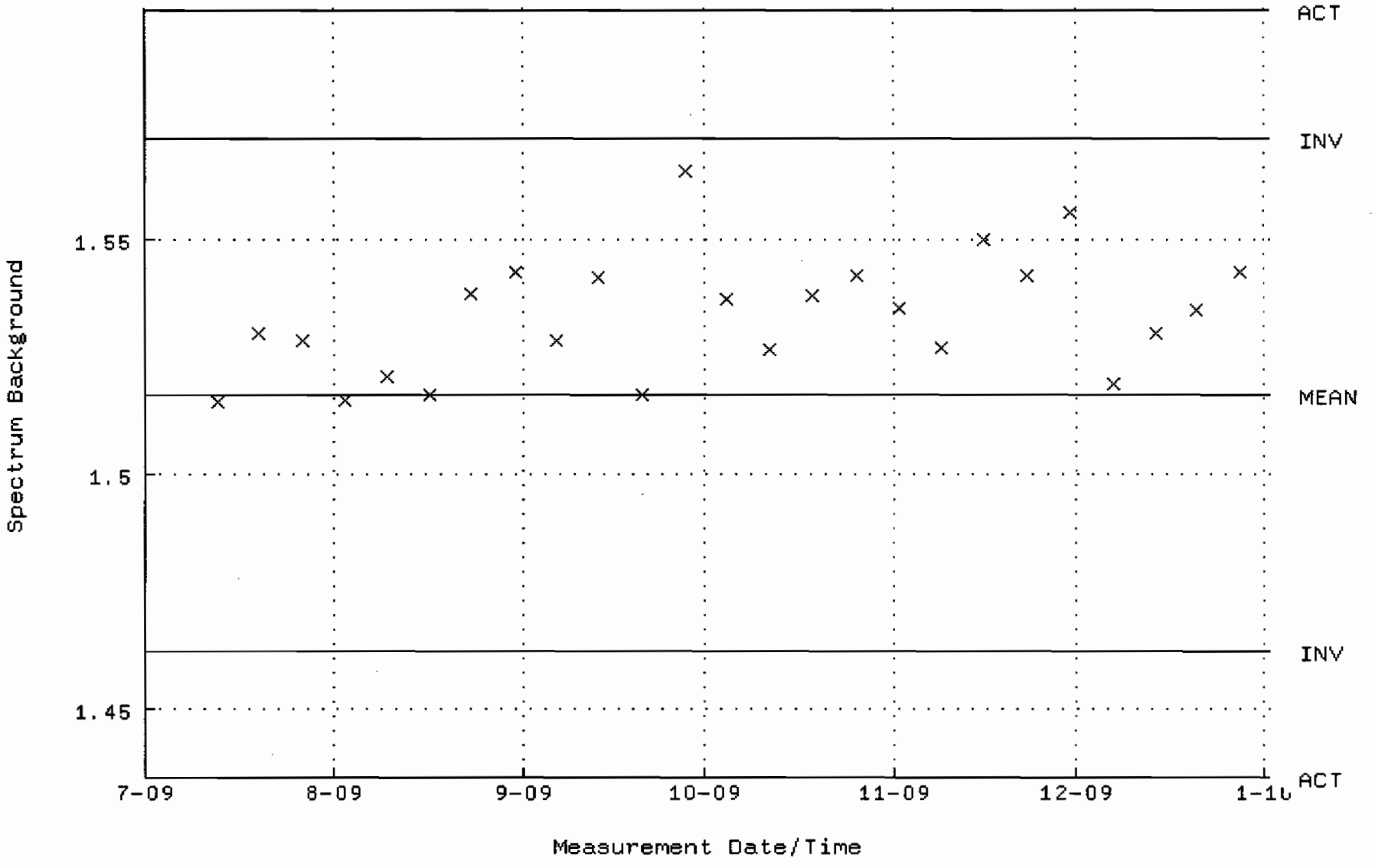
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM04.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:49:51 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.32050 +- 2.495234E-02 (1.89 %)



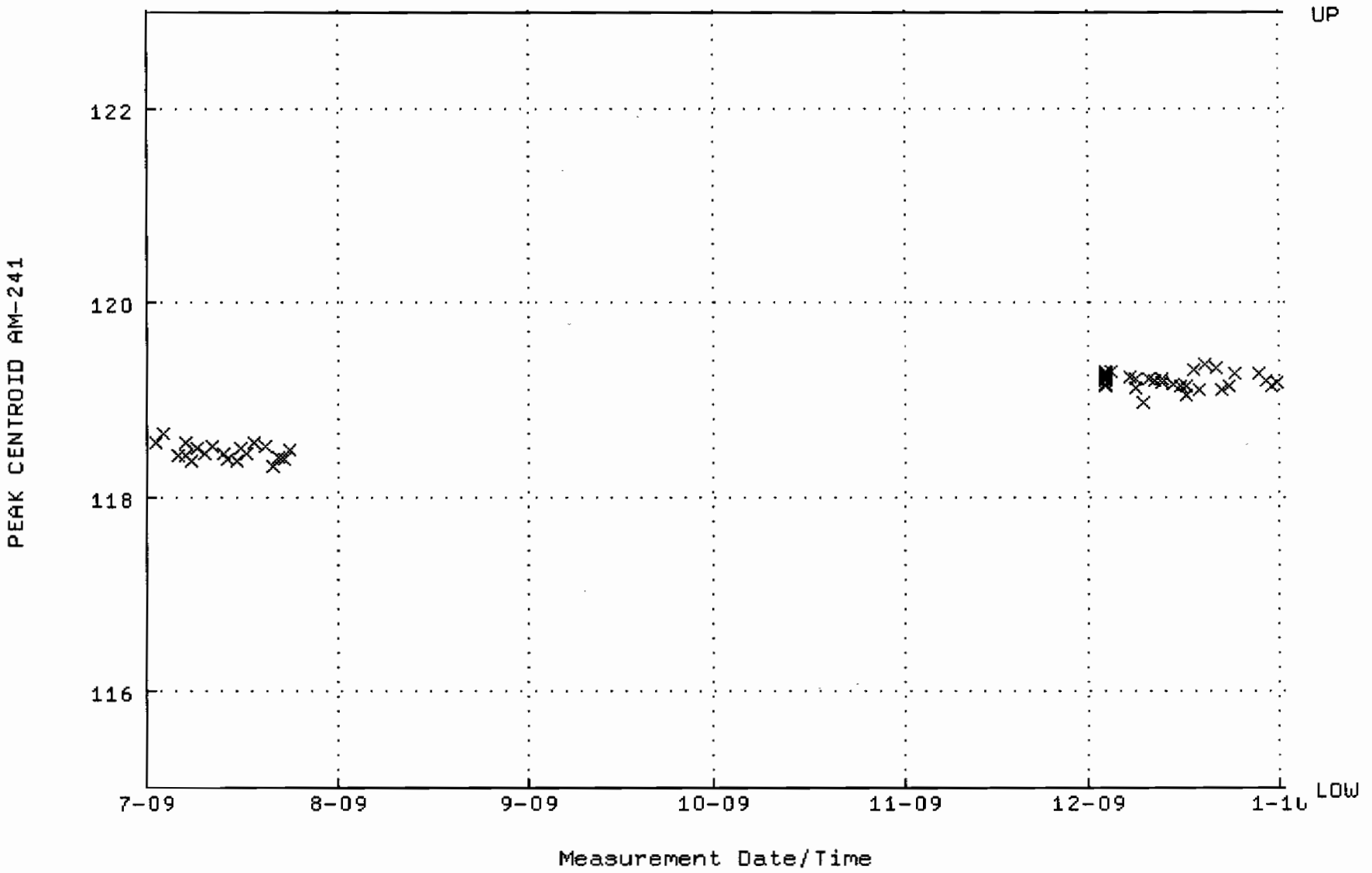
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM07_JAR.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 7-JUL-2009 09:02:00 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



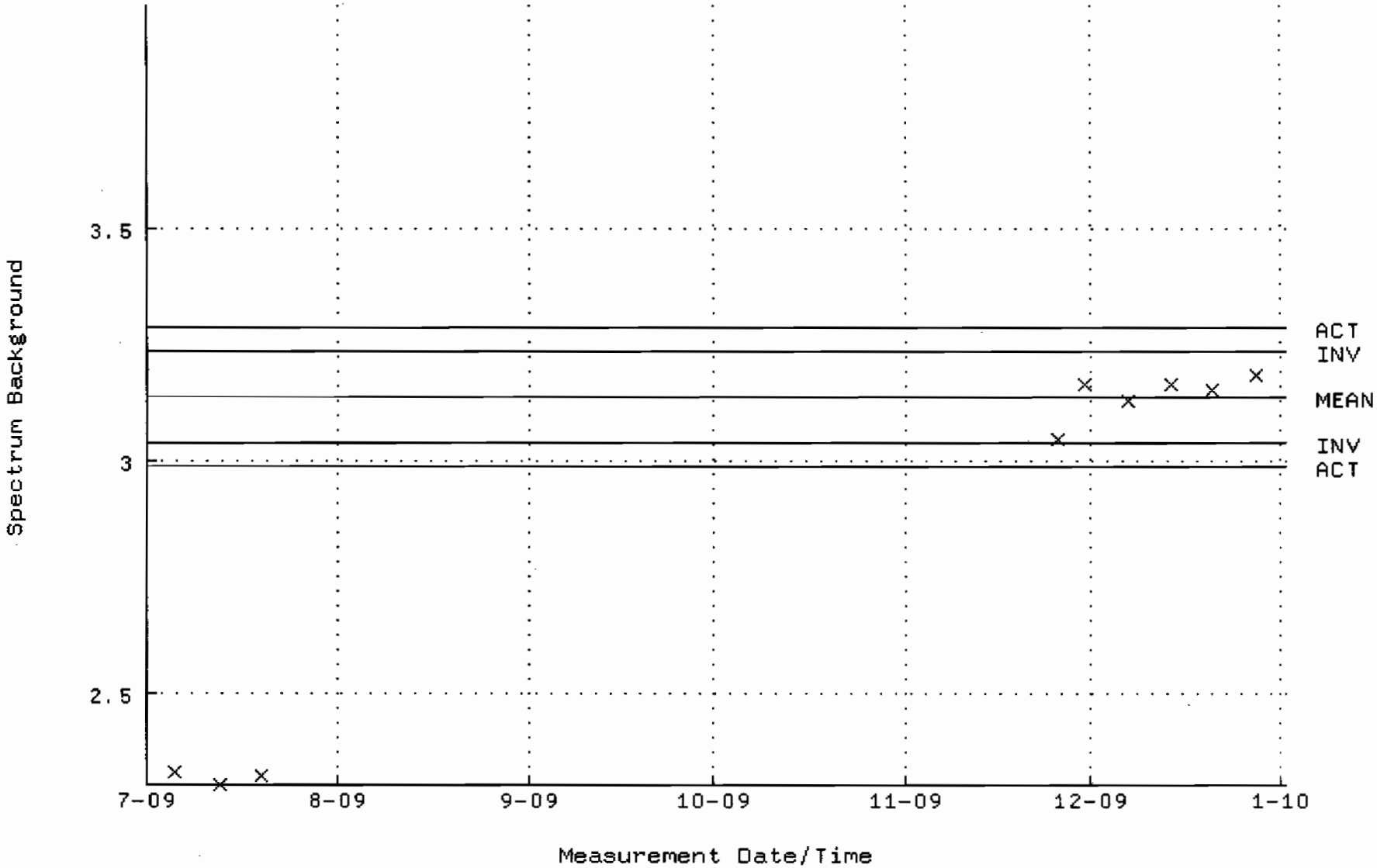
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM07.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 12-JUL-2009 17:17:31 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.51715 +- 2.726376E-02 (1.80 %)



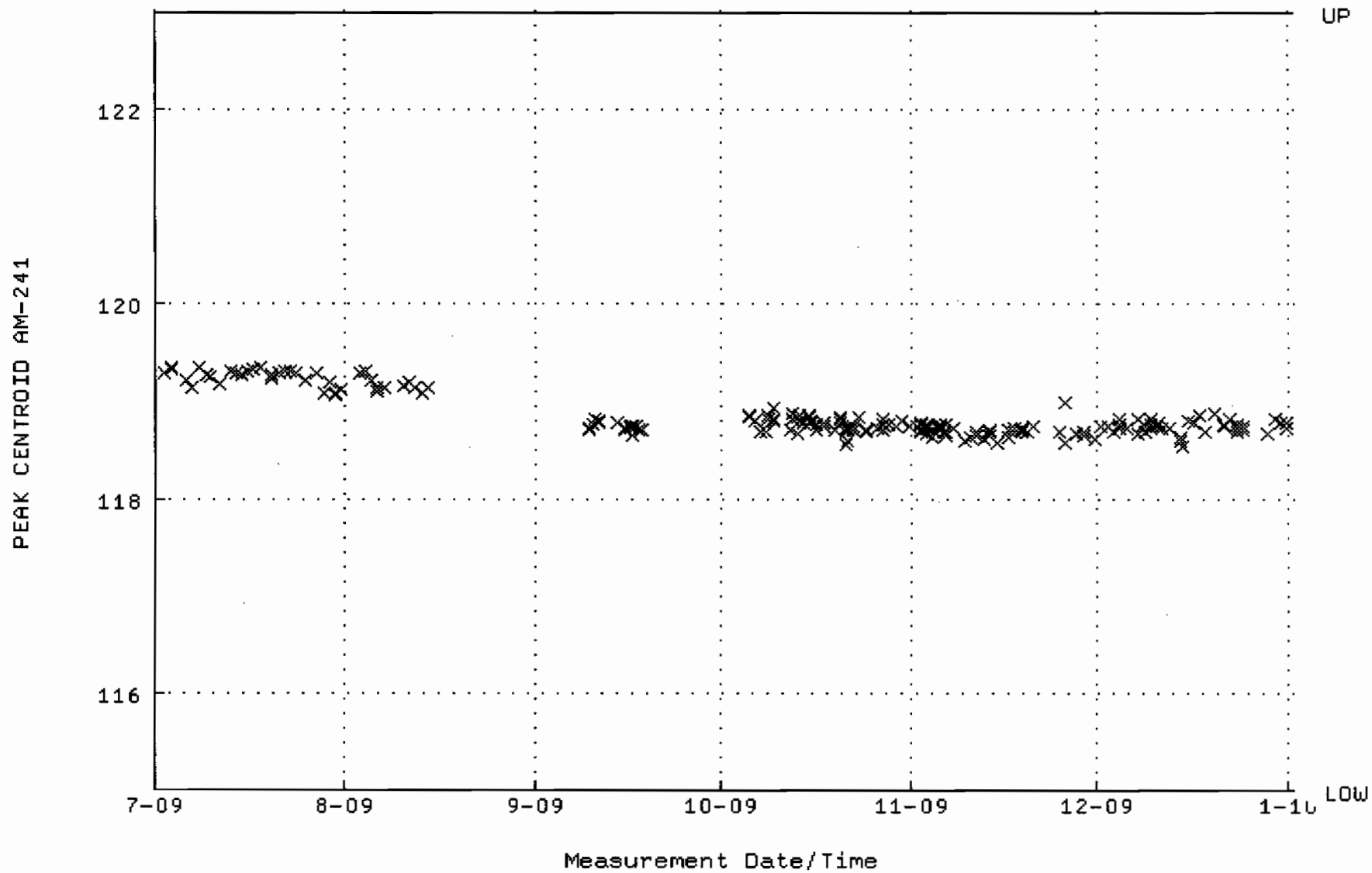
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM22_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 10:47:50 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



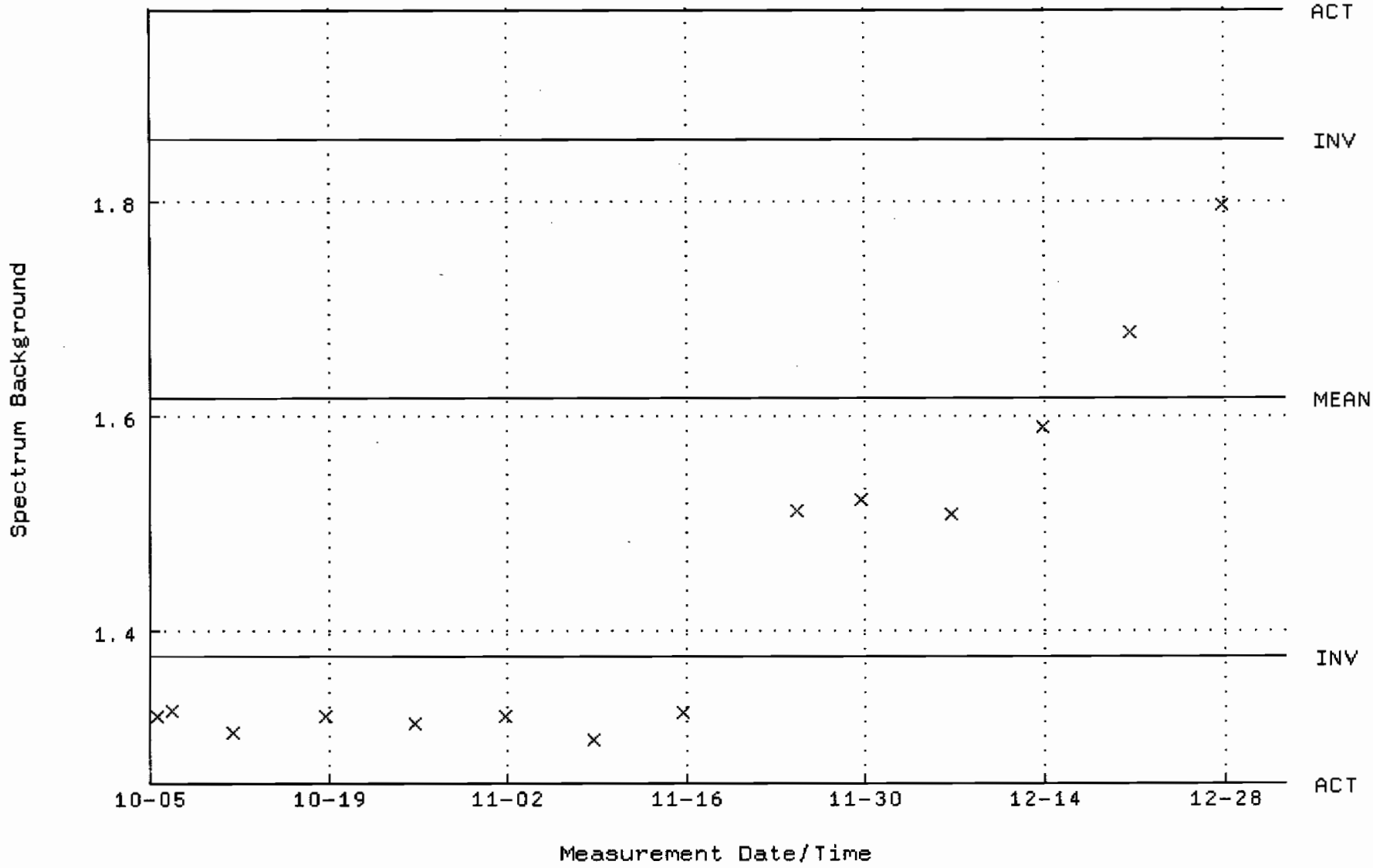
QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM22.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-JUL-2009 13:54:18 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 3.13961 +- 4.985064E-02 (1.59 %)



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]QCC_GAM23_CAN.QAF;1
Parameter Name : PSCENTRD-241 (PEAK CENTROID AM-241)
Start/End Dates : 2-JUL-2009 11:00:38 through 1-JAN-2010 12:00:00
Lower/Upper Lmts: 115.000 through 123.000



QA filename : DKA100:[CANBERRA.GAMMA.SCUSR.QA]LBC_GAM23.QAF;1
Parameter Name : BACKRATE (Spectrum Background Rate)
Start/End Dates : 5-OCT-2009 15:13:53 through 1-JAN-2010 12:00:00
Mean +- Std Dev : 1.61827 +- 0.119991 (7.41 %)



STANDARDS DATA

ANALYTICS
Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318
Tel 404•352•8677
Fax 404•352•2837
www.analyticsinc.com

1032

CERTIFICATE OF CALIBRATION
Standard Radionuclide Source

74047-278

5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using aliquots measured gravimetrically from master radionuclide solution sources. The Am-241 was calibrated by 4 pi alpha liquid scintillation counting. All other radionuclides were calibrated using a germanium gamma spectrometer system. Calibration and purity were checked using a germanium gamma spectrometer system. At the time of calibration no interfering gamma-ray emitting impurities were detected. The gamma-ray emission rates for the most intense gamma-ray lines are given. Analytics maintains traceability to the National Institute of Standards and Technology through a Measurements Assurance Program as described in USNRC Regulatory Guide 4.15, Rev. 1, February, 1979.

Calibration date: October 1, 2006 12:00 EST

ISOTOPE	GAMMA-RAY ENERGY	HALF-LIFE		GAMMA-RAYS PER SECOND	TOTAL UNCERTAINTY %
Am-241	59.5	432	y	3339	3.0
Cd-109	88	462.6	d	4815	3.3
Co-57	122	271.79	d	2409	3.0
Ce-139	166	137.6	d	3408	2.8
Hg-203	279	46.61	d	7522	2.7
Sn-113	392	115.1	d	4728	2.6
Cs-137	662	30.07	y	2973	3.0
Y-88	898	106.6	d	11600	2.6
Co-60	1173	5.2714	y	5780	2.7
Co-60	1332	5.2714	y	5783	2.6
Y-88	1836	106.6	d	12260	2.6

5.31725 grams 4M HCl solution.
P O NUMBER 2734RD, Item 1

SOURCE PREPARED BY: M. Dimitrova
M. Dimitrova, Radiochemist

Q A APPROVED: 11-28-06

This standard will expire one year after the calibration date.

Rec'd 11/30/06
RC-S-045-073-0

ANALYTICS
An Isotope Products Laboratories Company

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318

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Fax 404•352•2837

www.analyticsinc.com

ANALYSIS OF UNCERTAINTY FOR MIXED GAMMA STANDARDS
BATCH 127
CALIBRATION DATE: October 1, 2006 12:00 EST

Isotope	Energy (keV)	Calibration Method[1]	Statistics[2]	Calibration[2]	Peak Fitting[2]	Geometry[2]	Impurities[2]	Weighing	Combined Standard Uncertainty	Relative Expanded Uncertinty (k=2)
Cd-109	88	HPGe	0.16	1.1	0.88	0.8	0	0.2	1.64	3.3
Co-57	122	HPGe	0.23	1.1	0.71	0.7	0	0.2	1.52	3.0
Ce-139	166	HPGe	0.17	1.0	0.58	0.7	0	0.2	1.38	2.8
Hg-203	279	HPGe	0.11	1.1	0.34	0.7	0	0.2	1.37	2.7
Sn-113	392	HPGe	0.21	1.0	0.35	0.7	0	0.2	1.30	2.6
Cs-137	662	HPGe	0.36	1.1	0.60	0.7	0	0.2	1.49	3.0
Y-88	898	HPGe	0.19	1.0	0.33	0.7	0	0.2	1.29	2.6
Co-60	1173	HPGe	0.31	.97	0.45	0.7	0	0.2	1.33	2.7
Co-60	1332	HPGe	0.33	.93	0.48	0.7	0	0.2	1.32	2.6
Y-88	1836	HPGe	0.24	1.0	0.35	0.7	0	0.2	1.31	2.6
Optional Additional Isotopes										
Pb-210	46.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Am-241	59.5	4π LS	0.33	1.1	0	0.9	0.30	0.2	1.50	3.0
Sr-85	514	IC	0.30	1.1	0	0.7	0.17	0.2	1.36	2.7
Cs-134	605	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Cs-134	796	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Mn-54	835	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7
Zn-65	1116	IC	0.30	1.0	0	0.8	0.17	0.2	1.34	2.7

[1]Calibration Methods:

4π LS (4 pi Liquid Scintillation Counting)
HPGe (High Purity Germanium Gamma Ray Spectrometer)
IC (Gamma Ray Ionization Chamber)

[2]As Percent (%)from counting data

No interfering gamma emitting impurities were detected during calibration. Depending on the resolution and energy dispersion (keV/channel) of the measuring system, the following spectral conflicts may occur: (1) between the 88 keV gamma-ray and the X-rays emitted in the decay of Hg-203, (2) between the 1333 keV gamma-ray and the 1325 keV single escape peak from the 1836 keV gamma-ray.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1032
Prepared By:	Daniel Roy
Carrier Conc:	4 M HCL
Reference Date:	10/01/2006
Ampoule Mass (g):	5.31725 g
Uncertainty:	+/- 2.81 %
LogBook No:	RC-S-045-073

A Solution Material Info	
Isotope:	Mixed Gamma
Prepared By:	Daniel Roy
Prep Date:	11/30/2006
Verification Date:	12/02/2009
Expiration Date:	12/02/2010
Primary Code:	1032-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.2579 g
Density(g/mL):	1.0611
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dpm)) * (conversion dpm to dpm) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (5.31725 g * 100 mL) = 2163.7461 dpm/mL
(5.2579 g) * (218817 dpm) * (1 dpm/dpm) / (1.0611 g/mL)/ (5.31725 g * 100 mL) = 2039.2400 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Am-241	Isotope	Result	
	Mixed Gamma N1	2534	pCi/L - Ver. Jar. 1
	Mixed Gamma N2	2510	pCi/L - Ver. Jar. 3
	Mixed Gamma N3	2413	pCi/L - Ver. Jar. 5
Mean Value (Counting) =	2485.67	**100.00**	**Pass**
Stdev =	64.065		**Rule 3 (Pass/Fail)**
Certificate Value =	2485.68018	pCi/L	
Lower Limit =	2357.536524	pCi/L	
Upper Limit =	2613.796809	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	128.1301422		
10 % of Mean =	248.56666667		
Rule 2 (Pass/Fail)	**Pass**		

M. Stamps 12/2/09 witness Dietrich 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Cs-137	Isotope	Result		
	Mixed Gamma N1	854.2	pCi/L	- Ver-Jar-1
	Mixed Gamma N2	907.6	pCi/L	- Ver-Jar-3
	Mixed Gamma N3	898.9	pCi/L	- Ver-Jar-2
Mean Value (Counting) =	886.90	95.01	**Pass**	
Stdev =	28.651	**Rule 3 (Pass/Fail)**		
Certificate Value =	933.44144	pCi/L		
Lower Limit =	829.597644	pCi/L		
Upper Limit =	944.202356	pCi/L		
Rule 1 (Pass/Fail)	**Pass**			
Two sigma =	57.30235597			
10 % of Mean =	88.69000000			
Rule 2 (Pass/Fail)	**Pass**			

M. Stamps 12/2/09

12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

Verification for Mixed Gamma Standard 1032-A

M. Stamps
12/2/2009

Co-60 (1332.5)	Isotope	Result	
	Mixed Gamma N1	1572	pCi/L - VER-JAR-5
	Mixed Gamma N2	1495	pCi/L - VER-JAR-2
	Mixed Gamma N3	1501	pCi/L - VER-JAR-3
Mean Value (Counting) =	1522.67	**98.50**	**Pass**
Stdev =	42.829	**Rule 3 (Pass/Fail)**	
Certificate Value =	1545.8378	pCi/L	
Lower Limit =	1437.008431	pCi/L	
Upper Limit =	1608.324902	pCi/L	
Rule 1 (Pass/Fail)	**Pass**		
Two sigma =	85.65823564		
10 % of Mean =	152.26666667		
Rule 2 (Pass/Fail)	**Pass**		

M. Stamps 12/2/09 reviewed 12/4/09

Verification Rules

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

0533

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 · U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

65338-278

Am-241 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated by liquid scintillation counting.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Am-241
ACTIVITY (dps):	3.920 E4
HALF-LIFE:	4.322 E2 years
CALIBRATION DATE:	January 15, 2003 12:00 EST
TOTAL UNCERTAINTY*:	3.2%
SYSTEMATIC:	2.2%
RANDOM:	1.0%

*99% confidence level.

5.10649 grams 1M HCl solution.

Impurities: γ-impurities <0.1%
α-impurities <0.1%

P O NUMBER 3213 RD, Item 1

SOURCE PREPARED BY: M Taskaeva
M. Taskaeva, Radiochemist

Q A APPROVED: UM [signature] 1-16-03

RC-S-035-048a

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0533
Prepared By:	Angela Johnson
Carrier Conc:	1 M HCL
Reference Date:	01/15/2003
Ampoule Mass (g):	5.10649 g
Uncertainty:	+/- 3.2 %
LogBook No:	RC S 035 048

A Solution Material Info	
Isotope:	Americium-241
Prepared By:	Angela Johnson
Prep Date:	02/05/2003
Verification Date:	09/29/2008
Expiration Date:	09/29/2009
Primary Code:	0533-A
Dilution(mL):	100 mL
Mass of Parent(g):	4.8225 g
Density(g/mL):	1.0139
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(4.8225 g) * (39200 dps) * (60 dpm/dps) / (5.10649 g * 100 mL) = 22211.9695 dpm/mL
(4.8225 g) * (39200 dps) * (60 dpm/dps) / (1.0139 g/mL)/ (5.10649 g * 100 mL) = 21907.2185 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
02/20/2003	Angela Johnson	1.0151	100	0533-B	222.38 dpm/mL	03/01/2006	03/01/2007
02/20/2003	Angela Johnson	.6819	250	0533-C	59.754 dpm/mL	02/20/2004	02/20/2005
05/07/2003	Tim Chandler	.1245	100	0533-D	27.2745 dpm/mL	05/03/2004	05/03/2005
09/10/2004	Amanda Fehr	.6933	250	0533-E	60.753 dpm/mL	09/10/2005	09/10/2006
12/17/2004	Brenda Burke	.0093	100	0533-F	2.0374 dpm/mL	12/20/2004	12/20/2005
12/21/2004	Brenda Burke	.009273	100	0533-G	2.0315 dpm/mL	12/07/2005	12/07/2006
04/28/2005	Brenda Burke	.1347	100	0533-H	29.4598 dpm/mL	04/27/2006	04/27/2007
10/19/2005	Mary Aders	.6948	250	0533-I	60.7831 dpm/mL	10/18/2006	10/18/2007

05/08/2006	Julie Strock	.0711	100	0533-J	15.576 dpm/mL	05/10/2008	05/10/2009
05/11/2006	Brenda Burke	.00092601	100	0533-K	.20286 dpm/mL	08/02/2007	07/28/2007
11/15/2006	Tina Schoneman	.132	1000	0533-L	2.88586 dpm/mL	10/30/2008	10/30/2009
06/12/2007	Julie Strock	.000979	100	0533-M	.21448 dpm/mL	05/20/2009	05/20/2010
08/03/2007	Daniel Roy	.7042	250	0533-N	61.7083 dpm/ml	08/02/2008	08/02/2009
09/25/2008	Daniel Roy	1.4561	500	0533-O	63.7982 dpm/ml	09/10/2009	09/10/2010
09/29/2008	Tara Sides	.1004	100	0533-P	21.9948 dpm/mL	09/09/2009	09/09/2010
06/03/2009	Julie Strock	.0009751	100	0533-Q	.2136 dpm/mL	06/05/2009	06/03/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-241 Standard *0533-O*

M. Aders 9/10/2009	Isotope	Value	Uncertainty
	0533-O #1	2.880	0.3960
	0533-O #2	2.820	0.3910
	0533-O #3	2.790	0.3840
Mean Value (Counting) =	2.830	0.9953264	
Stdev =	0.045825757		
Target =	2.84		
Lower Limit =	2.738348486		
Upper Limit =	2.921651514		
Rule 1 Pass/Fail	Pass	Pass	Pass
Two sigma =	0.091651514		
10 % of Mean =	0.283		
Rule 2 (Pass/Fail)	Pass		

Rule 1 = The target value must lie within the average counting value concentration plus or minus two times the standard deviation of the three counting sources.
Rule 2 =The calculated value of two times the standard deviation of the concentration of the three counted sources must be less than 10% of the average concentration value.
Rule 3 = The determined mean value must be +/- 5% of the of the certificate value or within the uncertainty of the standards being verified.

The analyst prepared three standard verification sources for standard ***0533-O*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Am_243*** standard ***445-96-2-SS*** in a disposable centrifuge tube. 4 mL of 2M HCL was added and was diluted with 6 mL of DI water. 25 micrograms of neodymium carrier and two mL of 49% HF was added to precipitate neodymium (and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-241 were calculated by comparison to Am-243 certified values.

Just checked 9/22/09
[illegible] 9/25/09

CERTIFICATE OF CALIBRATION
ALPHA STANDARD SOLUTION

Radionuclide	Am-243	Customer:	GENERAL ENGINEERING LABS
Half Life:	7380 ± 40 years	P.O.No.:	9290-RAD
Catalog No.:	7243	Reference Date:	January 1 1994 12:00 PST.
Source No.:	445-96-2	Contained Radioactivity:	(Am-243) 101.2 μCi
		Contained Radioactivity:	(Am-243) 3750 kBq

Description of Solution

a. Mass of solution: 5.3739 g (in a 5 ml Flame Sealed Ampoule)

b. Chemical form: Am(NO3)3 in 2N HNO3

c. Carrier content: None added

d. Density: 1.0651 g/ml @ 20°C.

Radioimpurities None detected

Radioactive Daughters

Np-239 (beta active) in equilibrium

Radionuclide Concentration

(Am-243) 18.84 μCi/g

Method of Calibration

Weighed aliquots of the solution were assayed using gamma spectrometry for Np-239:

Energy peak(s) intergrated under: 228, 278 keV.

Branching ratio(s) used: 0.108, 0.1420 gamma rays per decay.

Uncertainty of Measurement

a. Systematic uncertainty in instrument calibration: ±3.0%

b. Random uncertainty in assay: ±0.4%

c. Random uncertainty in weighing(s): ±0.0%

d. Total uncertainty at the 99% confidence level: ±3.0%

NIST Traceability

This calibration is implicitly traceable to the National Institute of Standards and Technology.

Leak Test(s)

See reverse side for Leak Test(s) applied to this source.

Notes

1. Nuclear data were taken from "Table of Radioactive Isotopes", edited by Virginia S. Shirley, 1986.
2. IPL participates in an NIST measurement assurance program to establish and maintain implicit traceability for a number of nuclides, based on the blind assay (and later NIST certification) of Standard Reference Materials (As in NRC Regulatory Guide 4.15).

Anna U. Kuen

QUALITY CONTROL

Jan 3, 1994

Date Signed

ISOTOPE PRODUCTS LABORATORIES
1800 North Keystone Street
Burbank, California 91504
(818) 843 - 7000

RC-S-005-32

THE LEAK TEST(S) INDICATED BY THE CHECKED BOX(ES) WAS(WERE) APPLIED TO DETERMINE THE INTEGRITY OF THE SOURCE DESCRIBED ON THE FRONT SIDE

☑ 1. STANDARD WIPE TEST

The source is wiped over its entire surface with a moistened filter paper disk. After drying, the disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 2. SOAK TEST

The source is immersed in distilled water and maintained at 50 ± 10° C for a minimum of four hours. After removal of the source, the liquid is a) checked for activity using a liquid scintillation counter, or b) evaporated in a planchet and the residue is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 3. SOAK TEST -- BERYLLIUM WINDOW

The source is immersed in distilled water and maintained at 50 ± 10° C for 20 minutes. The entire surface of the source is then wiped with a moistened cotton swab or filter paper disk. After drying, the swab or disk is checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 4. GAS SOURCE TEST (Radioactive Gas)

The source is placed in a vacuum desiccator and maintained at a pressure of less than 1 mm Hg for not less than 12 hours. The activity is checked by introducing air into the desiccator and monitoring the air with an end-window G.M. tube. Activity levels exceeding 1000 cpm are cause for rejection of the source.

☑ 5. OTHER LEAK TEST

The ampoule is kept in an inverted position on a filter paper disk for a minimum of 16 hours. The filter paper disk is then checked for activity using a windowless proportional counter or end-window G.M. tube. Activity levels exceeding 0.001 μCi beta-gamma or 0.0001 μCi alpha are cause for rejection of the source.

☐ 6. LEAK TEST NOT APPLICABLE

The active area of this source is uncovered or is protected by a very thin coating. Although the deposit is adherent, it is not designed or certified to pass a standard leak test. The inactive portions of the source have been checked using the standard wipe test. Levels of removable activity did not exceed 0.001 μCi beta-gamma or 0.0001 μCi alpha at the time of shipment.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	445-96-2
Prepared By:	Genie Bost
Carrier Conc:	2M HNO3
Reference Date:	01/01/1994
Ampoule Mass (g):	5.3739 g
Uncertainty:	+/- 3 %
LogBook No:	RC S 005 032

A Solution Material Info	
Isotope:	Americium-243
Prepared By:	Angela Johnson
Prep Date:	01/05/1994
Verification Date:	05/11/2009
Expiration Date:	05/11/2010
Primary Code:	445-96-2-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.3419 g
Density(g/mL):	1.0785
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (uCi/g)) * (conversion dpm to uCi) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (100 mL) = 2234238.9912 dpm/mL
(5.3419 g) * (18.84 uCi/g) * (2220000 dpm/uCi) / (1.0785 g/mL) / (100 mL) = 2071617.0528 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
01/05/1994	Genie Bost	.0058	100	445-96-2-B	120.1 dpm/ml	01/05/1995	01/05/1996
09/10/2004	Amanda Fehr	.0325	1000	445-96-2-BB	67.328 dpm/mL	09/10/2005	09/10/2006
01/05/1994	Genie Bost	.0025	100	445-96-2-C	51.77 dpm/ml	01/05/1995	01/05/1996
05/27/2005	Brenda Burke	.000246	100	445-96-2-CC	5.10613 dpm/mL	05/31/2005	05/31/2006
03/25/1994	Genie Bost	.0064	100	445-96-2-D	132.53 dpm/ml	01/05/1995	01/05/1996
08/16/2005	Brenda Burke	.001224	500	445-96-2-DD	5.07144 dpm/mL	08/18/2007	08/18/2008
08/04/1994	Genie Bost	.0094	100	445-96-2-E	194.65 dpm/ml	01/05/1995	01/05/1996
10/13/2005	Brenda Burke	.0017	500	445-96-2-EE	7.0435 dpm/mL	11/15/2005	11/15/2006
08/04/1994	Genie Bost	.0046	100	445-96-2-F	95.25 dpm/ml	01/05/1995	01/05/1996
10/14/2005	Mary Aders	.0141	500	445-96-2-FF	58.4196 dpm/mL	10/14/2005	10/14/2006
09/01/1994	Genie Bost	.0031	100	445-96-2-G	64.19 dpm/ml	01/05/1995	01/05/1996
05/10/2006	Mary Aders	2.0753	1000	445-96-2-GG	4299.227 dpm/mL	09/30/2008	09/30/2009
10/17/1994	Genie Bost	.0969	100	445-96-2-H	2006.52 dpm/ml	01/05/1995	01/05/1996
06/07/2006	Mary Aders	.0365	1000	445-96-2-HH	75.614 dpm/mL	06/19/2006	06/19/2007
02/06/1995	Genie Bost	.0043	100	445-96-2-I	89.04 dpm/ml	01/05/1995	01/05/1996
05/11/2006	Brenda Burke	.000009739	100	445-96-2-II	.201761 dpm/mL	07/26/2006	07/26/2007
07/20/1995	Theresa Austin	.0041	100	445-96-2-J	84.9 dpm/ml	01/05/1995	01/05/1996
05/01/2007	Daniel Roy	.0352	1000	445-96-2-JJ	72.9209 dpm/ml	04/30/2008	04/30/2009
08/10/1995	Garret Ray	.0952	100	445-96-2-K	1971.32 dpm/ml	01/05/1995	01/05/1996
06/12/2007	Julie Strock	.01038	250	445-96-2-KK	22.1496 dpm/mL	05/28/2008	05/28/2009

09/11/1995	Theresa Austin	1.0525	100	445-96-2-L	21794.23 dpm/ml	01/05/1995	01/05/1996
09/11/1995	Theresa Austin	.5107	100	445-96-2-L-1	111.3 dpm/ml	01/05/1995	01/05/1996
04/28/1998	Richard Kinney	.1264	100	445-96-2-M	2617.4 dpm/ml	04/28/1998	04/28/1999
11/01/2007	Eric Williamson	.001274	500	445-96-2-MM	5.27945 dpm/mL	04/06/2008	04/06/2010
10/12/1998	Gregory Smith	.1348	100	445-96-2-N	2791.32 dpm/mL	01/05/1995	01/05/1996
01/25/1999	Gregory Smith	1.9382	100	445-96-2-N-1	50.16 dpm/ml	01/05/1995	01/05/1996
04/19/2008	Daniel Roy	.0424	1000	445-96-2-NN	87.8366 dpm/ml	04/16/2009	04/16/2010
04/21/1999	Greg Smith	.1645	100	445-96-2-O	3406.32 dpm/mL	04/21/1999	04/21/2000
07/27/1999	Gregory Smith	1.567	100	445-96-2-O-2	50.56 dpm/ml	05/13/1999	05/13/2000
10/12/1999	Richard Kinney	1.5589	100	445-96-2-O-3	50.31 dpm/mL	05/13/1999	05/13/2000
04/21/1999	Greg Smith	1.5309	100	445-96-2-O-1	49.4 dpm/mL	04/21/1999	04/21/2000
11/10/1999	Joe Davis	.1809	100	445-96-2-P	3745.92 dpm/mL	05/13/1999	05/13/2000
01/04/2008	Julie Strock	.00001005	100	445-96-2-PP	.20819 dpm/mL	12/29/2008	12/29/2009
01/28/2000	Angela Johnson	.0354	1000	445-96-2-Q	73.3 dpm/mL	02/08/2001	02/08/2002
09/29/2008	Julie Strock	.0025219	250	445-96-2-QQ	20.8977 dpm/mL	09/30/2008	09/29/2009
04/18/2000	Robert Timm	.429	250	445-96-2-R	3553.34 dpm/mL	04/18/2000	04/18/2001
04/23/2009	Tina Schoneman	.001251	500	445-96-2-RR	4.8075 dpm/mL	04/23/2009	04/23/2010
04/13/2001	Angela Johnson	.1869	100	445-96-2-S	3870.16 dpm/mL	04/13/2001	04/13/2002
05/08/2009	Mary Aders	.0141	1000	445-96-2-SS	29.2098 dpm/ml	05/11/2009	05/11/2010
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-103	4153.225 dpm/mL	07/03/2002	07/03/2003
07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-203	4153.225 dpm/mL	07/03/2002	07/03/2003

07/03/2001	Lonnie Morris	2.0057	1000	445-96-2-T-303	4153.225 dpm/mL	07/03/2002	07/03/2003
06/03/2009	Julie Strock	.00000927	100	445-96-2-TT	.1923 dpm/mL	06/05/2009	06/03/2010
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-103	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-203	80.34 dpm/mL	08/23/2001	08/23/2002
08/23/2001	Angela Johnson	.0194	500	445-96-2-U-303	80.34 dpm/ml	08/23/2001	08/23/2002
06/02/2009	Mary Aders	2.1177	1000	445-96-2-UU	4385.1449 dpm/ml	06/04/2009	06/04/2010
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-103	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-203	81.586 dpm/mL	08/27/2002	08/27/2003
08/27/2001	Angela Johnson	.0394	1000	445-96-2-V-303	81.586 dpm/mL	08/27/2002	08/27/2003
03/17/2003	Angela Johnson	2.1108	1000	445-96-2-W	4370.857 dpm/mL	03/14/2006	03/14/2007
04/14/2003	Lonnie Morris	.0315	1000	445-96-2-X	65.2559 dpm/mL	04/14/2004	04/14/2005
05/03/2003	Tim Chandler	.0103	1000	445-96-2-Y	21.3376 dpm/mL	05/05/2003	05/05/2004
05/05/2003	Eric Williamson	.011	1000	445-96-2-Z	22.7877 dpm/mL	04/03/2007	04/03/2008

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Am-243 Standard *445-96-2-SS*

M. Aders	Isotope	Value	Uncertainty
5/15/2009	445-96-2-SS #1	1.360	0.1690
	445-96-2-SS #2	1.370	0.1690
	445-96-2-SS #3	1.290	0.1590

Mean Value (Counting) =	1.340	101.99	**Pass**
Stdev =	0.043588989		**Rule 3 (Pass/Fail)**
Target =	1.314		
Lower Limit =	1.252822021		
Upper Limit =	1.427177979		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.087177979		
10 % of Mean =	0.134		
Rule 2 (Pass/Fail)	**Pass**		

The analyst prepared three standard verification sources for standard ***445-96-2-SS*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Cm-244*** standard ***0533-O*** and 50 micrograms of neodymium carrier in a disposable centrifuge tube. Each standard was diluted with 4 mL of 2 M HCl and 6 mL of DI Water. Two mL of 48% HF was added to precipitate Nd(and Americium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Am-243 were calculated by comparison to Am-241certified values.

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

M. Aders 5/15/09

007509

0338

ANALYTICS

1380 Seaboard Industrial Blvd.
Atlanta, Georgia 30318 - U.S.A.

Phone (404) 352-8677
Fax (404) 352-2837

CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

60513-278

Pu-239 5 mL Liquid in Flame Sealed Vial

This standard radionuclide source was prepared using an aliquot measured gravimetrically from a master radionuclide solution standard. The master radionuclide solution standard was calibrated by the Department Des Applications Et De La Metrologie Des Rayonnements Ionisants (DAMRI), Paris, France, as Number 24148.

Radionuclide purity and calibration were checked by germanium gamma-ray spectrometry and liquid scintillation counting. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

ISOTOPE:	Pu-239
ACTIVITY (dps):	3.674 E4
HALF-LIFE:	24131 years
CALIBRATION DATE:	October 30, 2000 12:00 EST
TOTAL UNCERTAINTY*:	5.0%

*99% confidence level.

5.45541 grams 3M HNO_3 solution.

Impurities detected (activity in dps/vial on Oct. 30, 2000):

Am-241 297.28
Pu-240 1208.8
Pu-241 2010.7
Pu-242 0.17

See reverse side for additional information.

P O NUMBER 2528RD, Item 1

PREPARED BY: M. Taskaeva
M. Taskaeva, Radiochemist

Q A APPROVED: 11/13/00

RC-S-028-167

Standard Traceability Log Rad

Source Material Info	
Parent Code:	0338
Prepared By:	Penet Melton
Carrier Conc:	3 M HNO3
Reference Date:	10/30/2000
Ampoule Mass (g):	5.45541 g
Uncertainty:	+/- 5 %
LogBook No:	RC S 027 167

A Solution Material Info	
Isotope:	Plutonium-239
Prepared By:	Penet Melton
Prep Date:	12/01/2000
Verification Date:	09/29/2008
Expiration Date:	09/29/2009
Primary Code:	0338-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.1674 g
Density(g/mL):	1.0121
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL | dpm/g

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)

(Mass of parent(g)) * (Parm Activity (dps)) * (conversion dpm to dps) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)

(5.1674 g) * (36740 dps) * (60 dpm/dps) / (5.45541 g * 100 mL) = 20880.2208 dpm/mL

(5.1674 g) * (36740 dps) * (60 dpm/dps) / (1.0121 g/mL)/ (5.45541 g * 100 mL) = 20630.6111 dpm/g

(5.1674 g) * (37948.8 dps) * (60 dpm/dps) / (5.45541 g * 100 mL) = 21567.2108 dpm/mL

(5.1674 g) * (37948.8 dps) * (60 dpm/dps) / (1.0121 g/mL)/ (5.45541 g * 100 mL) = 21309.3885 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
06/23/2009	Mary Aders	.591	250	0338-BB	50.3753 dpm/mL	06/23/2009	06/23/2010
10/29/2001	Tim Chandler	.3032	250	0338-E		10/16/2003	10/16/2004
12/30/2002	Tim Chandler	10.0252	100	0338-I		10/24/2003	10/24/2004
08/12/2003	Amanda Fehr	.2282	100	0338-K		08/12/2003	08/12/2004
12/09/2003	Amanda Fehr	.2409	100	0338-L		12/09/2003	12/09/2004

03/18/2004	Tim Chandler	10.0192	500	0338-M		03/18/2004	03/18/2005
04/26/2004	Amanda Fehr	.643	250	0338-N		04/26/2005	04/26/2006
05/26/2004	Eric Williamson	.355	250	0338-O	30.2619 dpm/mL	05/17/2007	05/17/2008
12/20/2004	Brenda Burke	.01957	100	0338-P	4.16992 dpm/mL	12/19/2006	12/19/2007
03/16/2005	Julie Strock	10.0395	100	0338-Q	2139.558 dpm/mL	06/12/2008	06/12/2009
07/19/2005	Amanda Fehr	.677	250	0338-R		07/10/2006	07/10/2007
05/11/2006	Brenda Burke	.0009935	100	0338-S	.21172 dpm/mL	07/30/2007	07/28/2007
01/04/2007	Julie Strock	.050286	250	0338-T	4.2887 dpm/mL	12/31/2007	12/31/2008
01/05/2007	Daniel Roy	.7285	250	0338-U		01/05/2008	01/05/2009
03/16/2005	Julie Strock	.010175	1000	0338-V	.216847 dpm/mL	04/23/2009	04/23/2010
05/15/2007	Eric Williamson	.253	250	0338-W	21.567 dpm/mL	05/21/2009	05/21/2010
07/31/2007	Julie Strock	.0010045	100	0338-X	.21379 dpm/mL	12/31/2007	12/31/2008
12/10/2008	Daniel Roy	.7715	250	0338-Y		12/10/2008	12/10/2009
09/29/2008	Julie Strock	.0504	250	0338-Z	4.29599 dpm/mL	09/30/2008	09/29/2009

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Plutonium-239 Standard *0338-BB*

Analyst: M. Aders	Serial #	Value	Uncertainty
Date: 6/25/09	0338-BB #1	2.350	0.2960
	0338-BB #2	2.190	0.2210
	0338-BB #3	2.300	0.2920
Mean Value (Counting) =	2.280	103.80917	**Pass**
Stdev =	0.081853528		
Target =	2.196		
Lower Limit =	2.116292945		
Upper Limit =	2.443707055		
Rule 1 Pass/Fail	**Pass**	**Pass**	**Pass**
Two sigma =	0.163707055		
10 % of Mean =	0.228		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements.
Rule 2 = The two sigma value used for the 95% cinfidence interval shall not exceed 10% of the mean value of the three measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three Pu-239 standard verification sources for standard ***0338-BB*** using 0.1 mL for each source. Each standard was combined with 0.1 mL of ***Pu-242*** standard ***1262-A*** and was diluted in a disposable centrifuge tube with 4 mL of 2 M HCl, and 6 mL of DI water, 50 micrograms of Nd carrier and 5 drops of hydrazine dihydrochloride were added to the centrifuge tube and swirled. After waiting ten minutes, two mL of 49% HF was added to precipitate Nd(and ***plutonium***) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for ***Pu-239*** were calculated by comparison to ***Pu-242*** certified values.

06/26/09

06/26/09

1374

National Institute of Standards & Technology
Certificate

Standard Reference Material 4334H
Plutonium-242 Radioactivity Standard

This Standard Reference Material (SRM) consists of radioactive plutonium-242 nitrate and nitric acid dissolved in 5 mL of distilled water. The solution is contained in a flame-sealed NIST borosilicate-glass ampoule. The SRM is intended for the calibration of alpha-particle counting instruments and for the monitoring of radiochemical procedures.

Radiological Hazard: The SRM ampoule contains plutonium-242 with a total activity of approximately 150 Bq. Plutonium-242 decays by alpha-particle emission. None of the alpha particles escape from the SRM ampoule. During the decay process, X-rays and gamma rays with energies from 10 keV to 160 keV are also emitted. Most of these photons escape from the SRM ampoule but their intensities are so small that they do not represent a radiation hazard. Approximate unshielded dose rates at several distances (as of the reference time) are given in note [a]*. The SRM should be used only by persons qualified to handle radioactive material.

Chemical Hazard: The SRM ampoule contains nitric acid (HNO_3) with a concentration of 3 moles per liter of water. The solution is corrosive and represents a health hazard if it comes in contact with eyes or skin. If the ampoule is to be opened to transfer the solution, the recommended procedure is given on page 2. The ampoule should be opened only by persons qualified to handle both radioactive material and strong acid solution.

Storage and Handling: The SRM should be stored and used at a temperature between 5 °C and 65 °C. The solution in an unopened ampoule should remain stable and homogeneous until at least January 2015. The ampoule (or any subsequent container) should always be clearly marked as containing radioactive material. If the ampoule is transported it should be packed, marked, labeled, and shipped in accordance with the applicable national, international, and carrier regulations. The solution in the ampoule is a dangerous good (hazardous material) both because of the radioactivity and because of the strong acid.

Preparation: This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

RECEIVED

Lisa R. Karam, Acting Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
January 2005

Robert L. Watters, Jr., Chief
Measurement Services Division

*Notes and references are on pages 5 to 7.

DC-5-057-C413

Recommended Procedure for Opening the SRM Ampoule

1) If the SRM solution is to be diluted, it is recommended that the diluting solution have a composition comparable to that of the SRM solution.

2) Wear eye protection, gloves, and protective clothing and work over a tray with absorbent paper in it. Work in a fume hood. In addition to the radioactive material, the solution contains strong acid and is corrosive.

3) Shake the ampoule to wet all of the inside surface of the ampoule. Return the ampoule to the upright position.

4) Check that all of the liquid has drained out of the neck of the ampoule. If necessary, gently tap the neck to speed the process.

5) Holding the ampoule upright, score the narrowest part of the neck with a scribe or diamond pencil.

6) Lightly wet the scored line. This reduces the crack propagation velocity and makes for a cleaner break.

7) Hold the ampoule upright with a paper towel, a wiper, or a support jig. Position the scored line away from you. Using a paper towel or wiper to avoid contamination, snap off the top of the ampoule by pressing the narrowest part of the neck away from you while pulling the tip of the ampoule towards you.

8) Transfer the solution from the ampoule using a pycnometer or a pipet with dispenser handle. NEVER PIPETTE BY MOUTH.

9) Seal any unused SRM solution in a flame-sealed glass ampoule, if possible, to minimize the evaporation loss.

See also reference [4]*.

*Notes and references are on pages 5 to 7.

PROPERTIES OF SRM 4334H

Certified values

Radionuclide	**Plutonium-242**
Reference time	**1200 EST, 07 June 1994 [b]***
Massic activity of the solution [c]	**26.31 $Bq \cdot g^{-1}$**
Relative expanded uncertainty (k=2)	**0.72%** [d] [e]
Solution density	**(1.105 ± 0.002) $g \cdot mL^{-1}$ at 20 °C** [f]

Uncertified values

Physical Properties:			
Source description	Liquid in flame-sealed NIST borosilicate-glass ampoule		
Ampoule specifications	Body outside diameter Wall thickness Barium content Lead-oxide content Other heavy elements	(16.5 ± 0.5) mm (0.60 ± 0.04) mm Less than 2.5% Less than 0.02% Trace quantities	
Solution mass	Approximately 5.5 g		
Chemical Properties:			
Solution composition	Chemical Formula	Concentration ($mol \cdot L^{-1}$)	Mass Fraction ($g \cdot g^{-1}$)
	H_2O HNO_3 $^{242}Pu^{+6}$	50 3.2 8×10^{-7}	0.81 0.19 2×10^{-7}
Radiological Properties:			
Alpha-particle-emitting impurities	None detected [g] [h]. See table on page 5.		
Beta-particle-emitting impurities	Plutonium-241: (0.092 ± 0.018) $Bq \cdot g^{-1}$ [f] [h]		
Photon-emitting impurities	None detected [i]		
Half lives used	Plutonium-242: (373 500 ± 1100) a [j] [5] Plutonium-241: (14.35 ± 0.10) a [j] [5] Americium-241: (432.2 ± 0.7) a [j] [5]		
Calibration method and measuring instrument(s)	Three $4\pi\alpha$ liquid-scintillation counters, a calibrated germanium detector system, and a silicon surface-barrier detector		

*Notes and references are on pages 5 to 7.

EVALUATION OF THE UNCERTAINTY OF THE MASSIC ACTIVITY [d] [e]*

Input Quantity x_i, the source of uncertainty (and individual uncertainty components where appropriate)	Method Used To Evaluate $u(x_i)$, the standard uncertainty of x_i (A) denotes evaluation by statistical methods (B) denotes evaluation by other methods	Relative Uncertainty Of Input Quantity, $u(x_i)/x_i$, (%) [k]	Relative Sensitivity Factor, $\lvert\partial y/\partial x_i\rvert \cdot (x_i/y)$ [m]	Relative Uncertainty Of Output Quantity, $u_i(y)/y$, (%) [n]
Massic alpha-particle emission rate, corrected for background and decay	Standard deviation of the mean for 80 sets of $4\pi\alpha$ liquid-scintillation measurements (A)	0.05	1.0	0.05
Half life of Pu-242	Standard uncertainty of the half life (A)	0.32 [p]	0.00001 [q]	0.000003
Decay-scheme data	Standard uncertainty of the probability of decay by alpha-particle emission (A)	0.001	1.0	0.001
Extrapolation of alpha-particle-count-rate-versus-energy to zero energy	Estimated (B)	0.25	1.0	0.25
Gravimetric measurements	Estimated (B)	0.10	1.0	0.10
Live time [r]	Estimated (B)	0.10	1.0	0.10
Alpha-particle detection efficiency of scintillators	Estimated (B)	0.15	1.0	0.15
Alpha-particle-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Photon-emitting impurities	Limit of detection (B) [s]	100.	0.001	0.10
Relative Combined Standard Uncertainty of the Output Quantity, $u_c(y)/y$, (%)				0.36
Coverage Factor, k				x 2
Relative Expanded Uncertainty of the Output Quantity, U/y, (%)				0.72

*Notes and references are on pages 5 to 7.

RELATIVE ACTIVITIES OF RADIONUCLIDIC IMPURITIES AT THE REFERENCE TIME [b]

Radionuclide	Half Life (years) [j] [5]	Relative Activity As Determined By	
		LLNL	NIST
Plutonium-242	373 500 ± 1100	1.000 000	1.000 000
Plutonium-241	14.35 ± 0.10	- -	0.0035 ± 0.0004 [t]
Plutonium-240	6 564 ± 11	$^{239}Pu + ^{240}Pu$ <0.000 001 [u]	$^{239}Pu + ^{240}Pu$ 0.000 020 ± 0.000 021 [v]
Plutonium-239	24 110 ± 30		
Plutonium-238	87.7 ± 0.1	$^{238}Pu + ^{241}Am$ <0.000 016 [u]	0.000 009 ± 0.000 016 [v]
Americium-241	432.2 ± 0.7		0.000 000 assumed [t]

NOTES

[a] The Sievert is the SI unit for dose equivalent. See reference [1]. One μSv is equal to 0.1 mrem.

Distance from Ampoule (cm):	1	30	100
Approximate Dose Rate (μSv/h):	<0.1	-	-

[b] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994.

[c] **Massic activity** is the preferred name for the quantity activity divided by the total mass of the sample. See reference [1].

[d] The reported value, y, of massic activity (activity per unit mass) at the reference time was not measured directly but was derived from measurements and calculations of other quantities. This can be expressed as $y = f(x_1, x_2, x_3, \ldots x_n)$, where f is a mathematical function derived from the assumed model of the measurement process. The value, x_i, used for each input quantity i has a **standard uncertainty**, $u(x_i)$, that generates a corresponding uncertainty in y, $u_i(y) = |\partial y/\partial x_i| \cdot u(x_i)$, called a **component of combined standard uncertainty** of y. The **combined standard uncertainty** of y, $u_c(y)$, is the positive square root of the sum of the squares of the components of combined standard uncertainty. The combined standard uncertainty is multiplied by a **coverage factor** of $k = 2$ to obtain U, the **expanded uncertainty** of y.

Since it can be assumed that the possible estimated values of the massic activity are approximately normally distributed with approximate standard deviation $u_c(y)$, the unknown value of the massic activity is believed to lie in the interval $y \pm U$ with a level of confidence of approximately 95 percent.

For further information on the expression of uncertainties, see references [2] and [3].

[e] The value of each component of combined standard uncertainty, and hence the value of the expanded uncertainty itself, is a best estimate based upon all available information, but is only approximately known. That is to say, the "uncertainty of the uncertainty" is large and not well known. This is true for uncertainties evaluated by statistical methods (e.g., the relative standard deviation of the standard deviation of the mean for the massic response is approximately 50%) and for uncertainties evaluated by other methods (which could easily be over estimated or under estimated by substantial amounts). The unknown value of the expanded uncertainty is believed to lie in the interval $U/2$ to $2U$ (i.e., within a factor of 2 of the estimated value).

[f] The stated uncertainty is two times the standard uncertainty.

[g] Estimated limits of detection for alpha-particle-emitting impurities, expressed as massic alpha-particle emission rates (numbers of alpha particles per second per gram), are:
0.003 s-1•g-1 for energies less than 3.1 MeV,
0.03 s-1•g-1 for energies between 3.1 and 4.4 MeV, and
0.003 s-1•g-1 for energies greater than 5.0 MeV.

[h] The plutonium-242 master solution was chemically purified at 1200 EST, 07 June 1994. Americium-241, the daughter of plutonium-241, was removed but has been growing in since that time.

[i] Estimated limits of detection for photon-emitting impurities, expressed as massic photon emission rates (numbers of photons per second per gram), are:
5 × 10-5 s-1•g-1 for energies between 19 and 39 keV,
7 × 10-5 s-1•g-1 for energies between 49 and 92 keV,
2 × 10-5 s-1•g-1 for energies between 106 and 507 keV,
1 × 10-5 s-1•g-1 for energies between 515 and 1456 keV, and
5 × 10-6 s-1•g-1 for energies between 1465 and 2750 keV,
provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of plutonium-242, plutonium-241, or americium-241.

[j] The stated uncertainty is the standard uncertainty.

[k] Relative standard uncertainty of the input quantity x_i.

[m] The relative change in the output quantity y divided by the relative change in the input quantity x_i. If $|\partial y/\partial x_i|\cdot(x_i/y) = 1.0$, then a 1% change in x_i results in a 1% change in y. If $|\partial y/\partial x_i|\cdot(x_i/y) = 0.05$, then a 1% change in x_i results in a 0.05% change in y.

[n] Relative component of combined standard uncertainty of output quantity y, rounded to two significant figures or less. The relative component of combined standard uncertainty of y is given by $u_i(y)/y \equiv |\partial y/\partial x_i|\cdot u(x_i)/y = |\partial y/\partial x_i|\cdot(x_i/y)\cdot u(x_i)/x_i$. The numerical values of $u(x_i)/x_i$, $|\partial y/\partial x_i|\cdot(x_i/y)$, and $u_i(y)/y$, all dimensionless quantities, are listed in columns 3, 4, and 5, respectively. Thus, the value in column 5 is equal to the value in column 4 multiplied by the value in column 3. The input quantities are independent, or very nearly so. Hence the covariances are zero or negligible.

[p] The relative standard uncertainty of $\lambda \cdot t$ is determined by the relative standard uncertainty of λ (i.e., of the half life). The relative standard uncertainty of t is negligible.

[q] $|\partial y/\partial x_i| \cdot (x_i/y) = |\lambda \cdot t|$

[r] The live time is determined by counting the pulses from a gated crystal-controlled oscillator.

[s] The standard uncertainty for each undetected impurity that might reasonably be expected to be present is estimated to be equal to the estimated limit of detection for that impurity, i.e. $u(x_i)/x_i$ = 100%. $|\partial y/\partial x_i| \cdot (x_i/y)$ = {(response per Bq of impurity)/(response per Bq of Pu-242)}·{(Bq of impurity)/(Bq of Pu-242)}. Thus $u_i(y)/y$ is the relative change in y if the impurity were present with a massic activity equal to the estimated limit of detection.

[t] The stated uncertainty is the standard uncertainty. The plutonium-241 activity was calculated from a gamma-ray measurement of the americium-241 ingrowth as of 25 November 1998, assuming that americium-241 was completely removed at the time of chemical purification.

[u] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The value shown is an estimated upper limit based upon background and counting statistics. Measurements were made at the Lawrence Livermore National Laboratory (LLNL) in July of 1994.

[v] Using alpha-particle spectrometry, no alpha-particle emission was detected that could reliably be ascribed to these radionuclides. The stated uncertainty is the standard uncertainty. Measurements were made at the National Institute of Standards and Technology (NIST) in June and July of 1999.

REFERENCES

[1] International Organization for Standardization (ISO), *ISO Standards Handbook - Quantities and Units*, 1993. Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B.N. Taylor and C.E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

[4] National Council on Radiation Protection and Measurements Report No. 58, *A Handbook of Radioactivity Measurements Procedures*, Second Edition, 1985. Available from the National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814 U.S.A.

[5] Evaluated Nuclear Structure Data File (ENSDF), January 2005.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1374
Prepared By:	Mary Aders
Carrier Conc:	0.5M HNO3
Reference Date:	06/07/1994
Ampoule Mass (g):	5.5 g
Uncertainty:	+/- .72 %
LogBook No:	RC-S-051-093

A Solution Material Info	
Isotope:	Plutonium-242
Prepared By:	Ashley Drochter
Prep Date:	12/02/2009
Verification Date:	12/08/2009
Expiration Date:	12/08/2010
Primary Code:	1374-A
Dilution(mL):	250 mL
Mass of Parent(g):	5.3616 g
Density(g/mL):	1.0136
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (250 mL) = 33.8553 dpm/mL
(5.3616 g) * (26.31 Bq/g) * (60 dpm/Bq) / (1.0136 g/mL) / (250 mL) = 33.4010 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Pu-242 Standard 1374-*A*

A.Drochter	Isotope	Value	Uncertainty
12/8/2009	1374-A	1.610	0.2480
	1374-A	1.580	0.2510
	1374-A	1.530	0.2440
Mean Value (Counting) =	1.573	103.17	**Pass**
Stdev =	0.040414519		**Rule 3 (Pass/Fail)**
Target =	1.52		
Lower Limit =	1.492504296		
Upper Limit =	1.654162371		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.080829038		
10 % of Mean =	0.157333333		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 5% of the certificate value.

The analyst prepared three standard verification sources for standard 1374-A using 0.1 mL for each source. Each standard was combined with 0.1 mL of Pu239 standard 0338-BB and 50 micrograms of neodymium carrier in a disposable centrifuge tube containing 4 mL of 2 M HCl and 6 mL of DI water. Four drops of 25% Hydrazine dihydrochloride were added to each centrifuge tube and swirled. Two mL of 49% HF was added to precipitate neodymium(and plutonium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for Pu-242 were calculated by comparison to Pu-239 certified values.

12/9/09

National Institute of Standards & Technology

Certificate 1163

Standard Reference Material 4321C

Natural Uranium Radioactivity Standard

This Standard Reference Material (SRM) consists of a solution of a standardized and certified quantity of radioactive uranium-238, uranium-235, and uranium-234 in a suitably stable and homogeneous matrix. It is intended primarily for the calibration of instruments that are used to measure radioactivity and for the monitoring of radiochemical procedures. The solution, whose composition is specified in Table 1, is contained in a flame-sealed, 5 mL, NIST, borosilicate-glass ampoule (see Note 1)*.

The certified massic activities for the uranium isotopes at a **Reference Time of 1200 EST, 1 August 1997**, are:

Uranium-238: (242.0 ± 1.5) Bq·g^{-1}

Uranium-235: (11.14 ± 0.07) Bq·g^{-1}

Uranium-234: (233.1 ± 2.2) Bq·g^{-1}

Additional physical, chemical, and radiological properties for the SRM, as well as details on the standardization method, are given in Table 1. Uncertainty intervals for certified quantities are expanded ($k = 2$) uncertainties calculated according to the ISO and NIST Guidelines (see Note 2). Table 2 contains a specification of the components that comprise the uncertainty analyses.

The certification of this SRM, within the measurement uncertainties specified, is valid for at least five (5) years after receipt. The solution matrix, in an unopened ampoule, is believed to be indefinitely homogeneous and stable, within its half-life-dependent, useful lifetime. NIST will monitor this material and will report any substantive changes in certification to the purchaser. Should any of the certified values change, purchasers of this SRM will be notified of the change by NIST.

This SRM may represent a radiological hazard and a chemical hazard. Consult the Material Safety Data Sheet (MSDS), enclosed with the SRM shipment, for details (see Note 1).

This Standard Reference Material was prepared in the Physics Laboratory, Ionizing Radiation Division, Radioactivity Group, Dr. M.P. Unterweger, Acting Group Leader. The overall technical direction and physical measurements leading to certification were provided by Dr. L.L. Lucas of the Radioactivity Group. The support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Standard Reference Materials Program.

Lisa R. Karam, Deputy Chief
Ionizing Radiation Division

Gaithersburg, Maryland 20899
November 1997
Text revised and expiration date extended February 2007

Robert L. Watters, Jr., Chief
Measurement Services Division

RECEIVED 11/5/08

*Notes and references are on page 4

RC-5-048-044

Table 1. Properties of SRM 4321C

Certified values

Radionuclides	**Natural Uranium (Mixture of ^{238}U, ^{235}U, and ^{234}U)**
Reference time	**1200 EST, 1 August 1997**
Massic activities of the solution	**^{238}U : 242.0 Bq•g^{-1}** **^{235}U : 11.14 Bq•g^{-1}** **^{234}U : 233.1 Bq•g^{-1}**
Relative expanded uncertainties ($k = 2$)	**^{238}U : 0.60%** (see Note 2)* **^{235}U : 0.60%** (see Note 2) **^{234}U : 0.96%** (see Note 2)

Uncertified information

Source description	Liquid in flame-sealed, 5 mL NIST borosilicate ampoule (see Note 1)
Solution composition	1.0 mol•L^{-1} HCl with 30 mg $UO_2(NO_3)_2$ per gram of solution
Solution density	(1.053 ± 0.001) g•mL^{-1} at 21.4 °C (see Note 3)
Solution mass	(5.258 ± 0.002) g (see Note 3)
Mass fraction of uranium	(0.01960 ± 0.00010) g•g^{-1} (see Note 3)
Photon-emitting impurities	None detected (see Note 4)
Half-lives used [1]	^{238}U : (4.468 ± 0.003) x 10^{9} a ‡ ^{235}U : (7.038 ± 0.005) x 10^{8} a ‡ ^{234}U : (2.455 ± 0.006) x 10^{5} a ‡
Calibration method (and instruments)	The certified massic activity for natural uranium was obtained by mass spectrometer, silicon surface-barrier detector, and $4\pi\alpha\beta$ liquid scintillation (LS) counting systems.

‡ See Note 5

*Notes and references are on page 4

Table 2. Uncertainty evaluation for the massic activity for SRM 4321C

	Uncertainty component	Assessment Type †	Relative standard uncertainty contribution on massic activity of Natural Uranium (%)
1	Isotopic uranium atom fraction in SRM 960; standard deviation of the mean for replicate mass-spectrometric measurements for ^{238}U	A	0.001
2	Isotopic uranium atom fraction in SRM 960; standard deviation of the mean for replicate mass-spectrometric measurements for ^{235}U	A	0.07
3	Isotopic uranium atom fraction in SRM 960; standard deviation of the mean for replicate mass-spectrometric measurements for ^{234}U	A	0.3
4	Half life of ^{238}U; standard uncertainty of the half-life	A	0.07
5	Half life of ^{235}U; standard uncertainty of the half-life	A	0.07
6	Half life of ^{234}U; standard uncertainty of the half-life	A	0.24
7	Uranium mass fraction in SRM 960; from SRM960 certificate	B	0.003
8	Quantitative dissolution	B	0.25
9	Gravimetric (mass) measurements	B	0.10
10	Limit for photon-emitting impurities	B	0.10
Relative combined standard uncertainty		^{238}U	**0.30**
		^{235}U	**0.30**
		^{234}U	**0.48**
Relative expanded uncertainty ($k = 2$)		^{238}U	**0.60**
		^{235}U	**0.60**
		^{234}U	**0.96**

† = (A) denotes evaluation by statistical methods; (B) denotes evaluation by other methods.

NOTES

Note 1. Refer to http://physics.nist.gov/Divisions/Div846/srm.html for the standardized ampoule dimensions and for assistance and instructions on how to properly open an ampoule. Information on additional storage and handling requirements is also included in the website.

Note 2. The uncertainties on certified values are expanded uncertainties, $U = ku_c$. The quantity u_c is the combined standard uncertainty calculated according to the ISO and NIST Guides (see references [2] and [3]). The combined standard uncertainty is multiplied by a coverage factor of $k = 2$ and was chosen to obtain an approximate 95 % level of confidence.

Note 3. The stated uncertainty is two times the standard uncertainty. See reference [3]

Note 4. The estimated lower limits of detection for photon-emitting impurities, expressed as massic photon emission rates are;

$1.4\ s^{-1} \cdot g^{-1}$ for $8\ keV < E < 59\ keV$
$1.1\ s^{-1} \cdot g^{-1}$ for $67\ keV < E < 88\ keV$
$0.5\ s^{-1} \cdot g^{-1}$ for $102\ keV < E < 197\ keV$
$0.3\ s^{-1} \cdot g^{-1}$ for $205\ keV < E < 762\ keV$
$0.2\ s^{-1} \cdot g^{-1}$ for $770\ keV < E < 996\ keV$, and
$0.1\ s^{-1} \cdot g^{-1}$ for $1006\ keV < E < 1900\ keV$

provided that the photons are separated in energy by 4 keV or more from photons emitted in the decay of ^{238}U, ^{235}U, ^{234}U, or their progeny

Note 5. The stated uncertainty is the standard uncertainty. See reference [3].

REFERENCES

[1] Evaluated Nuclear Structure Data File (ENSDF), online database, National Nuclear Data Center, Brookhaven Laboratory (Upton, NY), August 2007. Refer to http://www.nndc.bnl.gov/ensdf/

[2] International Organization for Standardization (ISO), *Guide to the Expression of Uncertainty in Measurement*, 1993 (corrected and reprinted, 1995). Available from Global Engineering Documents, 12 Inverness Way East, Englewood, CO 80112, U.S.A. Telephone 1-800-854-7179.

[3] B. N. Taylor and C. E. Kuyatt, *Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results*, NIST Technical Note 1297, 1994. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20407, U.S.A.

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1163
Prepared By:	Daniel Roy
Carrier Conc:	1M HCL
Reference Date:	08/01/1997
Ampoule Mass (g):	5.258 g
Uncertainty:	+/- .6 %
LogBook No:	RC-S-048-044

A Solution Material Info	
Isotope:	Uranium-238
Prepared By:	Daniel Roy
Prep Date:	02/23/2008
Verification Date:	10/21/2009
Expiration Date:	10/21/2010
Primary Code:	1163-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.118 g
Density(g/mL):	1.0327
Balance ID:	38080204

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / (Dilution Vol) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq/g)) * (conversion dpm to Bq) / Density (g/mL)/ (Dilution Vol) = Parent Activity (dpm/g)
(5.118 g) * (242 Bq/g) * (60 dpm/Bq) / (100 mL) = 743.1336 dpm/mL
(5.118 g) * (242 Bq/g) * (60 dpm/Bq) / (1.0327 g/mL) / (100 mL) = 719.5817 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
07/23/2009	Julie Strock	.1	100	1163-090723-1		07/30/2008	07/30/2009
07/23/2009	Julie Strock	1	100	1163-090723-2		07/30/2008	07/30/2009
07/23/2009	Julie Strock	.25	50	1163-090723-3		07/30/2008	07/30/2009
07/23/2009	Julie Strock	.02	20	1163-090723-4		07/30/2008	07/30/2009
07/23/2009	Julie Strock	.2	20	1163-090723-5		07/30/2008	07/30/2009
07/23/2009	Julie Strock	2	20	1163-090723-6		07/30/2008	07/30/2009
07/31/2009	James Schoneman	.1	100	1163-090731-1		08/07/2008	08/07/2009
07/31/2009	James Schoneman	1	100	1163-090731-2		08/07/2008	08/07/2009
07/31/2009	James Schoneman	.02	20	1163-090731-3		08/07/2008	08/07/2009
07/31/2009	James Schoneman	.2	20	1163-090731-4		08/07/2008	08/07/2009
07/31/2009	James Schoneman	2	20	1163-090731-5		08/07/2008	08/07/2009

08/05/2009	James Schoneman	.1	20	1163-090805-1	08/07/2008	08/07/2009
08/06/2009	James Schoneman	.02	20	1163-090806-1	08/07/2008	08/07/2009
08/06/2009	James Schoneman	.2	20	1163-090806-2	08/07/2008	08/07/2009
08/06/2009	James Schoneman	2	20	1163-090806-3	08/07/2008	08/07/2009
08/14/2009	James Schoneman	.1	100	1163-090814-1	08/21/2008	08/21/2009
08/14/2009	James Schoneman	1	100	1163-090814-2	08/21/2008	08/21/2009
08/14/2009	James Schoneman	.02	20	1163-090814-3	08/21/2008	08/21/2009
08/14/2009	James Schoneman	.2	20	1163-090814-4	08/21/2008	08/21/2009
08/14/2009	James Schoneman	2	20	1163-090814-5	08/21/2008	08/21/2009
08/14/2009	James Schoneman	.01	20	1163-090814-6	08/21/2008	08/21/2009
08/14/2009	James Schoneman	.05	25	13451163-090814-1	08/21/2008	08/21/2009
08/18/2009	James Schoneman	.1	20	1163-090818-1	08/21/2008	08/21/2009
08/18/2009	James Schoneman	2.5	25	1163-090818-2	08/21/2008	08/21/2009
08/21/2009	James Schoneman	.1	100	1163-090821-1	08/28/2008	08/28/2009
08/21/2009	James Schoneman	1	100	1163-090821-2	08/28/2008	08/28/2009
08/21/2009	James Schoneman	.02	20	1163-090821-3	08/28/2008	08/28/2009
08/21/2009	James Schoneman	.2	20	1163-090821-4	08/28/2008	08/28/2009
08/21/2009	James Schoneman	2	20	1163-090821-5	08/28/2008	08/28/2009
08/21/2009	James Schoneman	.01	20	1163-090821-6	08/28/2008	08/28/2009
08/21/2009	James Schoneman	.05	25	13451163-090821-1	08/28/2008	08/28/2009
08/28/2009	James Schoneman	.1	100	1163-090828-1	09/04/2008	09/04/2009

08/28/2009	James Schoneman	1	100	1163-090828-2		09/04/2008	09/04/2009
08/28/2009	James Schoneman	.02	20	1163-090828-3		09/04/2008	09/04/2009
08/28/2009	James Schoneman	.2	20	1163-090828-4		09/04/2008	09/04/2009
08/28/2009	James Schoneman	2	20	1163-090828-5		09/04/2008	09/04/2009
08/28/2009	James Schoneman	.01	20	1163-090828-6		09/04/2008	09/04/2009
09/01/2009	James Schoneman	.01	20	1163-090901-1		09/04/2008	09/04/2009
09/02/2009	James Schoneman	.01	20	1163-090902-1		09/04/2008	09/04/2009
09/02/2009	James Schoneman	.01	20	1163-090902-2		09/04/2008	09/04/2009
08/28/2009	James Schoneman	.05	25	11631345-090828-1		09/04/2008	09/04/2009
09/01/2009	James Schoneman	.05	25	11631345-090901-1		09/04/2008	09/04/2009
09/02/2009	James Schoneman	.05	25	11631345-090902		09/04/2008	09/04/2009
09/02/2009	James Schoneman	.05	25	11631345-090902-1		09/04/2008	09/04/2009
09/11/2009	James Schoneman	.1	100	1163-090911-1	999645.956 ug/L	09/18/2008	09/18/2009
09/11/2009	James Schoneman	1	100	1163-090911-2	999.646 ug/L	09/18/2008	09/18/2009
09/11/2009	James Schoneman	.02	20	1163-090911-3	9.99646 ug/L	09/18/2008	09/18/2009
09/11/2009	James Schoneman	.2	20	1163-090911-4	9.99646 ug/L	09/18/2008	09/18/2009
09/11/2009	James Schoneman	2	20	1163-090911-5	9.99646 ug/L	09/18/2008	09/18/2009
09/11/2009	James Schoneman	.01	20	1163-090911-6	9.99646 ug/L	09/18/2008	09/18/2009
09/16/2009	James Schoneman	.02	20	1163-090916-1	9.99646 ug/L	09/18/2008	09/18/2009
09/16/2009	James Schoneman	.2	20	1163-090916-2	9.99646 ug/L	09/18/2008	09/18/2009
09/16/2009	James Schoneman	2	20	1163-090916-3	9.99646 ug/L	09/18/2008	09/18/2009

09/16/2009	James Schoneman	.01	20	1163-090916-4	9.99646 ug/L	09/18/2008	09/18/2009
09/16/2009	James Schoneman	.05	25	11631332-090916-1	9.99646 ug/L	09/18/2008	09/18/2009
09/11/2009	James Schoneman	.05	25	11631345-090911-1	9.99646 ug/L	09/18/2008	09/18/2009
09/18/2009	James Schoneman	.1	20	1163-090918-1	999.646 ug/L	09/18/2008	09/18/2009
09/19/2009	James Schoneman	.1	100	1163-090919-1		09/26/2008	09/26/2009
09/19/2009	James Schoneman	1	100	1163-090919-2		09/26/2008	09/26/2009
09/19/2009	James Schoneman	.02	20	1163-090919-3		09/26/2008	09/26/2009
09/19/2009	James Schoneman	.2	20	1163-090919-4		09/26/2008	09/26/2009
09/19/2009	James Schoneman	2	20	1163-090919-5		09/26/2008	09/26/2009
09/19/2009	James Schoneman	.01	20	1163-090919-6		09/26/2008	09/26/2009
09/19/2009	James Schoneman	.05	25	11631332-090919-1		09/26/2008	09/26/2009
09/28/2009	James Schoneman	.1	100	1163-090928-1		10/05/2008	10/05/2009
09/28/2009	James Schoneman	1	100	1163-090928-2		10/05/2008	10/05/2009
09/28/2009	James Schoneman	.02	20	1163-090928-3		10/05/2008	10/05/2009
09/28/2009	James Schoneman	.2	20	1163-090928-4		10/05/2008	10/05/2009
09/28/2009	James Schoneman	2	20	1163-090928-5		10/05/2008	10/05/2009
09/28/2009	James Schoneman	.01	20	1163-090928-6		10/05/2008	10/05/2009
09/28/2009	James Schoneman	.05	25	11631332-090928-1		10/05/2008	10/05/2009
10/05/2009	James Schoneman	.1	100	1163-091005-1		10/12/2008	10/12/2009
10/05/2009	James Schoneman	1	100	1163-091005-2		10/12/2008	10/12/2009
10/05/2009	James Schoneman	.02	20	1163-091005-3		10/12/2008	10/12/2009

10/05/2009	James Schoneman	.2	20	1163-091005-4	10/12/2008	10/12/2009
10/05/2009	James Schoneman	2	20	1163-091005-5	10/12/2008	10/12/2009
10/05/2009	James Schoneman	.01	20	1163-091005-6	10/12/2008	10/12/2009
10/05/2009	James Schoneman	.05	25	11631332-091005	10/12/2008	10/12/2009
10/08/2009	James Schoneman	.1	20	1163-091008-1	10/12/2008	10/12/2009
10/09/2009	James Schoneman	.1	100	1163-091009-1	10/16/2008	10/16/2009
10/09/2009	James Schoneman	1	100	1163-091009-2	10/16/2008	10/16/2009
10/09/2009	James Schoneman	.02	20	1163-091009-3	10/16/2008	10/16/2009
10/09/2009	James Schoneman	.2	20	1163-091009-4	10/16/2008	10/16/2009
10/09/2009	James Schoneman	2	20	1163-091009-5	10/16/2008	10/16/2009
10/09/2009	James Schoneman	.01	20	1163-091009-6	10/16/2008	10/16/2009
10/12/2009	James Schoneman	.01	20	1163-091012-1	10/16/2008	10/16/2009
10/09/2009	James Schoneman	.05	25	11631332-091009-1	10/16/2008	10/16/2009
10/15/2009	James Schoneman	.1	100	1163-091015-1	10/22/2008	10/22/2009
10/15/2009	James Schoneman	1	100	1163-091015-2	10/22/2008	10/22/2009
10/15/2009	James Schoneman	.02	20	1163-091015-3	10/22/2008	10/22/2009
10/15/2009	James Schoneman	.2	20	1163-091015-4	10/22/2008	10/22/2009
10/15/2009	James Schoneman	2	20	1163-091015-5	10/22/2008	10/22/2009
10/15/2009	James Schoneman	.01	20	1163-091015-6	10/22/2008	10/22/2009
10/15/2009	James Schoneman	.05	25	11631332-091015	10/22/2008	10/22/2009
10/22/2009	James Schoneman	.1	100	1163-091022-1	10/29/2008	10/29/2009

10/22/2009	James Schoneman	1	100	1163-091022-2	10/29/2008	10/29/2009
10/22/2009	James Schoneman	.2	20	1163-091022-4	10/29/2008	10/29/2009
10/22/2009	James Schoneman	2	20	1163-091022-5	10/29/2008	10/29/2009
10/22/2009	James Schoneman	.01	20	1163-091022-6	10/29/2008	10/29/2009
10/22/2009	James Schoneman	.05	25	11631332-091022-1	10/29/2008	10/29/2009
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10/29/2009	James Schoneman	.1	100	1163-091029-1	11/05/2008	11/05/2009
10/29/2009	James Schoneman	1	100	1163-091029-2	11/05/2008	11/05/2009
10/29/2009	James Schoneman	.02	20	1163-091029-3	11/05/2008	11/05/2009
10/29/2009	James Schoneman	.2	20	1163-091029-4	11/05/2008	11/05/2009
10/29/2009	James Schoneman	2	20	1163-091029-5	11/05/2008	11/05/2009
10/29/2009	James Schoneman	.01	20	1163-091029-6	11/05/2008	11/05/2009
10/29/2009	James Schoneman	.05	25	11631332-091029	11/05/2008	11/05/2009
11/05/2009	James Schoneman	.1	100	1163-091105-1	11/12/2008	11/12/2009
11/05/2009	James Schoneman	1	100	1163-091105-2	11/12/2008	11/12/2009
11/05/2009	James Schoneman	.02	20	1163-091105-3	11/12/2008	11/12/2009
11/05/2009	James Schoneman	.2	20	1163-091105-4	11/12/2008	11/12/2009
11/05/2009	James Schoneman	2	20	1163-091105-5	11/12/2008	11/12/2009
11/05/2009	James Schoneman	.01	20	1163-091105-6	11/12/2008	11/12/2009
11/05/2009	James Schoneman	.05	25	11631332-091105-1	11/12/2008	11/12/2009
11/10/2009	James Schoneman	.1	20	1163-091110-1	11/12/2008	11/12/2009

11/12/2009	James Schoneman	.1	100	1163-091112-1	11/19/2008	11/19/2009
11/12/2009	James Schoneman	1	100	1163-091112-2	11/19/2008	11/19/2009
11/12/2009	James Schoneman	.02	20	1163-091112-3	11/19/2008	11/19/2009
11/12/2009	James Schoneman	.2	20	1163-091112-4	11/19/2008	11/19/2009
11/12/2009	James Schoneman	2	20	1163-091112-5	11/19/2008	11/19/2009
11/12/2009	James Schoneman	.01	20	1163-091112-6	11/19/2008	11/19/2009
11/12/2009	James Schoneman	.05	25	11631332-091112-1	11/19/2008	11/19/2009
11/18/2009	James Schoneman	.1	100	1163-091118-1	11/25/2008	11/25/2009
11/18/2009	James Schoneman	1	100	1163-091118-2	11/25/2008	11/25/2009
11/18/2009	James Schoneman	.02	20	1163-091118-3	11/25/2008	11/25/2009
11/18/2009	James Schoneman	.2	20	1163-091118-4	11/25/2008	11/25/2009
11/18/2009	James Schoneman	2	20	1163-091118-5	11/25/2008	11/25/2009
11/18/2009	James Schoneman	.01	20	1163-091118-6	11/25/2008	11/25/2009
11/18/2009	James Schoneman	.05	25	11631332-091118-1	11/25/2008	11/25/2009
11/30/2009	James Schoneman	.1	100	1163-091130-1	12/06/2008	12/06/2009
11/30/2009	James Schoneman	1	100	1163-091130-2	12/06/2008	12/06/2009
11/30/2009	James Schoneman	.02	20	1163-091130-3	12/06/2008	12/06/2009
11/30/2009	James Schoneman	.2	20	1163-091130-4	12/06/2008	12/06/2009
11/30/2009	James Schoneman	2	20	1163-091130-5	12/06/2008	12/06/2009
11/30/2009	James Schoneman	.01	20	1163-091130-6	12/06/2008	12/06/2009
11/30/2009	James Schoneman	.05	25	11631332-091130-1	12/06/2008	12/06/2009

12/07/2009	James Schoneman	.1	100	1163-091207-1		12/14/2008	12/14/2009
12/07/2009	James Schoneman	1	100	1163-091207-2		12/14/2008	12/14/2009
12/07/2009	James Schoneman	.02	20	1163-091207-3		12/14/2008	12/14/2009
12/07/2009	James Schoneman	.2	20	1163-091207-4		12/14/2008	12/14/2009
12/07/2009	James Schoneman	2	20	1163-091207-5		12/14/2008	12/14/2009
12/07/2009	James Schoneman	.01	20	1163-091207-6		12/14/2008	12/14/2009
12/09/2009	James Schoneman	.01	20	1163-091209-1		12/14/2008	12/14/2009
12/10/2009	James Schoneman	.02	20	1163-091210-2		12/14/2008	12/14/2009
12/10/2009	James Schoneman	.2	20	1163-091210-3		12/14/2008	12/14/2009
12/10/2009	James Schoneman	2	20	1163-091210-4		12/14/2008	12/14/2009
12/07/2009	James Schoneman	.05	25	11631332-091207-1		12/14/2008	12/14/2009
12/10/2009	James Schoneman	.1	20	1163-091210-1		12/14/2008	12/14/2009
12/11/2009	James Schoneman	.1	100	1163-091211-1		12/18/2008	12/18/2009
12/11/2009	James Schoneman	1	100	1163-091211-2		12/18/2008	12/18/2009
12/11/2009	James Schoneman	.02	20	1163-091211-3		12/18/2008	12/18/2009
12/11/2009	James Schoneman	.2	20	1163-091211-4		12/18/2008	12/18/2009
12/11/2009	James Schoneman	2	20	1163-091211-5		12/18/2008	12/18/2009
12/11/2009	James Schoneman	.01	20	1163-091211-6		12/18/2008	12/18/2009
12/11/2009	James Schoneman	.05	25	11631333-091211-1		12/18/2008	12/18/2009
02/27/2008	Daniel Roy	8.0851	100	1163-B	58.1789 dpm/ml	03/01/2008	03/01/2009
02/27/2008	Daniel Roy	8.1015	100	1163-C	58.2969 dpm/ml	03/01/2008	03/01/2009

04/16/2008	Julie Strock	.5619	100	1163-D	4.0433 dpm/mL	04/16/2008	04/16/2009
07/10/2008	Daniel Roy	20.0175	250	1163-E	57.6169 dpm/ml	07/13/2008	07/13/2009
01/05/2009	Tina Schoneman	.519	100	1163-F	3.7346 dpm/mL	01/05/2009	01/05/2010
04/16/2009	Mary Aders	19.4278	250	1163-G	55.9196 dpm/ml	04/16/2009	04/16/2010
10/21/2009	Mary Aders	20.008	250	1163-H	57.5896 dpm/mL	10/21/2009	10/21/2010
08/01/1997	Julie Strock	7.379	250	1163-I	21.2392 dpm/mL	12/07/2009	12/02/2010
08/01/1997	Julie Strock	.106	375	1163-J	.2034 dpm/mL	12/07/2009	12/02/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-238 Standard *1163-H*

Analyst: M. Aders	Serial #	Value	Uncertainty
Date: 10/21/2009	1163-H N1	2.660	0.510
	1163-H N2	2.460	0.469
	1163-H N3	2.530	0.409

Mean Value (Counting) =	2.550	**98.298998**	**Pass**
Stdev =	0.101488916		**Rule 3 (Pass/Fail)**
Target =	2.594		
Lower Limit =	2.347022169		
Upper Limit =	2.752977831		
Rule 1 Pass/Fail	**Pass**		
Two sigma =	0.202977831		
10 % of Mean =	0.255		
Rule 2 (Pass/Fail)	**Pass**		

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1163-H** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-232** standard **1283-E** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

11/2/09
11/2/09

Eckert & Ziegler
Analytics

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Atlanta, Georgia 30318
Tel 404-352-8677
Fax 404-352-2837
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CERTIFICATE OF CALIBRATION

Standard Radionuclide Source

1283

78747-278

U-232 5 mL Liquid in Flame Sealed Vial

Customer: GEL Laboratories, LLC
P.O. No.: 7319 RD, Item 1

This standard radionuclide source was prepared gravimetrically from a calibrated master solution. The master solution was calibrated using a germanium gamma spectrometer system.

Radionuclide purity and calibration were checked using a germanium gamma spectrometer system. The nuclear decay rate and assay date for this source are given below.

ANALYTICS maintains traceability to the National Institute of Standards and Technology through Measurements Assurance Programs as described in USNRC Reg. Guide 4.15, Revision 1.

Isotope:	U-232
Activity (Bq):	3.754 E3
Half-Life:	68.9 years
Calibration Date:	December 9, 2008 12:00 EST
Relative Expanded Uncertainty (k=2):	5.0%

Comments:
Impurities: U-233 <0.3%, Am-241 <0.15%
5.20453 grams 1M HNO_3 solution.

Source Prepared By: _____
W. Mao, Radiochemist

QA Approved: _____ Date: 12-11-08
D. M. Montgomery, QA Manager

End of Certificate

RECEIVED
12/15/08
RC-S-08

Standard Traceability Log Rad

Source Material Info	
Parent Code:	1283
Prepared By:	Daniel Roy
Carrier Conc:	1M HNO3
Reference Date:	12/09/2008
Ampoule Mass (g):	5.20453 g
Uncertainty:	+/- 5 %
LogBook No:	RC-S-051-002

A Solution Material Info	
Isotope:	Uranium-232
Prepared By:	Daniel Roy
Prep Date:	12/16/2008
Verification Date:	12/30/2008
Expiration Date:	12/30/2009
Primary Code:	1283-A
Dilution(mL):	100 mL
Mass of Parent(g):	5.0245 g
Density(g/mL):	1.0285
Balance ID:	

Calculations Converting parent activity to dpm/mL|dpm/g

(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / (Ampoule Mass(g) *(Dilution Vol)) = Parent Activity (dpm/mL)
(Mass of parent(g)) * (Parm Activity (Bq)) * (conversion dpm to Bq) / Density / (Ampoule Mass (g) * (Dilution Vol)) = Parent Activity (dpm/g)
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (5.20453 g * 100 mL) = 2174.4872 dpm/mL
(5.0245 g) * (3754 Bq) * (60 dpm/Bq) / (1.0285 g/mL)/ (5.20453 g * 100 mL) = 2114.1700 dpm/g

Secondary Standards

Prep Date	Preparer	Mass Primary	Dilution (mL)	Code	Conc dpm/mL	Verification Date	Expiration Date
12/16/2008	Daniel Roy	25.1813	1000	1283-B	53.2375 dpm/ml	12/16/2008	12/16/2009
12/30/2008	Tina Schoneman	2.05	250	1283-C	17.336 dpm/mL	12/30/2008	12/30/2009
12/30/2008	Tina Schoneman	.49	250	1283-D	4.1438 dpm/mL	01/09/2009	01/09/2010
01/14/2009	Mary Aders	25.0528	1000	1283-E	52.9659 dpm/ml	01/15/2009	01/15/2010
12/02/2009	Julie Strock	2.076	250	1283-F	17.5561 dpm/mL	01/09/2009	12/30/2009
12/02/2009	Julie Strock	.517	250	1283-G	4.3721 dpm/mL	01/09/2009	12/30/2009
12/09/2009	Ashley Drochter	21.56	1000	1283-H	45.58 dpm/mL	12/09/2009	12/09/2010

GEL Laboratories LLC
Version 1.0 9/18/2000

Verification for Uranium-232 Standard *1283-H*

Analyst: A. Drochter	Serial #	Value		Uncertainty	
Date: 12/10/09	1283-H N1	2.020	pCi/L	0.238	pCi/L
	1283-H N2	2.000	pCi/L	0.234	pCi/L
	1283-H N3	2.060	pCi/L	0.242	pCi/L

Mean Value (Counting) =	2.027	pCi/L	**99.66904**	**Pass**
Stdev =	0.030550505	pCi/L	**Rule 3 (Pass/Fail)**	
Target =	2.033	pCi/L		
Lower Limit =	1.965565657	pCi/L		
Upper Limit =	2.087767676	pCi/L		
Rule 1 Pass/Fail	**Pass**			
Two sigma =	0.061101009			
10 % of Mean =	0.202666667			
Rule 2 (Pass/Fail)	**Pass**			

Rule 1 = The certificate value (NOT including any uncertainty) shall lie within the 95% confidence interval determined from the mean and two sigma standard deviation of the three measurements
Rule 2 = The two sigma value used for the 95% confidence interval shall not exceed 10% of the mean value of the three verification measurements.
Rule 3 = The determined mean value shall be within 10% of the certificate value.

The analyst prepared three standard verification sources for standard **1283-H** using 0.1 mL for each source. Each standard was combined with 0.1 mL of **U-238** standard **1163-G** and was diluted to 10 mL with DI water. 50 micrograms of neodymium carrier and 1ml of Titanium Chloride were added. The solution was allowed to sit for 30 seconds. One mL of 49% HF was then added to precipitate neodymium (and uranium) fluoride. After 30 minutes, each sample was filtered following routine procedures for alpha spectroscopy source preparation. Each source was counted using routine alpha spec procedures. DPM values for U-238 were calculated by comparison to U-232 certified values.

A. Drochter 12/14/09

RUNLOGS

Instrument Run Log

Instrument Type: GAMMA SPECTROMETER **Batch ID: 937282**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
243494001	SAMPLE	MXR1	GAM04	04-JAN-10 19:28	DONE	JAR	06-MAY-09 00:00
243494002	SAMPLE	MXR1	GAM22	04-JAN-10 19:28	DONE	JAR	03-DEC-09 00:00
1202005628	MB	MXR1	GAM23	04-JAN-10 19:28	DONE	JAR	02-JUN-09 00:00
1202005630	LCS	MXR1	GAM07	04-JAN-10 19:55	DONE	JAR	20-JUL-09 00:00
1202005629	DUP	MXR1	GAM03	05-JAN-10 09:08	DONE	JAR	20-AUG-09 00:00

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 938067**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
243494001	SAMPLE	MXE1	1071	13-JAN-10 08:27	DONE		
243494002	SAMPLE	MXE1	1072	13-JAN-10 08:27	DONE		
1202007313	MB	MXE1	1074	13-JAN-10 08:27	DONE		
1202007314	DUP	MXE1	1077	13-JAN-10 08:27	DONE		
1202007316	LCS	MXE1	1078	13-JAN-10 08:27	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 938068**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
243494001	SAMPLE	MXE1	1084	13-JAN-10 08:27	DONE		
243494002	SAMPLE	MXE1	1085	13-JAN-10 08:27	DONE		
1202007317	MB	MXE1	1086	13-JAN-10 08:27	DONE		
1202007319	DUP	MXE1	1087	13-JAN-10 08:27	DONE		
1202007318	LCS	MXE1	1088	13-JAN-10 08:27	DONE		

Instrument Run Log

Instrument Type: ALPHA SPECTROMETER **Batch ID: 938069**

Sample ID	Sample Type	Analyst	Instrument	Run Date	Status	Geometry	Calibration Date
1202007323	LCS	MXE1	1115	13-JAN-10 07:12	DONE		
243494001	SAMPLE	MXE1	1169	13-JAN-10 07:12	DONE		
243494002	SAMPLE	MXE1	1170	13-JAN-10 07:12	DONE		
1202007321	MB	MXE1	1171	13-JAN-10 07:12	DONE		
1202007322	DUP	MXE1	1172	13-JAN-10 07:12	DONE		